

2

Oregon
Health
Authority



PUBLIC HEALTH RESPONSE TO THE COVID-19 PANDEMIC IN OREGON

Report 2 of 3

Version 1.0

Produced by Rede Group in March 2023

Acknowledgments

Rede Group produced this report as a neutral third party contractor of the Oregon Health Authority, Public Health Division in response to a legislative requirement set in Senate Bill 1554 (2022). We want to acknowledge the many people who contributed to this report, including Community-based Organizations (CBOs), an education serving Labor Union, Health Care Associations, Local Public Health Authorities (LPHAs), OHA Staff, Managers, and Directors, School District (SD) and Education Service District (ESD) Superintendents, School Nurses, School Principals, other State Agencies, Tribal Nations, and Tribal Organizations.

In addition to the study team, community partners contributed to this report by reviewing data collection instruments, supporting recruitment efforts, and reviewing and interpreting key findings.



Rede Group study team:

- Kara Skelton, PhD
- Beck Wright, MPH
- Jill Hutson, MA
- Makinna Miles, MPH
- Alex Muvua
- Elena Rivera, MPH
- Robb Hutson, MA
- Elizabeth Paschal
- KC Thompson
- Elisabeth Castillo
- Erin Charpentier, MFA
- Kai Sun

In partnership with:

- Vashti Boyce, MBA, MA, QMHP-C, Wild Iris Consulting, LLC
- Jessica Nischik-Long, MPH Oregon Public Health Association
- Coordinated Consulting Services, LLC

With community partners support in data collection and analysis:

- Emily Cooper, Disability Rights Oregon
- Roberto Gamboa, EUVALCREE
- Kelly Gonzales, PhD, Indigenous Health Equity Institute
- Joe McFerrin II, MPA, Portland Opportunities Industrialization Center/ Rosemary Anderson High School
- Jenny Pool Radway, Consejo Hispano

Acknowledgments

The OHA contract administrator and project coordinator with assistance from other OHA staff and partners supported this project through providing context, supporting recruitment, and sharing background documents and secondary data sources.

- Danna Drum, MDiv
- Alessandra Karson-Whitethorn, MPH, MS, QMHP

OHA also convened a study review committee comprised of OHA staff, LPHAs, Tribal Health Directors, and CBOs to review and interpret key findings for this report.

Everyone has a right to know about and use OHA programs and services. OHA provides free help, and some examples of this help include:

- Sign language and spoken language interpreters
- Written materials in other languages
- Braille
- Large print
- Audio and other formats

If you need help or have questions, please contact Cessa Karson at alessandra.karson-whitethorn2@dhsosha.state.or.us, 971-256-1518, or 711 TTY.



Contents

Executive summary	8
Terminology	22
Introduction	25
Study design, methods + analysis, limitations	33
Findings	41
Public health system response in schools	41
Nongovernmental + community partners	166
Tribal Nations + Tribal Organizations	195
Local epidemiological capacity + data	208
Response coordination: LPHAs, hospitals, + long-term care facilities	222
COVID-19 outcomes + enforcement of public health mandates	229
Statewide funding + expenditures for public health response	236
Public health workforce challenges	239
Recommendations	245
Rede authors' positionality statement	250
References	251
Appendix	257

Figures

Figure 1: Public health system overview	28
Figure 2: Stages of public health response to COVID-19 in Oregon	31
Figure 3: School-related executive orders	32
Figure 4: Public health regions	39
Figure 5: District preparedness for COVID-19 pandemic (SD respondents, N=71)	42
Figure 6: School preparedness for COVID-19 pandemic (School Principal respondents, N=171)	45
Figure 7: School preparedness for COVID-19 pandemic (School Nurse respondents, N=74)	47
Figure 8: How SDs and ESDs utilized COVID-19 funding	51
Figure 9: How schools utilized COVID-19 funding	52
Figure 10: Barriers to efficient use of COVID-19 funding for SDs and ESDs	58
Figure 11: Barriers to efficient use of COVID-19 funding for schools	59
Figure 12: Adequate funding for COVID-19 response activities (SD respondents, N=67)	60
Figure 13: Adequate funding for COVID-19 response activities (ESD respondents, N=7)	61
Figure 14: Adequate funding for COVID-19 response activities (School Principal respondents, N=129)	62
Figure 15: Adequate funding for COVID-19 response activities (School Nurse respondents, N=63)	63
Figure 16: Numbers of barriers experienced in the efficient use of COVID-19 funds	64
Figure 17: Did district worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (SD respondents, N=67)	65
Figure 18: Did ESD worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (ESD respondents, N=7)	66
Figure 19: Did school worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (School Principal respondents, N=129)	67
Figure 20: Existence of a School Emergency Operations Plan (EOP) at school	74

Figure 21: Ways SDs and ESDs responded to COVID-19 pandemic	75
Figure 22: Ways that schools responded to COVID-19 pandemic	76
Figure 23: Access to local epidemiological data to guide COVID-19 decision making by stage (SD respondents, N=62)	82
Figure 24: Access to local epidemiological data to guide COVID-19 decision making by stage (Principal respondents, N=123)	83
Figure 25: Access to local epidemiological data to guide COVID-19 decision making by stage (School Nurse respondents, N=59)	84
Figure 26: Stages during which TA was received by SDs and ESDs to access, understand, or use COVID-19 epidemiological data	85
Figure 27: Entities that provided technical assistance (TA) to support COVID-19 response in SDs and ESDs	86
Figure 28: Stages during which TA was received by schools to access, understand, or use COVID-19 epidemiological data	87
Figure 29: Entities that provided technical assistance (TA) to schools to access, understand, or use COVID-19 epidemiological data	88
Figure 30: Mass media communications platforms utilized by SDs and ESDs to communicate COVID-19 information	102
Figure 31: Mass media communications platforms utilized by schools to communicate COVID-19 information	103
Figure 32: Public health requirements adopted by SDs	117
Figure 33: Public health requirements that schools adopted that were enforced	120
Figure 34: Strategies that were most effective for schools for enforcing public health mandates	135
Figure 35: Preparedness to transition to distance learning for educational instruction delivery	139
Figure 36: Abrupt closure of schools and resulting transition to distance learning required changes to existing policies (SD respondents, N=71)	139
Figure 37: Abrupt closure of schools and resulting transition to distance learning required changes to existing policies (School Principal respondents, N=171)	140
Figure 38: Ranking of most to least challenging aspects of transitioning to distance learning (School Principal respondents N=171)	141
Figure 39: Effectiveness of school's delivery of distance learning (School Principal respondents, N= 121)	142
Figure 40: When developing targeted public health messaging, school districts did the following (SD respondents, N=62)	150
Figure 41: When developing targeted public health messaging, ESDs did the following (ESD respondents, N=5)	151
Figure 42: When developing targeted public health messaging, schools did the following (School Principal respondents, N=123):	152
Figure 43: Guidance challenges that hindered the effectiveness, scale, or quality of COVID-19 response in schools	156

Figure 44: Staffing challenges that hindered the effectiveness, scale, or quality of COVID-19 response in schools	157
Figure 45: CBO COVID-19 response activities (CBO respondents, N=61)	169
Figure 46: CBO's pandemic roles and responsibilities over time	175
Figure 47: Previous experience with emergency response and public health activities (CBO respondents, N=61)	179
Figure 48: CBO preparedness (CBO respondents, N=61)	180
Figure 49: Technical assistance received from any organization (CBO respondents, N=59)	184
Figure 50: Agencies CBOs received TA from (CBO respondents, N=48)	185
Figure 51: Types of partnerships for COVID-19 Response (LPHA respondents, N=38)	189
Figure 52: Types of activities LPHAs partnered on with community based organizations (LPHA respondents, N=38)	191
Figure 53: Oregon COVID-19 Data Supply Chain	211
Figure 54: Changes in surveillance authority, roles, and/or responsibilities during COVID-19 response, by stage (LPHA respondents, N=39)	213
Figure 55: Changes in data presentations authority, roles, and/or responsibilities during COVID-19 response, by stage (LPHA respondents, N=39)	214
Figure 56: Employee types hired to meet the needs of COVID-19 response (LPHA respondents, N=36)	215
Figure 57: Capacity and expertise to manage COVID-19 data (LPHA respondents, N=37)	216
Figure 58: Access to local epidemiological data to guide COVID-19 decision making by stage (LPHA respondents, N=37)	218
Figure 59: Rating of Oregon's public health system's data accessibility and availability (LPHA respondents, N=39)	219
Figure 60: Stages during which OHA provided TA to LPHAs to access, understand, or use epidemiological data (LPHA respondents, N=37)	221
Figure 61: Allocation of funding for pandemic response through OHA	238

Executive summary

Study of Oregon's public health system response to the COVID-19 pandemic

This summary includes high-level key findings and recommendations.

The purpose of this study is to fulfill the requirements of Senate Bill 1554 (2022), which calls for a comprehensive study of Oregon's public health system response to the COVID-19 pandemic. This is the second of three legislatively mandated reports. Primarily focused on the government-led and government-funded public health system's response to the COVID-19 pandemic and the response in Oregon schools, this report is based on a narrow definition of the term "public health system's response" to mean activities undertaken to equitably control the spread of a deadly, infectious disease.

Design and Limitations: The study team used an exploratory sequential design for this study, a robust mixed-methods study design that integrates qualitative data to provide an enhanced understanding and interpretation of quantitative findings. Study findings, however, should be interpreted in the context of the limitations of this study. The most significant limitation in this phase of the study was time constraints (four months). Other limitations are the retrospective nature of this study, which covers over two years, introducing recall bias in which participants may not accurately recall past events. Public health workforce turnover, limited incentive availability for specific participant groups, documents lacking dates and other context, and reliance on self-reported data for online surveys are also limitations.

Public health response in schools

Key findings:

1. The majority of School District Superintendents (SDs) and Education Service District Superintendents (ESDs) reported their district was highly or moderately prepared to respond to the COVID-19

pandemic; 31.0% of SDs reported their district was minimally or not at all prepared to respond. Prior experience in emergency response was cited as a strength in response, largely at the district-level. There was, however, a disconnect between preparedness at the district and school levels, as most Principals (53.2%) felt their school was unprepared for COVID-19 response. Outdated or non-existent Emergency Operations Plans (EOPs) at the school level, lack of prior training and experience in emergency preparedness, and inexperience as an administrator (i.e., COVID-19 hit during their first year as a school administrator) were all cited as reasons for unpreparedness.

2. Education sector study participants reported using state and non-state COVID-19 funding for an array of pandemic response activities at the district and school levels. SDs and ESDs were aligned in much of their utilization of COVID-19 funds; SDs and ESDs most frequently reported using funding to procure personal protective equipment (PPE) (94.0% and 100%, respectively). Similarly, Principals and School Nurses most frequently reported using COVID-19 funding to secure PPE (83.7% and 58.7%, respectively).
3. School districts and schools experienced a few challenges with funding during COVID-19 pandemic response:
 - Education sector study informants reported they were worried about having continued funding to support COVID-19 response in their school community.
 - Lack of clarity around allowable use of funds, short timeframe to spend funds, frequent changes to funding structure(s), inflexibility of funds, and administrative requirements associated with COVID-19 funding were all cited as barriers to efficient use of funds.
4. Strong collaborations and partnerships were a strength of Oregon’s response to the COVID-19 pandemic in schools. This included partnerships between the education and public health sectors, as well as partnerships within the education sector. Unclear roles in pandemic response hindered response in schools. Some education study participants reported that collaboration with LPHAs specifically was, at times, a challenge due to low capacity for collaboration or not having a pre-existing relationship with their LPHA.

5. Lack of clarity around responsibility of implementing public health mandates and guidelines was problematic for schools, particularly relating to contact tracing. Role uncertainty and associated changes to roles during the COVID-19 pandemic response hindered schools' response effectiveness. This was particularly seen in the onerous task of contact tracing, which became overly burdensome and unmanageable to schools during COVID-19 infection spikes.
6. Supply chain issues for PPE challenged schools. Although most study participants reported they had enough PPE to respond, a lack of clarity around the ordering process, the length of time it took to receive PPE, and receiving PPE that was not usable for children (e.g., adult-sized masks), hindered their response.
7. Study participants reported considerable success around vaccination uptake in their school community, though a lack of vaccine confidence was noted as a barrier that hindered the pandemic response in their schools. Many schools collaborated with their LPHA or other community organizations (e.g., local hospital or health care clinic) to coordinate vaccine clinics on or near school grounds. Many educational informants reported confusion around the prioritization of educators for the COVID-19 vaccination without the associated return to schools.
8. The vast majority of study informants reported using resources and frameworks developed by the Oregon Department of Education (ODE) and OHA to inform COVID-19 response in their district or school. Unfamiliarity with public health jargon, however, often made interpretation of these resources confusing. Further, unique challenges for serving populations with specific needs (e.g., students with learning or physical disabilities) added a layer of complexity to interpretation and implementation of guidance.
9. Access to local epidemiologic data to guide COVID-19 response in Stage 1 was a substantial barrier reported by most education sector study participants. As the pandemic progressed (in Stages 2 and 3), epidemiological data access at the local level increased. In Stage 4, however, local data access started to decline. Technical assistance (TA) to access, understand, or use local epidemiologic data varied across educational study participant groups and many SDs, ESDs, and School Principals reported never receiving TA at any time during the COVID-19 pandemic.

10. SDs, ESDs, Principals, and School Nurses reported they tried their best to adhere to Executive Orders and health mandates and used an array of enforcement methods, including behavior modeling, clear messaging, and punitive consequences. Overarching enforcement challenges included the politicization of mandates, the frequency with which public health mandates and associated guidance changed, and lag times between when a complaint Occupational Safety and Health Administration (OR-OSHA) was filed and follow-up. Additionally, there were many enforcement-related challenges specific to the school setting, including confusion about how public health mandates applied to schools, inconsistent enforcement across districts, and inability to implement specific measures with school-aged children. Enforcement was not consistently applied across all Oregon schools.
11. Education sector study participants reported numerous successes with COVID-19 public health messaging and communication, including creating clear messaging (e.g., meetings, signage, exposure letters) and translation of materials across multiple languages. Nevertheless, the frequency at which public health guidance and communication changed from state level agencies and LPHAs, as well as conflicting guidance across different agencies, posed substantial challenges.

Recommendations:

Improve public health emergency response effectiveness in schools by:

1. Building out and investing in comprehensive emergency preparedness for schools at the district- and school-level to incorporate pandemic-level events, and include training for school administrators and frequent EOP updates.
2. Continuing to invest in partnerships between the education (e.g., SDs, ESDs, schools) and public health sectors (e.g., LPHAs, OHA), as this will enable a more timely and collaborative response to future public health emergencies in Oregon's schools.
3. Investing in sustained emergency operations funding for schools; with sustained effort, EOPs and communicable disease management plans in schools will be implemented with more efficiency and timeliness. Specific recommendations regarding funding for schools include:

- Invest in necessary school building infrastructure improvements (i.e., heating, ventilation, and air conditioning (HVAC), desks, filtration systems, outdoor access) to align with best practices to prevent or slow transmission of communicable diseases;
 - Streamline funding to reduce administrative burden for schools; and
 - Improve communication about emergency operations funding, including communication specific to allowable use of funds, timeline for spending funds, and duration of funding.
- 4. Clearly defining roles and expectations for all involved in public health response in schools in advance of emergency response.
- 5. Supporting disease investigation training and resources in schools to effectively respond in future communicable disease related emergencies.
- 6. Supporting both districts and schools to conduct an after-action review (AAR) of their response and to define areas of improvement to inform future public health emergency response.
- 7. Involving schools when making decisions about public health mandates and other emergency response decisions that impact schools; it is imperative that the education sector is brought to the table to inform development of guidelines and recommendations for the school setting. School Nurses, in particular, are a valuable resource that should be utilized when planning emergency response at both the district and school levels.
- 8. Ensuring data availability at district and local levels that includes sub-population data and corresponding TA; a designated liaison at LPHAs to coordinate data availability and provide TA for each district would ensure greater availability and accessibility of TA to inform response for future public health emergencies. This recommendation may require additional resources for LPHAs.
- 9. Public health protection mandate enforcement-related recommendations for schools are summarized as follows:
 - Comprehensively examining the benefits and risks of specific public health mandates in varied schools and population settings, including the long-term impact of using specific mandates in Oregon preschool and school settings on child health and educational outcomes.

- Re-examining the enforcement structure for public health mandates in schools to ensure schools are adequately equipped with the necessary resources to support enforcement.
 - Clearly articulating compliance roles and responsibilities; all parties involved in this structure should receive the necessary training to ensure successful follow-through in future public health emergencies.
 - Ensuring that enforcement-related messaging is clear, consistent, and takes into consideration the individualized needs of the populations(s) the district or school serves.
- 10.** Coordinating messaging across public health and education organizations before information is communicated to the public. This step is imperative to build trust and allow schools time to digest guidance. Further, schools need support (via additional funding, staffing, or otherwise) with translating and communicating information to be culturally-specific and tailored for the population served.
- 11.** Addressing the substantial challenges Oregon schools faced when transitioning to and maintaining distance learning, by:
- Sustaining investments in technology infrastructure to ensure that all Oregon students are able to access distance learning, should it ever be required in the future to respond to a public health emergency;
 - Regularly providing professional development for Oregon educators on best practices in distance learning; and
 - Maintaining clear distance learning protocols for districts and schools to enable a smoother, less interrupted transition to distance learning.
- 12.** Considering public health mandates and guidance for future public health emergencies that are flexible to allow for local school authority and decision-making regarding school closures.
- 13.** Continuing investment and support for Oregon schools to specifically address learning loss and socioemotional issues resulting from school closures and distance learning during the COVID-19 pandemic.

Nongovernmental + community partners

Key findings:

1. CBOs made pivotal contributions to Oregon's COVID-19 pandemic response and played four primary roles:
 - Providing essential resources to community members;
 - Educating community members about COVID-19 and pandemic control measures;
 - Implementing or partnering to support emergency response activities; and
 - Elevating community needs with state and local partners through advocacy.
2. Most CBOs reported they were highly or moderately prepared for the pandemic and significantly grew their capacity throughout the pandemic. CBOs cited their capacity strengths as trust with the community, experience supporting community members to navigate services, strong communication channels, extensive partner networks, and flexibility. The top CBO capacity limitations were financial and staffing-related.
3. OHA and LPHAs provided significant support to CBOs, including funding via grants and contracts, resource allocation, training and technical assistance, and information and data-sharing.
4. CBOs identified several gaps in the support they received, including:
 - Lag in the prioritization of funding for and services to support vulnerable populations in the pandemic response;
 - Limited understanding of how to operationalize equity in response activities;
 - Need for more funding support
 - Limited buy-in from some local leaders for pandemic control measures; and
 - Lack of role clarity between LPHAs and CBOs which hindered partnerships.

Recommendations:

Improve support to CBOs by:

1. Improving communication about funding opportunities;
2. Simplifying funding application and documentation processes, including tracking and invoicing systems, processes, and requirements;
3. Increasing flexibility of funding;
4. Prioritizing learning and capacity building around equity practices in a public health emergency response;
5. Designating OHA and LPHA staff contacts for CBOs, creating a clear and consistent chain of communication for support and efficiency; and
6. Fostering and maintaining relationships and collaboration between CBOs and OHA and LPHAs.

Tribal Nations + Tribal Organizations

Key findings:

1. Tribal Nations performed key public health functions for their Tribal and non-Tribal communities throughout the pandemic.
2. Tribal Nations implemented and enforced similar public health measures as state and local governments, such as mask mandates, stay-at-home orders, and remote work.
3. Tribal Organizations filled a critical supportive role for American Indians/Alaska Natives (AI/ANs) during stay-at-home orders and isolation/quarantine by providing food, traditional medicines, activities, and cultural connection.
4. Partnerships were an important way to coordinate COVID-19 testing and vaccination clinics; acquisition of PPE, testing, and vaccination supplies; and care for community members.
5. Funding provided to Tribal Nations and Tribal Organizations was often too specific in requirements for what it could be spent on and inconsistent with current needs of the community.

6. Both Tribal Nations and Tribal Organizations struggled with having enough staff/staff capacity to efficiently support their communities during the pandemic.
7. Tribal Nations reported a lack of accessible Tribal-specific data to support their decision-making related to COVID-19 response in their communities.

Recommendations:

Improve support to Tribal nations and Tribal organizations by:

1. Implementing flexible funding streams for Tribal nations and Tribal organizations so they can identify and support their communities specific needs;
2. Developing data collection and reporting methods for Tribal-specific data;
3. Increasing communications between Tribal nations and Tribal organizations with LPHAs, OHA, Northwest Portland Area Indian Health Board (NPAIHB), and Indian Health Services (IHS) to better coordinate disease investigation and reporting processes; and
4. Maintaining new and strengthened partnerships that were built by Tribal nations and organizations during COVID-19 response to actively work together to eliminate health inequities in order to reduce the disproportionate impact of public health emergencies on Tribal communities in the future.

Local epidemiological capacity + data

Key findings:

1. Not surprisingly, the COVID-19 pandemic stretched Oregon's epidemiological capacity. Many LPHA participants reported great difficulty hiring staff with the necessary skills and knowledge to perform critical data collection, interpretation, and dissemination functions.
2. OHA supported local epidemiological capacity in various ways, including:
 - Providing direct technical assistance;

- Conducting statewide and regional meetings that provided an opportunity to share epidemiological data and get additional technical assistance;
 - Routing funding to LPHAs to increase staffing for local epidemiological capacity;
 - Sharing epidemiological data communication and messaging resources that aided LPHAs in addressing misinformation efforts in their communities; and
 - Setting up and streamlining systems for LPHAs to order and receive tests, vaccines, and other supplies.
3. Existing epidemiological data systems were severely strained by the surge of users trying to access the system at the same time. LPHA participants described these systems as all but unusable during peak stages of the pandemic, and OHA reported that modules had to be built and separated from the original system to improve useability.
 4. When Oregon’s pandemic response officially began in March 2020, OHA was in the process of putting plans in place to improve collection and reporting of race, ethnicity, language, and disability data (REALD) and adding sexual orientation and gender identity (SOGI) as optional data, which meant that there were not strong practices in place or sufficient capacity to build and adapt standards across governmental public health entities and the array of partners engaged in pandemic response activities. These capacity challenges hindered the use of REALD and SOGI data to inform Oregon’s health equity work in response to the public health pandemic.

Recommendations:

OHA can better support local epidemiological capacity by:

1. Investing in epidemiological data systems improvements; and
2. Continuing to prioritize the development of standards for the collection of and access to REALD and SOGI data.

Hospitals, long-term care facilities and local public health programs

Key findings:

1. Long-term care facilities (LTCFs) required special attention in Oregon's public health system response to COVID-19.
2. Previously established relationships and lines of communication were essential for successful role coordination between hospitals, LTCFs, and LPHAs.
3. Working together throughout the pandemic also strengthened previous relationships between LPHAs, hospitals, and LTCFs.
4. Role confusion occurred around enforcement of public health measures in LTCFs. Participants from several groups reported a lack of clarity around who had jurisdiction over LTCFs, which was a significant issue for public health protective measure enforcement.
5. Due to complexities with licensing and response authority, jurisdiction over LTCFs, was called into question, which, at times, created communication and compliance challenges.

Recommendations:

Improve effectiveness of response efforts by:

1. Developing and maintaining relationships among LPHAs, LTCFs, and hospitals to improve communication in future public health emergencies; and,
2. Developing clear guidance for LTCFs around public health and infection control regulations outlining the roles of OHA and Oregon Department of Human Services (ODHS). Ideally, dissemination of this information would be co-created with LTCFs and LTCF advocacy groups.

Public health workforce challenges

Key findings:

1. Staffing challenges hindered pandemic response for governmental public health. Difficulty recruiting, onboarding, and retaining staff was a strong theme across individual interviews, group interviews, and surveys with LPHA administrators and staff. In the LPHA survey, 87.2% (n=34) of respondents reported that staffing shortages hindered the effectiveness of their pandemic response.
2. A majority of OHA Director interviewees ranked staffing capacity at OHA as a significant challenge that negatively affected OHA's ability to respond to COVID-19. At the beginning of the pandemic, OHA needed to hire numerous new staff to mount and coordinate an effective response; in addition, OHA reassigned many existing staff to new COVID-related work and roles. Small applicant pools for hiring and contracting and limited human resources administrative capacity to meet the hiring demand stalled hiring efforts.
3. Multiple respondent groups routinely reported working 60-70 hour work weeks for many months during 2020- 2022. Several OHA Staff and Manager interviewees indicated that maintaining overall workforce capacity after the Delta variant emergency was especially difficult because the workforce was already stretched thin.
4. Analysis of individual interviews, group interviews, and LPHA survey responses surfaced two themes within challenges to recruiting public health staff during the pandemic:
 - County-level administrative burden for hiring; and,
 - Overall public health workforce shortages, especially for nurses and epidemiologists.
5. LPHAs were able to relieve some of the burden on staff by turning to volunteers to assist with the work. Medical Reserve Corps were specifically named by several LPHAs as a helpful resource during the pandemic response. However, a few LPHAs noted that because individuals in Medical Reserve Corps were older, they were at higher risk for COVID-19 serious illness and therefore were not able to

be as involved. Other LPHAs were able to draw on community volunteers, including retired nurses, through the county government volunteer management department or through partnerships with CBOs.

6. Other solutions LPHAs used to augment staff capacity included:
 - Contracts with CBOs to facilitate major work areas such as contact tracing;
 - “Loaned” staff from other departments within county government;
 - Mobilizing graduating nurses directly to the LPHA’s pandemic response or working with university to intern PhD students for epidemiology support; and
 - Hiring temporary staff.
7. OHA also relied on reassignment of staff from other non-communicable disease programs and hiring temporary staff.
8. LPHAs and OHA demonstrated tenacity, creativity, and accountability in staffing up for the pandemic.

Recommendations:

Mitigate workforce challenges by:

1. Planning for surge capacity within a large-scale, longer-term public health emergency using lessons learned from the COVID-19 experience. Mutual aid agreements, whereby jurisdictions establish the legal basis for sharing resources in the event of an emergency, are critical tools for preparedness planning, but may be of limited value in a geographically dispersed event; thus planning for hiring, reassigning, and limiting non-emergency response functions should be established.
2. Creating plans and protocols at every jurisdiction in the entire public health system that can be activated in a large-scale event, such as the COVID-19 pandemic, for streamlining hiring and worker reassignment processes.
3. Cooperatively, between LPHAs and city and county emergency management programs, create, review, and simulate surge capacity models and plans to outline the most efficient use of available human resources in a public health and medical services emergency.

- Models and plans should clarify roles and responsibilities for primary, supporting, and coordinating agencies to avoid duplication of efforts and provide a baseline for expanding workforce capacity in areas where it is most needed.
 - Planning should include additional partners such as CBOs, neighborhood associations, and other government agencies (e.g., housing, human services, volunteerism, and natural resources departments).
4. Emphasizing and creating local public health emergency preparedness relationships, especially as the public health leadership workforce rebounds from the strain of the COVID-19 pandemic and experiences an influx of new leadership.
 5. Improving local epidemiological capacity while recognizing that local capacity may come in the form of regional epidemiological services or other shared services models. Recognize that funding, in addition to Public Health Modernization funding, may be necessary to create the requisite capacity.

Terminology

Frequently used acronyms

Acronym	Meaning
CARES	The Coronavirus Aid, Relief, and Economic Security Act
CBO	Community-based organization
CDC	Centers for Disease Control and Prevention
CDL	Comprehensive distance learning
COSA	Coalition of School Administrators
COVID-19	Novel coronavirus disease
EMS	Emergency medical services
ESD	Education Service District
ESSER	Elementary and Secondary School Emergency Relief
EO	Executive Order
EOP	Emergency Operations Plan
Epi	Epidemiology/epidemiologist
FEMA	Federal Emergency Management Agency
FTE	Full-time equivalent
IHS	Indian Health Services
LPHA	Local public health authority
LTCF	Long-term care facility
NARA	Native American Rehabilitation Association
NPaiHB	Northwest Portland Area Indian Health Board
NPI	Non-pharmaceutical intervention

Acronym	Meaning
OASSA	Oregon Association of Secondary School Administrators
ODE	Oregon Department of Education
OEA	Oregon Education Association
OEM	Oregon Department of Emergency Management
OHA	Oregon Health Authority
OSHA	Occupational Safety and Health Administration
PH	Public health
PHAB	Public Health Advisory Board
PPE	Personal protective equipment
REALD	Race, Ethnicity, Language, and Disability data
SB 1554	Senate bill 1554
SD	School district
SOGI	Sexual Orientation and Gender Identity data

Key terms

Community Partner Outreach Program: CPOP is a training, outreach, and grant program run by the Oregon Health Authority. CPOP works to build and strengthen community and agency partnerships to better serve vulnerable and hard-to-reach populations.

Emergency management: For the purposes of this study emergency management includes Oregon state, county, city, and Tribal offices that are responsible for the mitigation, preparation for, response to, and recovery from emergencies and natural disasters, acts of terrorism, or other man-made disasters.

Health Care Associations: A health care association is an organization with members who work in or share an interest in health care. Members of health care associations will often meet regularly to discuss upcoming news in their field or will host events for other members to meet and network.

Opera, Orpheus, ARIAS: Opera, Orpheus, and ARIAS are commonly used databases for COVID-19 data in Oregon. Local and state public health epidemiologists used Oregon Public Health Epidemiology User System (Orpheus) to collect and report local case data. Oregon Pandemic Emergency Response Application (Opera) is a COVID-19 specific module within Orpheus. ARIAS is a platform used by OHA, counties, and some Tribes to record contact tracing-related data.

Protecting Oregon Farmworkers Program (POF): Protecting Oregon Farmworkers is a program created to support migrant and seasonal farmworkers in Oregon during the COVID-19 pandemic. POF supports community partner organizations by providing COVID-19-related outreach and education.

Secondary data: Data collected by someone other than the study team, including administrative datasets, surveillance data, public records, etc.

Study team: For Report 2, this includes Rede Group staff, Dr. Kara Skelton, and Vashti Boyce.

Study participant: General term for anyone who responded to a survey, was interviewed, or participated in a focus group.

Tribal Nations: For the purposes of this study, refers to study participants from Oregon's Federally Recognized Tribes.

Tribal Organization: For the purposes of this study, refers to study participants from community-based organizations that serve American Indian/Alaska Native communities. This does not include study participants from Oregon's Federally Recognized Tribes.

A full list of terminology and definitions can be found in Appendix A.

Introduction

Study purpose

The purpose of this study is to fulfill the requirements of Senate Bill (SB) 1554 (2022), which calls for a comprehensive study of Oregon's public health system COVID-19 pandemic response. The study aims to identify lessons learned from the COVID-19 response and outline recommendations for improving and strengthening Oregon's public health system capacity and resiliency for responding to future public health emergencies. Rede Group will submit the results of this study to the Oregon Health Authority (OHA) in three mandated reports. Reports 1 and 2 were submitted in November 2022 and March 2023, respectively, and Report 3 will be submitted in September 2023.

This study is not an external evaluation of an individual's, team's, or agency's performance, but instead is a systematic examination of Oregon's complex and evolving public health system response to the COVID-19 pandemic. As such, this study takes into account the perspectives of a diverse array of organizations engaged in the pandemic response across the state. To ensure objectivity, reduce bias, and provide neutrality, OHA contracted with Rede Group (based on results of an open, competitive solicitation process) to conduct this study. Rede Group has no affiliation with Oregon's public health system response to the COVID-19 pandemic and was not involved in Oregon's public health system response.

Public health system response

Public health is the science of protecting and improving the health of people and their communities (Centers for Disease Control and Prevention [CDC] Foundation, n.d.). Therefore, public health work includes promoting healthy lifestyles, researching disease and injury prevention, and detecting, preventing, and responding to infectious diseases.

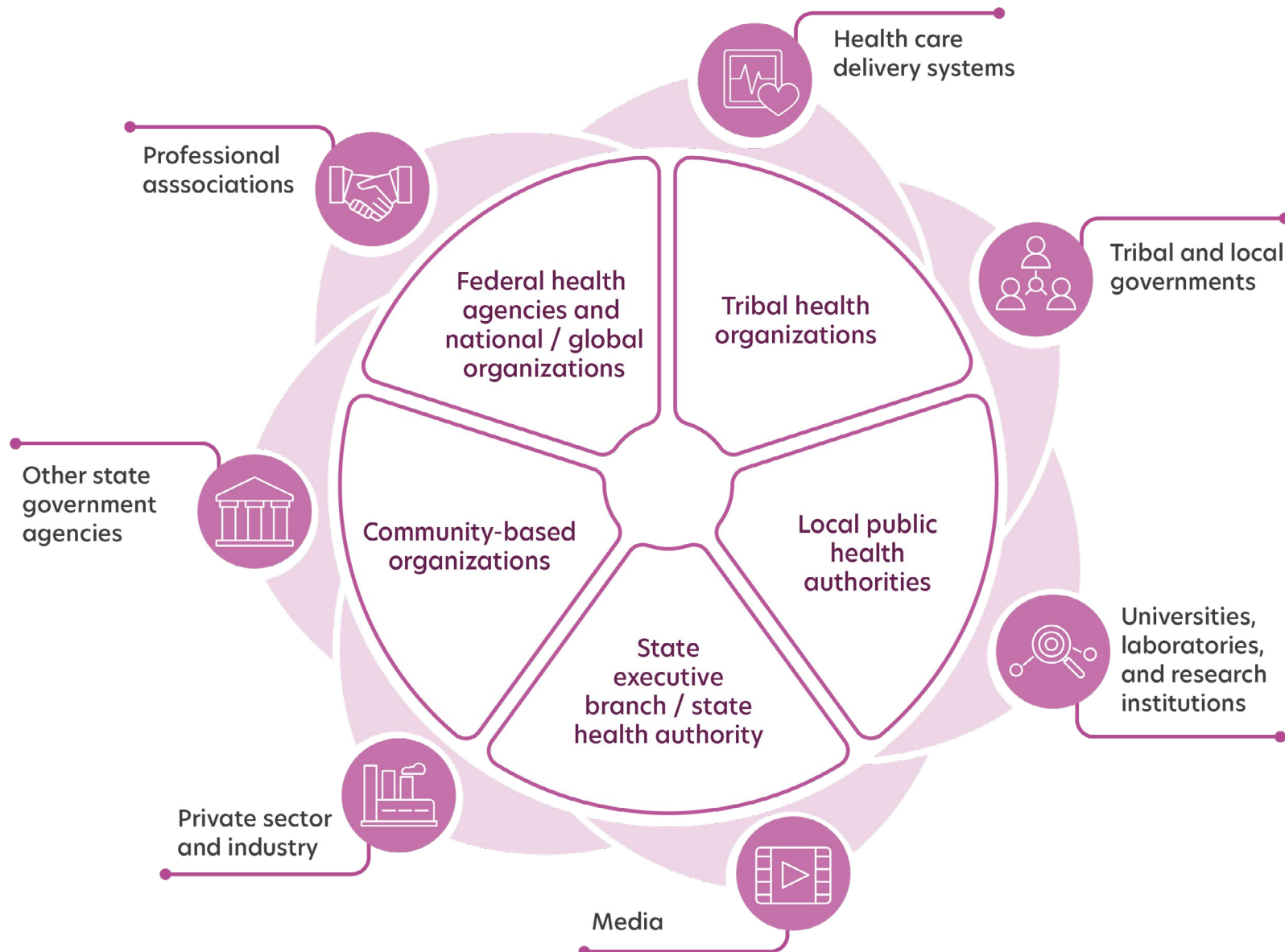
A public health system, typically defined as "all public, private, and voluntary entities that contribute to the delivery of essential public health services within a jurisdiction," is formed by a network of actors, including government agencies, laboratories, hospitals, nongovernmental public and private agencies, and community members (CDC, 2023). Public health systems focus on protecting and promoting the health of populations across an array of ecological levels, including community-, state-, national-, and global-levels. Regardless of scale, a well-functioning public health system requires aligned goals, clarity about the distinct roles of each actor, a strong infrastructure that supports coordination and collaboration, and sufficient resources to accomplish its mission.

National standards for public health were initially released by the CDC in 1994 and updated in 2020 (CDC, 2023). The CDC outlines 10 essential public health services, spanning assessment and monitoring, investigation, communication, community partnership, program and policy implementation, regulation, equitable access to care, workforce development, evaluation and continuous quality improvement, and infrastructure. In 2015, the Oregon Legislature passed House Bill 3100, which aimed to improve the efficiency and effectiveness of Oregon's governmental public health system through establishing a framework of 11 foundational capabilities and programs. In turn, HB 3100 launched an effort to modernize the public health system with focused investments on identified gaps in the foundational capabilities and programs.

Embedded within Oregon's public health system is a network of diverse partners composed of state, local, and Tribal governments, health care delivery partners, private organizations, universities, professional associations, and other partners. For more than two years, Oregon's public health system has been responding to the COVID-19 pandemic, with each of these partners playing a critical role in the delivery of essential public health services. Whether messaging public health guidance for communities, contact tracing, providing essential goods for individuals during quarantine and isolation, delivering vaccines, or other critical public health pandemic response activities, the importance of each actor's role and the coordination of efforts within communities and across the state is essential.

Pursuant to SB 1554 (2022), this study covers Oregon's public health system response to COVID-19 from the beginning of the pandemic (March 2020) to July 2022. Although Oregon's public health response to COVID-19 during 2020- 2022 included numerous entities and individuals (see Figure 1 on the following page), this study primarily focuses on governmental public health agencies and other organizations, such as community-based organizations, funded by the governmental public health system to support the pandemic response. These entities included federal health agencies and national/global organizations, state executive branch/state health authority, Tribal governments, local public health authorities, and community-based organizations. Additionally, Oregon pre-kindergarten through grade 12 schools partnered with local and state agencies to implement public health mandates that impacted schools throughout the COVID-19 pandemic. Importantly, Oregon's health care system, social service sector, higher education system, industries, and businesses were all represented in Oregon's public health system response to the COVID-19 pandemic. These partners, however, are beyond the scope of this study.

Figure 1: Public health system overview



Overview of pandemic history

In December 2019, the novel coronavirus disease (COVID-19), caused by the SARS-CoV-2 virus, emerged from Wuhan, China and began spreading rapidly throughout China and across the globe. Over the last three years (2020- 2023), the COVID-19 pandemic has ravaged health care and public health systems, delivered lasting blows to the global economy, and forever changed the lives of individuals and communities. The global toll of the COVID-19 pandemic has been catastrophic, with 6,859,093 total COVID-19 deaths and 758,390,564 confirmed cases as of February 28, 2023 (WHO, n.d.). Since the initial outbreak, the public health and emergency response communities have mobilized to research, report, and track the disease, implemented evidence-based public health measures that prevent and mitigate widespread transmission, and attempted to resource communities to address the long-term health, social, and economic impacts of COVID-19.

Oregon's first case of COVID-19 was identified on February 28, 2020 and confirmed March 1, 2020. Though the latest research now indicates that COVID-19 was likely circulating in Oregon and across the U.S. as early as December 2019, widespread transmission and public awareness grew rapidly beginning in March 2020 (Basavaraju et al, 2020). At that time, Governor Kate Brown issued Executive Order (EO) 20-03, which declared a state of emergency in Oregon and authorized action to respond to, control, mitigate, and recover from the emergency. Between March 2020 and July 2022, Governor Brown issued 39 executive orders to control the spread of the virus and protect the public's health (see Figures 3-6 and Appendix B).

The pandemic progressed in multiple waves, with COVID-19 cases surging and declining due to a variety of environmental factors as well as the evolution of the coronavirus itself. New information about the disease emerged and informed the mounting public health system response. Evidence-based public health practices that Oregon implemented to help control the pandemic included public information campaigns, gathering bans, stay-at-home orders, restaurant and bar closures, school and workplace closures, mask mandates, and vaccine mandates, among others. Waves of federal and state emergency response and recovery funding

supported Oregon's public health system response as well. Despite these efforts, the impact of COVID-19 in Oregon has still been great, with 9,361 total deaths and 961,523 confirmed cases as of March 1, 2023 (OHA [Oregon Health Authority], 2023).

One critical aspect of studying Oregon's public health system response to COVID-19 is acknowledging that the burden of the pandemic was not experienced equally. The population health impacts of COVID-19 have cast light on longstanding inequities in access to health care, educational and economic opportunity, and safety. Racism, ableism, sexual orientation and gender identity discrimination, and other systemic biases have persistently undermined the physical, social, economic, and emotional health of entire communities and populations across Oregon and the nation long before the COVID-19 pandemic. Attention must be given to understanding the disparities in COVID-19 outcomes and intentionally addressing the root causes of inequities throughout the long-term COVID-19 public health system response and recovery.

COVID-19 pandemic stages overview

As of the publication date of this report, Oregon's public health response to COVID-19 is ongoing. This study is primarily focused on government-led and government-funded activities between March 2020 through July 31, 2022. The COVID-19 pandemic landscape has been complex and evolving since COVID-19 first arrived in Oregon. As the study team gathered data from key informants and analyzed a wide array of documents, distinct stages of the pandemic began to emerge. In an effort to acknowledge the transformation of the COVID-19 pandemic, and thus Oregon's public health system response to the pandemic, the study team, after consultation with OHA, developed a framework separating the pandemic into four distinct stages. Although delineations between stages are imperfect, these stages provided a framework for analyzing public health system capacity, mobilization, and response alongside COVID-19 health outcomes. Figure 2 was used to describe the pandemic stages for qualitative research used in this report.

Figure 2: Stages of public health response to COVID-19 in Oregon

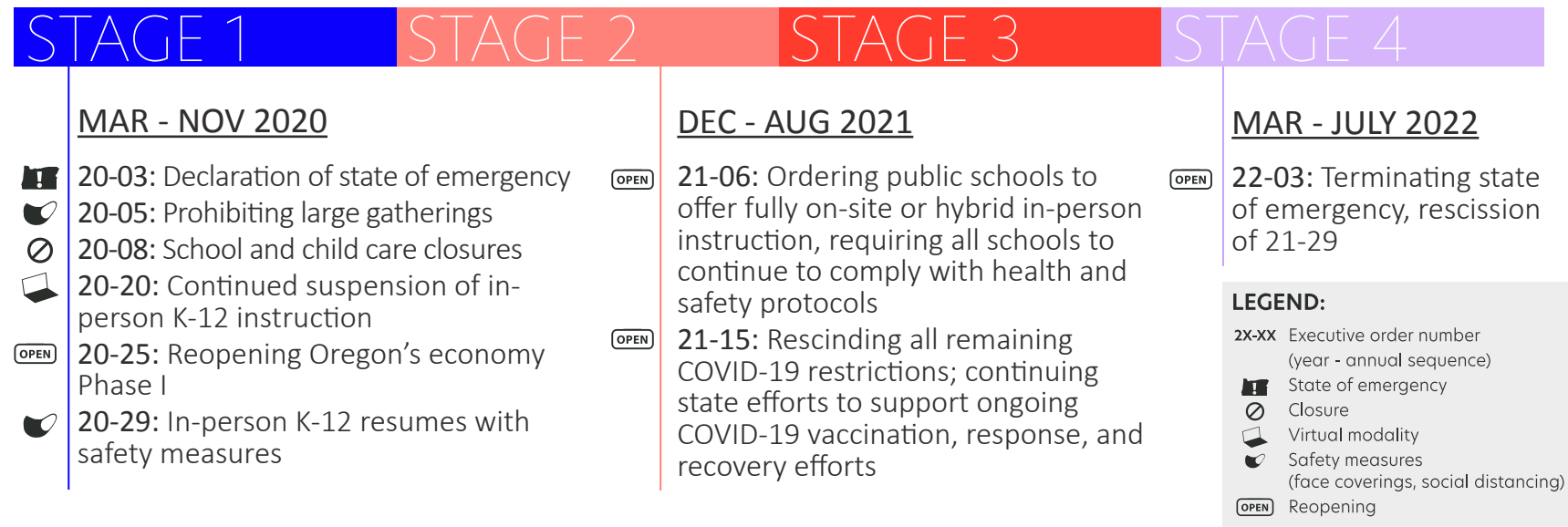


Executive orders

Figure 3 below details the school-related public health system response EOs enacted from March 2020 through July 2022. These EOs provide context for findings found on page 109.

A full list of EOs is included in Appendix B. EOs in Figure 3 and Appendix B were only included if they directly impacted the public health response to COVID-19 in Oregon, including those that prevented/limited transmission of COVID-19, bolstered the governmental and clinical workforce, and preserved necessary resources to treat individuals infected with coronavirus. For the purpose of this study, public health is defined as the science of protecting and improving the health of people and their communities.

Figure 3: School-related executive orders



Study design, methods + analysis, limitations

Scope of study

The scope of this study was set forth by the 81st Oregon Legislative Assembly through Oregon SB 1554 (2022 Regular Session; see Appendix C). This study primarily focuses on the government-led and government-funded public health system response to the COVID-19 pandemic. **For this report, Rede Group applied a narrow definition of the term "public health system response to COVID-19" to mean activities undertaken to equitably control the spread of a deadly, infectious disease.**

Several interested parties have offered perspectives on the scope of the study and have requested examination of specific topics or study questions. In each case, the study team collectively and carefully reviewed requests to determine whether or not inclusion of those questions or topics was appropriate. Importantly, Rede Group understands that numerous pandemic-related public health impacts and specific public health system responses unfolded throughout 2020 - 2022. For example, due to pandemic-caused economic difficulty (layered on top of extant, pernicious socio-economic inequities), population-level food insecurity was exacerbated. In response, numerous actors in the public health system worked to get Oregonians the food they needed. However, the scope of this report does not include an in-depth overview of secondary public health effects of COVID-19. This is not intended to downplay the significance of these effects, but rather to acknowledge that within the time parameters for this report, developing a complete analysis of secondary public health effects was not feasible.

Other items of note about the scope of this report:

1. SB 1554 calls for an analysis comparing health and health system data, including COVID-19 positivity rates, rates of COVID-19 infection, hospital capacity, and other core metrics with the efficacy of statewide public health mandate enforcement. There is no way to objectively determine the effectiveness of statewide public health mandate enforcement in Oregon. As discussed in Report 1, enforcement of statewide public health mandates in Oregon had many challenges, including being a complaint-driven system, multiple agencies working to support enforcement, inconsistent enforcement across the state, a lack of staff and capacity to conduct enforcement activities, lag times between complaints being made and follow-up, issues in statutory authority to enforce laws and regulations, and rapidly changing mandates. Thus an analysis of the effectiveness of enforcement, including a comparison of regions within Oregon, is not possible. In lieu of that, the study team conducted a literature review to inform the topic of the comparative effect of public health restrictions (such as mask mandates, stay-at-home orders, and business and government closures) on COVID-19 outcomes.
2. Support provided to Oregon's migrant and seasonal farmworker populations during the COVID-19 pandemic will be included in Report 3. Data has been gathered from those who provided support through Oregon's Protecting Oregon Farmworker Program, however, additional time was needed to receive reports from this program and information from other organizations' work with the migrant and seasonal farmworker population during COVID-19.
3. For some state and local governmental officials, pandemic response activities began prior to March 2020 as they utilized extant systems to monitor and track the spread of the disease to Oregon. The period of time between December 2019 and Oregon's first presumptive case on February 28, 2022 is referenced but not included for thorough analysis.

Study questions + methods

This report covers eight components outlined in SB 1554. Additionally, this report includes findings from Tribal nations' and Tribal organizations' contributions to the public health system response to COVID-19. To ensure we were able to successfully answer the research questions set forth by the Oregon State Legislature, we used an exploratory sequential design for this study, a robust mixed-methods study design. A mixed-methods study design was most appropriate for this study, as it allows the integration of qualitative data to provide an enhanced understanding and interpretation of quantitative findings. With this design, the qualitative phase of the study, including data collection (see Appendices D-E for interview and focus group interview guides) and preliminary analysis, precedes quantitative data collection (see Appendix F for survey instruments) and analysis. Quantitative data instruments were informed by qualitative study findings, enhancing the validity of the quantitative measures. This study design incorporated qualitative and quantitative methods in interviews, focus groups, surveys, document review, and secondary data analysis. The study was designed so that the majority of the data collection covering Report 1 and Report 2 study questions were gathered prior to completing Report 1 (see Report 1 Appendix G for additional details on data collection). Some additional data was gathered for Report 2 (see Appendix G for additional data gathered for Report 2). An overview of data collected and analyzed for this report is shown on page 37 (this excluded data solely gathered and analyzed for Report 1).

Report 2 study questions:

1. Identify efficiencies and deficiencies in the public health system's response coordination with schools.
2. Analyze the enforcement of public health requirements by schools and examine the effectiveness of enforcement of pandemic control evidence-based practices in schools, including implementation of statewide public health measures.
3. Provide an in-depth report of nongovernmental and community partner contributions to the COVID-19 response.
4. Report Tribal nations and Tribal organization contributions to the COVID-19 response
5. Identify local epidemiological data and capacity issues, including those that affected reporting to statewide data systems.
6. Clarify the roles of hospitals, long-term care facilities, and local public health programs in response coordination.
7. Compare health and health system data, including COVID-19 positivity rates, rates of COVID-19 infection, hospital capacity, and other core metrics with the efficacy of statewide public health mandate enforcement.
8. How did the allocation of federal funds support local and Tribal COVID-19 response activities? How could federal funds allocated and used at the local and Tribal level go more smoothly in the future?
9. Investigate specific public health workforce challenges; provide recommendations for improving specific workforce challenges.

Informants	Study Questions								
	1	2	3	4	5	6	7	8	9
CBOs			X					X	
Educator serving Labor Union	X	X							
Health Care Assoc.						X			
OHA Directors			X						
OHA OEI			X						
OHA Staff + Managers			X			X			
Principals	X	X							
School Nurses	X	X							
SDs/ESDs	X	X							
State Agencies						X			
LPHAs			X		X	X		X	X
Tribal Nations				X	X			X	
Tribal Orgs.			X						

REPORT 2: PRIMARY DATA COLLECTION

LITERATURE REVIEW

Informants	Qualitative Interviews (response rate)	Surveys (response rate)	Focus Groups (participants)	Peer reviewed literature
CBOs	23 (96%)	63 (36%)	4 (27)	Over 30 journal articles reviewed
OHA OEI	1	n/a	n/a	
Health Care Associations	4 (100%)	n/a	n/a	
LPHAs	16 individual, 2 groups (100%)	39 (33%)	n/a	
OHA Directors	12 (100%)	n/a	n/a	
OHA Staff + Managers	20 (100%)	n/a	n/a	
State Agencies	7 (63%)	n/a	n/a	
Tribal Orgs.	4 (67%)	n/a	1 (7)	
Tribal Nations	7 (78%)	1 (11%)	n/a	
School SDs	9 (60%)	84		
School ESDs	5 (100%)	8		
School Principals		220	4 (19)	
School Nurses		90	2 (8)	
Labor Unions	1 (50%)			
Total	97 (89%)	132 (29%)	11 (44)	

Study sampling

Qualitative phase sampling

Given the time and resource-intensive nature of qualitative data collection, it was not possible to interview each individual involved in Oregon's public health system response to the COVID-19 pandemic. Given this evaluation constraint, the study team used both probability and non-probability (i.e., purposeful) sampling strategies to create the evaluation sample. Stratified random sampling, a type of probability sampling strategy in which the population is divided into smaller subgroups called strata, was utilized to ensure representativeness of the evaluation sample to the larger target population and thus, generalizability of findings. Stratified sampling was used for school district (SD) and education service district (ESD) interview data gathered for Report 2. Within each stratum, we then pulled a simple random sample by assigning each potential informant a number and used a random number generator to pull individuals. See Appendix G for additional information on sampling strategies.

Quantitative phase sampling

Purposeful sampling was used by the study team to recruit participants for online surveys. Where comprehensive lists of participant groups were provided by OHA and partners (LPHAs, CBOs, Tribal Nations, School District (SD) SDs), surveys were distributed to each informant. Where comprehensive lists of participant groups were provided by OHA and partners (LPHAs, CBOs, Tribal Nations, SDs), surveys were distributed to each informant. Where comprehensive lists of participant groups were unavailable (ESDs, Principals, and School Nurses), Rede used web searches to identify informant contact information or worked with OHA partners to distribute the survey through email lists to the participant groups. More details about the specific recruitment methods for each informant group can be found in Appendix G.

Analysis

Qualitative Phase Analysis

The study team performed a series of qualitative data analyses to answer each report's key evaluation questions. All qualitative data were audio-recorded for accuracy and professionally transcribed. After transcription, all transcripts were analyzed using Dedoose mixed-methods software using thematic content analysis. To do this, the study team developed an initial coding tree for each group and piloted the coding scheme on a small sample of transcripts. Once transcripts were coded, we examined findings by many different variables, codes, and descriptors to identify the strongest themes.

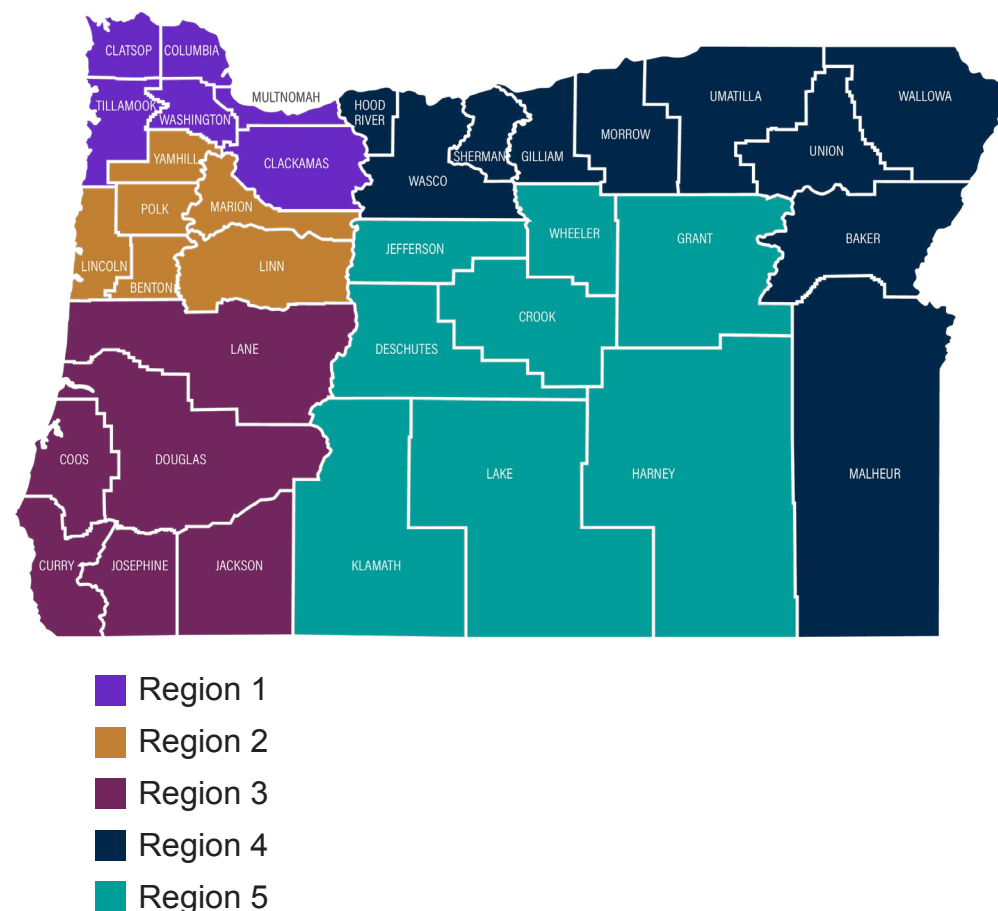
Quantitative Phase Analysis

Quantitative data, including surveys, were analyzed using standard descriptive statistics. See Appendix H for the preliminary survey analysis.

Regional sampling + analysis

For this study, counties were divided into five regions. Oregon's Emergency Management regions were modified to include at least five counties in

Figure 4: Public health regions



adapted from: Oregon's Emergency Management. <https://www.oregon.gov/oha/PH/PREPAREDNESS/PARTNERS/Documents/AllState.pdf>

each region to support the confidentiality of study informants. These regions were used to inform regional representation in data collection and as an analytic framework for the survey.

Limitations overview

Strengths of this study include the mixed-methods, equity-centered approach, and robust sampling strategy. Community study partners were integral to this study, as they reviewed data collection instruments and aided in the recruitment of study participants. Community study partners also assisted with interpretation of data findings.

Study findings, however, should be interpreted in the context of limitations of this study. The largest limitation impacting this study was time constraints. The accelerated timeline of this study, including the due date for Report 1 (when most of the data for the entire study was gathered), hindered the study team's ability to be exhaustive of all of Oregon's public health system response. In an effort to address this limitation, an array of study design features were used, including probability sampling, when possible. To also ensure adequate data collection for those involved in Oregon's response in schools, the study team pushed findings relating to this study question to Report 2 (instead of Report 1). The study's sampling methodology leaves out the perspectives of community-based organizations (CBOs) who did not receive Oregon Health Authority (OHA) funding but who still made important contributions to the public health pandemic response. Additionally, the retrospective nature of this study, which covers a period of over two years, introduced recall bias in which participants may not accurately recall past events. Other limitations of this study include public health workforce turnover, limited incentive availability for specific informant groups, incomplete documents included in document reviews (e.g., missing dates and/or other context), and reliance on self-reported data for online surveys. See Appendix I for detailed description of the study limitations.

Findings

Public health system response in schools

In Report 1, we provided an overview of public health emergency preparedness for the following informants: OHA, LPHAs, Oregon Department of Emergency Management (OEM), and CBOs. A critical actor in the public health system response—the education sector—was omitted due to the data collection timelines of this study. To ensure adequate participation and response from key actors in Oregon’s public health response in schools, the decision was made to push findings relating to the response in schools to Report 2. Below, we present a detailed overview of Oregon’s public health system response coordination in schools, identifying efficiencies and deficiencies and providing recommendations to elicit a better response in schools. Additionally, we analyze the enforcement of statewide public health requirements in schools, including challenges schools face and areas of improvement for future public health emergencies.

Training + preparation

Although study participants involved in Oregon’s public health response to the pandemic in schools reported having some training in emergency preparedness, the magnitude of the COVID-19 pandemic was unprecedented. As a result of the duration and magnitude of COVID-19, school administrators and staff did not feel fully prepared to respond. Additionally, Oregon schools had never been required to transition to distance learning in response to a public health or emergency threat, which added a layer of complexity to school preparedness and overall response.

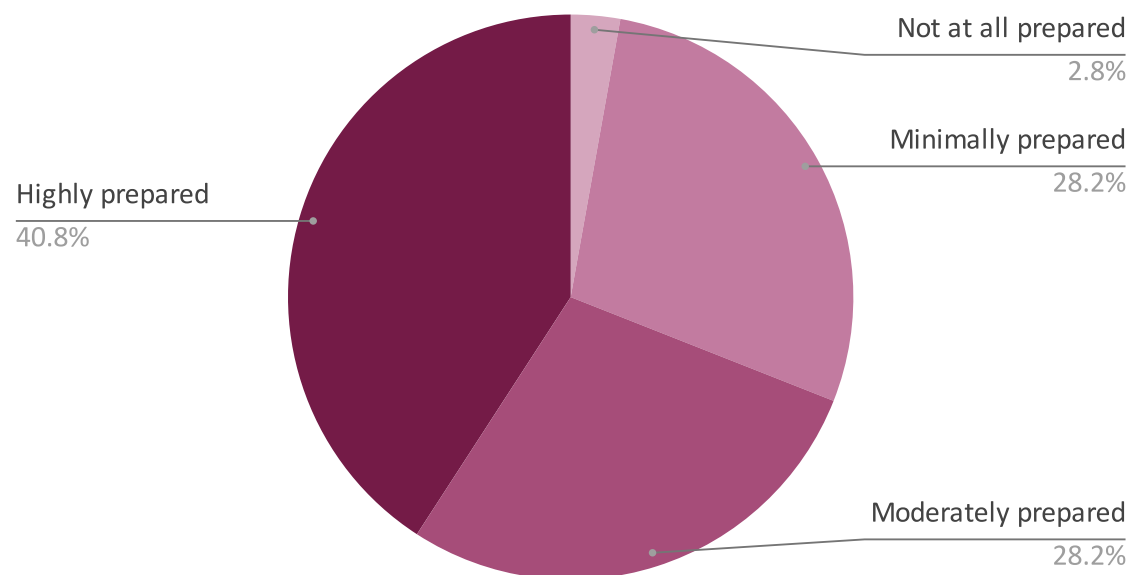
School Districts

The majority of school district (SD) survey respondents (69.0%, n=49) felt their district was either highly prepared (40.8%; n=29) or moderately prepared (28.2%; n=20) to respond to the COVID-19 pandemic (Figure 5).

The remaining third of SD survey respondents felt their district was minimally or not at all prepared (31.0%; n=22).

SD survey respondents, however, were more varied regarding individual preparedness to respond to the COVID-19 pandemic, with about two-thirds of respondents reporting they felt minimally or not at all prepared for the response (66.2%, n=47). SD respondents who felt they were highly prepared to respond to the pandemic noted extensive training in public health, prior experience in responding to communicable disease outbreaks, and prior experience in developing emergency response plans as reasons for their level of preparedness.

Figure 5: District preparedness for COVID-19 pandemic (SD respondents, N=71)



“I have 30 years of experience with developing emergency response plans and was prepared. I was working with our local public health department for weeks before the shutdown happened.”

—SD Survey Respondent

Some SD survey respondents who felt moderately prepared cited prior experience with school closures for communicable diseases as good preparation for the COVID-19 pandemic. Other SD respondents reported that lack of experience in responding to public health emergencies in schools, confusion around emergency response roles, and limited engagement with LPHAs prior to the COVID-19 pandemic diminished their level of preparedness. For many school district administrators, the COVID-19 pandemic was the first emergency event through which they had worked. SD respondents who felt minimally prepared reported that lack of involvement in emergency planning and response, lack of prior emergency response experience at a district level, and lack of preparation to smoothly shift to distance learning contributed to feelings of lack of preparedness. SD respondents who felt minimally prepared to respond stated:

- “The mandates changed our role significantly and nearly overnight. We shifted nearly everything we do and how we do it, with little room for local decision making.” -SD Survey Respondent
- “I knew we had a communicable disease plan that I thought would help guide our initial work as the pandemic began. I soon became aware that this was bigger than a communicable disease that in the past may shut down a district for a few days to up to a week. The communicable [disease] plan we had, although good, didn't address what we were undertaking. Plus, the infrastructure for full closure and continued closure of K-12 public schools was not in place.” -SD Survey Respondent
- “We were prepared for emergency safety response protocols, but not the rapid pace of the pandemic. We were unprepared with how to educate students virtually.” -SD Survey Respondent

Collectively, a lack of experience in responding to public health emergencies at the district level was a contributing factor to the majority of SD survey respondents who reported feeling not at all prepared to respond to the pandemic. Additionally, the long-standing structure of in-person learning in schools, which created large gaps in preparedness to transition to completely virtual learning modalities, was reported by survey respondents as a reason for not feeling prepared for the public health response in schools. One SD survey respondent reported that inadequate staffing played a part in feeling unprepared to respond to the COVID-19 pandemic, “This was the district's first response to a pandemic. We had to move from an in-person model to an online model over spring break. At the time, we only had a .5 FTE [full-time equivalent] district nurse who did not have experience with how to deal with a pandemic.” -SD Survey Respondent

Education Service Districts

Most 62.5% (n=5) education service district (ESD) survey respondents felt their district was moderately prepared to respond to the COVID-19 pandemic; 25.0% (n=2) of respondents felt their district was minimally prepared to respond. A single respondent felt their ESD was highly prepared to respond to the pandemic. Regarding individual preparedness to respond to the pandemic, the majority of ESD respondents (62.5%, n=5) reported they were minimally or not at all prepared; three ESD respondents reported they were moderately prepared to respond. One ESD survey respondent who felt their ESD was moderately prepared commented that prior training in emergency preparedness and preexisting protocols and relationships with their local health department were key in why they felt prepared.

“I had no knowledge about health care protocols or best practices. We didn't even have laptops for teachers or Chromebooks for students. We didn't have enough textbooks for everyone to take a book home. Implementation and logistics were really overwhelming.”

—SD Survey Respondent

“[I] was well aware of health response and education response during emergency or risk situations. We had internal mechanisms and protocols to immediately implement. Roll out of plans from ODE [Oregon Department of Education] was slow for school reopening documents and protocols. Excellent working relationship, collaboration and communication with local health department.”

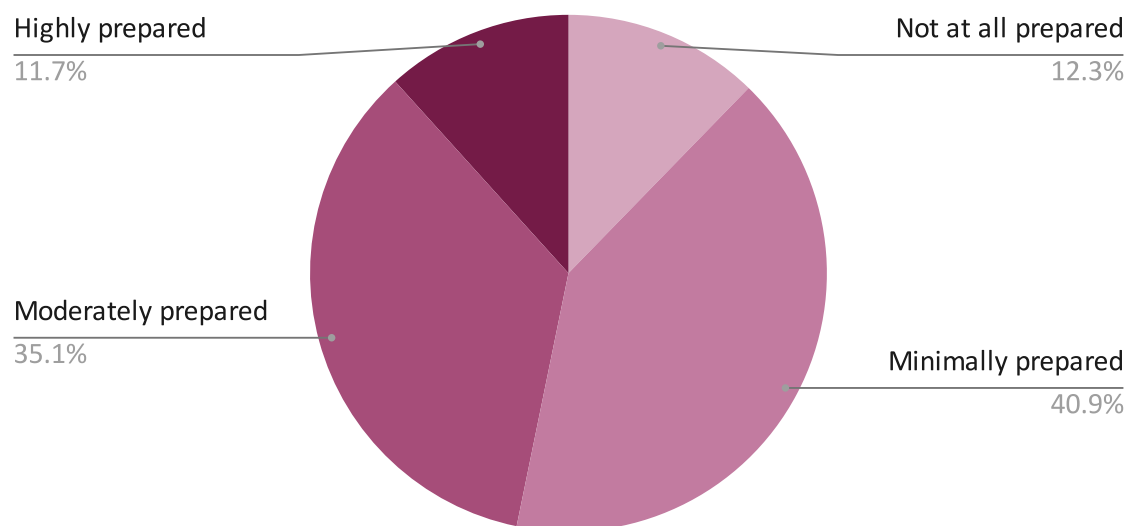
—ESD Interviewee

Principals

In contrast to SD and ESD preparedness, over half (53.2%, n=91) of Principals felt their school was minimally or not at all prepared to respond to the COVID-19 pandemic and approximately 11.7% (n=20) of Principals felt their school was highly prepared to respond to the COVID-19 pandemic.

Principals reported various levels of individual preparedness (e.g., knowledge, training, experience, expertise) to respond to the COVID-19 pandemic, with the vast majority (71.8%, n=121) reporting they felt not at all or minimally prepared to respond to the pandemic.

Figure 6: School preparedness for COVID-19 pandemic (School Principal respondents, N=171)



“Each person on our team would know their specific role in a health emergency, how to prop up the virtual aspects of school and all of the safety protocols.”

—Principal Survey Respondent

“It was not something that I had been asked to do prior in my work, short of forwarding the county recommendations and HR notifications regarding the measles vaccine. I don't think the idea of school closing down as a response to a global issue had even occurred to me.”

—Principal Survey Respondent

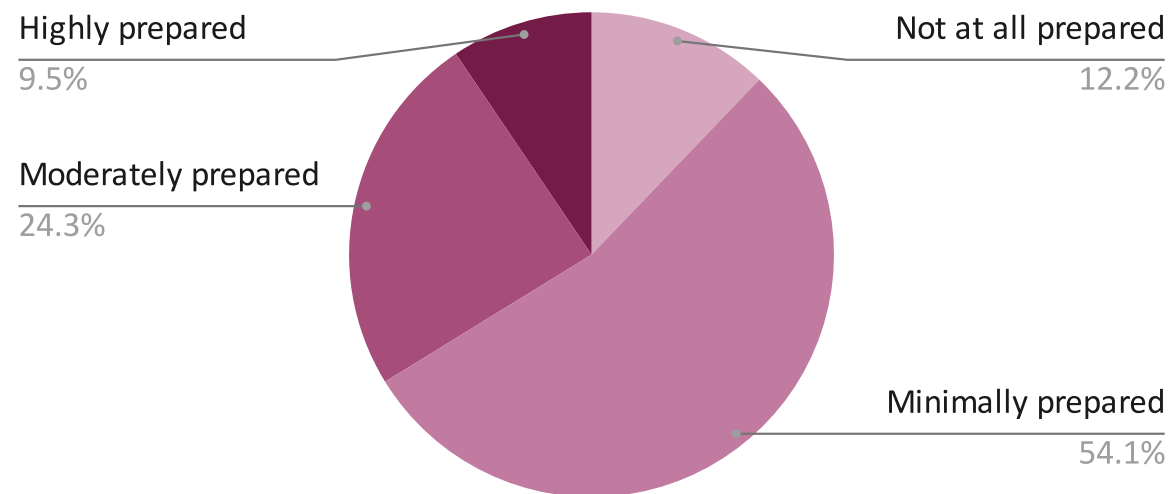
Many Principals reported they did not have prior experience with a public health crisis as large as the COVID-19 pandemic and that emergency preparedness training focused more on “realistic” emergencies. One Principal stated, “Our emergency preparedness focuses more on school shooter, emergency evacs and reunification, earthquakes. Things that in the past were much more likely.” Constant changes to school guidance and policies were noted as a major challenge by Principals, “Information was being provided at an incredibly rapid rate, changing constantly. It made it nearly impossible to be prepared in any way.” Some Principals stated they were proactive in responding to the COVID-19 pandemic—even before school closures, “I had an old binder that referred to response to SARS. Before being advised by the district, I knew to have science teachers give handwashing lessons to students and I canceled evening events before the district started canceling events.” Another considerable challenge to preparedness was the background of Principals, which did not include expanded knowledge or skills in health care or public health. In turn, many Principals reported their degrees “English” and “Education” were not helpful in preparing them to respond. Importantly, challenges associated with distance learning were frequently cited as a reason for feeling minimally or not at all prepared. One Principal reported, “The significant shift from in-person to virtual to hybrid had never been discussed.” Another said, “We were not prepared for distance learning or access to technology for students.”

Only 3.5% (n=6) of Principals felt highly prepared to respond. One Principal who felt they were highly prepared reflected on preparedness for the pandemic, “The biggest problem facing someone in a major crisis is that nobody has experience dealing with it so there is no one to lean on or learn from. After going through [it] I feel highly prepared to be able to use that experience to have better support and outcomes if another major crisis occurred.” Principals who felt moderately prepared cited prior experience and training in emergency preparedness, clear hierarchy of decision making, established policies, and community collaborations as factors influencing their level of preparedness. One Principal who was moderately prepared stated, “I knew that there would be a lot of logistics and I was prepared for the amount of work we would need to do and the decisions that would need to be made, but I didn't have any of the materials or PPE [Personal Protective Equipment] to put an immediate plan into action.”

School Nurses

Most (66.2%, n=49) of School Nurses felt their school was minimally or not at all prepared to respond to the COVID-19 pandemic. About 9.5% (n=7) and 24.3% (n=18) of School Nurses felt their school was highly prepared to respond to the pandemic and moderately prepared to respond to the pandemic, respectively.

Figure 7: School preparedness for COVID-19 pandemic (School Nurse respondents, N=74)



“I have a personal interest in global health, having grown up in the third world, and I keep abreast of outbreaks around the world. I went through the H1N1 outbreak while a school nurse and was familiar with symptom tracking and mass vaccination efforts.”

—School Nurse Survey Respondent

Reporting on individual preparedness, approximately 41.9% (n=31) of School Nurses reported they were highly or moderately prepared to respond to the COVID-19 pandemic, citing prior involvement in infectious disease response (e.g., H1N1 response, Norovirus outbreaks) and nursing experience as contributors to their level of preparedness to respond to the COVID-19 pandemic. Prior experience in responding to the COVID-19 pandemic in a clinical or community setting before transitioning to a School Nurse was commonly cited as a reason for moderate or high levels of preparedness.

Most respondents (58.1%, n=43), however, reported they were minimally prepared or not at all prepared. School Nurses reported that a lack of experience in public health emergency response in a community setting, lack of training on school health policy development, limited training on emergency preparedness, and overall inexperience contributed to their level of preparedness. One School Nurse who felt minimally prepared to respond stated, “I knew of the ODE communicable disease guidelines & exclusion & PPE use, but nothing about contact tracing, covid [COVID-19] testing, county guidelines, air filtration requirements, creating health policies for schools & large scale staff trainings on health care issues to non-health care personnel.” Another respondent stated, “I was fresh out of nursing school so I was completely new to the workforce. Then I found myself basically in charge of the response at my three schools with minimal training or overhead.”

Funding for schools

Funding streams to support COVID-19 response in schools

The vast majority of funding received by SDs and ESDs for COVID-19 response work was from the Elementary and Secondary School Emergency Relief Fund (ESSER). This funding was distributed in three iterations (ESSER I approved in March 2020, ESSER II approved in December 2020, and ESSER III approved in March 2021). ESSER is a federal program administered by the Department of Education in response to the COVID-19 pandemic. The program provides emergency financial assistance to public school districts across the country. Since the start of the pandemic, Oregon has received \$1.62 billion in ESSER funds to support Oregon student needs (ODE, n.d).

Fourteen SD survey respondents (20.9%) reported affirmatively that their district received COVID-19 funding from entities other than ODE, 45 (67.2%) reported that they did not, and eight (11.9%) did not know. Other sources of funding reported by SD survey respondents included federal funding, foundation grants, local COVID-19 grants, Chamber of Commerce and Business Oregon funding, and Governor's office funding. In addition to funding, some respondents reported receiving donations of PPE from other local or regional agencies.

Some SD and ESD interviewees mentioned using “state funds” for COVID-19 response, with two interviewees describing using their state school fund money and three receiving state contributions specifically for summer school programs. One SD interviewee noted that the funding their district received to support COVID-19 response came more quickly than typical governmental funding and appreciated the flexibility of some funding sources.

“The lion's share of money that came through the state was federal money through ESSER. And that really was, those are really the funds we've used almost exclusively to address all of the impacts of COVID-19, the disproportionality we saw, and we continue to see, really the ESSER funding has been the main source of funding.”

—SD Interviewee

“The funding came, I would say more quickly than I normally see from the federal and state governments. So, things normally move slowly. I thought they did a pretty good job of actually getting the funding out quickly. So, that was helpful. And then there was flexibility in some of the spending, and I appreciated the latitude.”

—SD Interviewee

“[Northern Oregon] county health department, during the 21-22 school year, and the prior summer, did contract with us to support two of our communicable disease team positions, because they recognized the amount of public health work we were doing instead of just the education work that we've always done as school nurses.

—ESD Interviewee

One ESD interviewee received funding from their LPHA to pay for two of their communicable disease team positions.

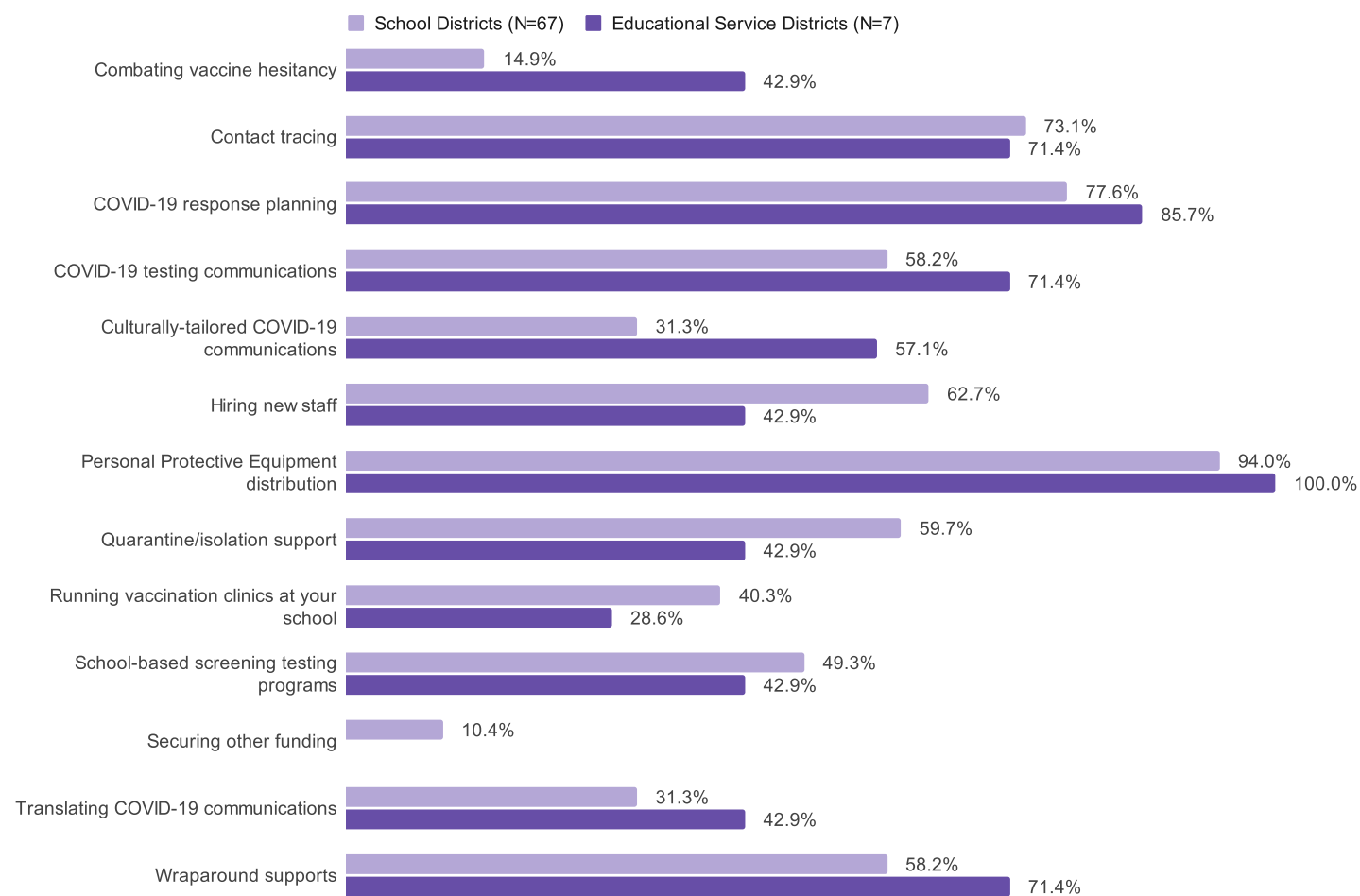
SDs, ESDs, and Principals also reported receiving non-governmental funds to support their COVID-19 response in schools. Non-governmental funds mentioned by study participants included grants from Facebook, Google, and local CBOs.

The majority of Principal survey respondents (61.9%, n=83) were unsure if they received funding from any entities besides ODE, with a few respondents reporting this uncertainty due to a lack of involvement in funding decision-making (e.g., funding handled at the district level). Nearly one-fifth (19.4%, n=26) of Principal survey respondents reported their school received funding to support the COVID-19 response from entities other than ODE and 20.9% (n=28) of Principal survey respondents reported ODE was the only source of funding to support pandemic response in their school. Other sources of funding to support response in schools reported by Principal survey respondents included donations from local churches and organizations, Student Investment Account funds, support from health care partners, and local education foundation funds.

Uses of funding to support COVID-19 response in schools

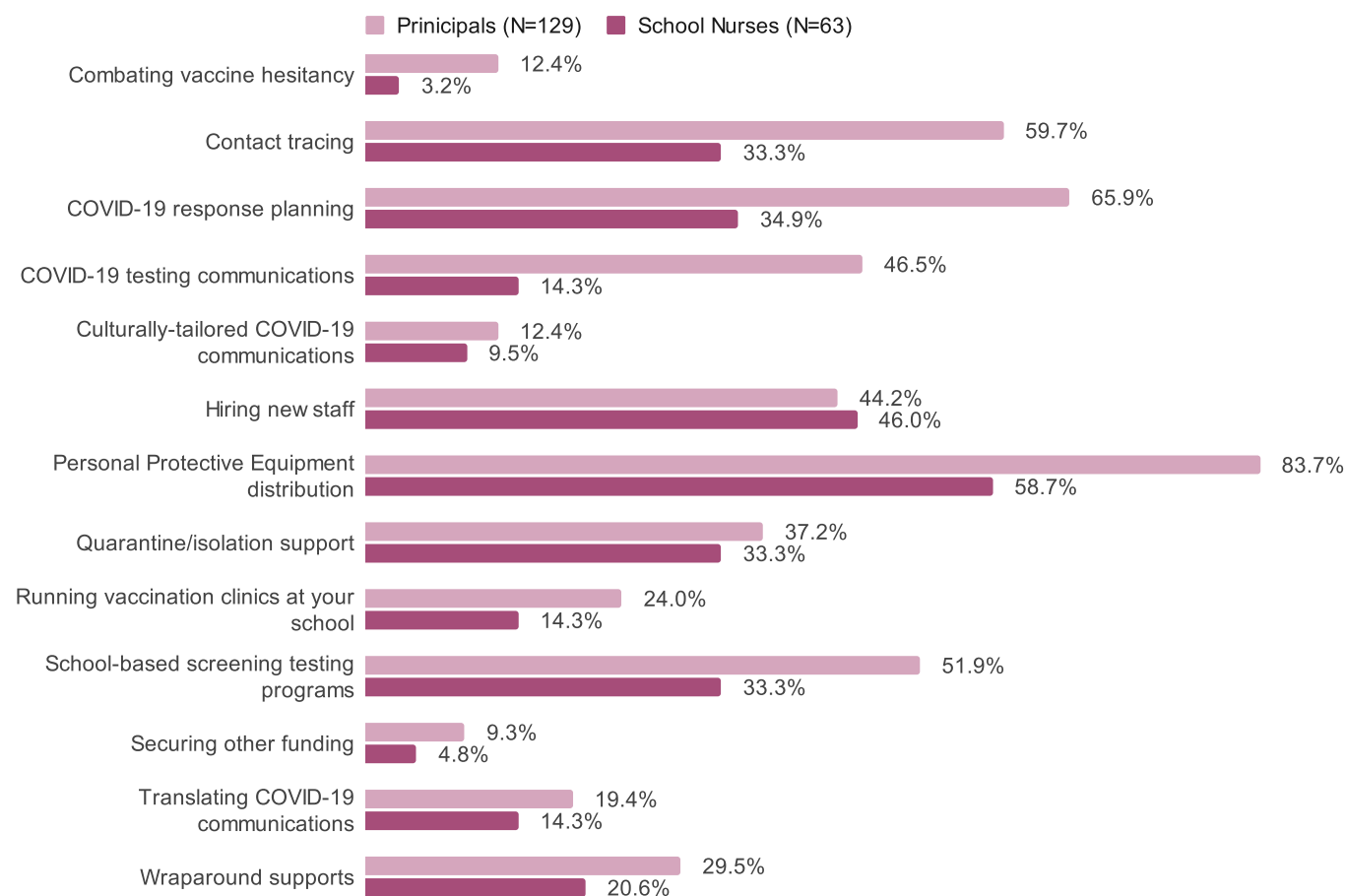
Study participants involved in Oregon's COVID-19 public health response in schools were asked about the use of COVID-19 funding to support district- and school-level pandemic response. Qualitative and quantitative analysis revealed use of funds for an array of pandemic response activities. SD and ESD survey respondents reported utilizing state and other funding to coordinate COVID-19 pandemic response at the district level (Figure 8). SDs and ESDs were aligned in much of their utilization of COVID-19 funds; SDs and ESDs most frequently reported using funding to procure PPE (94.0% and 100%, respectively), followed by COVID-19 response planning (77.6% and 85.7%, respectively).

Figure 8: How SDs and ESDs utilized COVID-19 funding



Principals and School Nurses reported using funding for multiple pandemic response activities at the school-level. Principals and School Nurses most frequently reported using COVID-19 funding to secure PPE (83.7% and 58.7%, respectively). A thorough review of the reported use of COVID-19 funds to support response in schools is provided in the following paragraphs.

Figure 9: How schools utilized COVID-19 funding



Staffing + operations

Use of funds to hire new staff was a primary use of COVID-19 funding to support Oregon's pandemic response in schools. About two-thirds of SD survey respondents (62.7%, n=42) and 42.9% (n=3) of ESD respondents reported using funds to hire new staff. About 44.2% (n=57) of Principals reported using funds to hire new staff, which is similar to the percent of School Nurses (46.0%, n=29) who reported using funds to hire new staff. One School Nurse interviewee specifically mentioned appreciating the ability to use overtime to increase nurses' capacity.

Funding was also frequently utilized to support COVID-19 response planning. At the district-level, 77.6% (n=52) of SD survey respondents and 85.7% (n=6) of ESD respondents reported using funds to support response planning. Two-thirds of Principal survey respondents (65.9%; n=85) and 34.9% of School Nurse survey respondents reported spending on COVID-19 response planning.

Community engagement + health equity

Approximately 31.3% (n=21) of SD respondents and 57.1% (n=4) of ESD respondents reported using funding for culturally-tailored COVID-19 messaging to their school communities. About 31.3% (n=21) of SD survey respondents and 42.9% (n=3) of ESD respondents reported using funding to translate federal, state, or local COVID-19 communications. Approximately 12.4% (n=16) of Principals and 9.5% (n=6) of School Nurses reported they used COVID-19 funding to provide culturally-tailored, population-specific COVID-19 communications, respectively.

“Overtime was a resource that we were allowed to do, which helped ease it a little bit. Also, they were more willing to look at FTEs, realizing that COVID took all the time away from the actual in-school issues that we had so we were able to hire, if I could find a nurse during Covid [COVID-19], didn't really find a lot of nurses, so primarily money”

—School Nurse Focus Group
Participant

PPE + other supplies or equipment

Of survey respondents, the vast majority reported spending funding to acquire PPE. About 94.0% of SD (n=63) and 100% of ESD respondents reported using funding to acquire PPE. Approximately 83.7% (n=108) of Principals and 58.7% (n=37) of School Nurses reported using funding for PPE. Some SD and ESD respondents mentioned issues with being told conflicting messages about which PPE to purchase and distribute, costing schools resources. Principals reported using additional COVID-19 relief funds to procure additional PPE and other necessary supplies.

Testing + contract tracing

The majority of SD and ESD survey respondents reported spending COVID-19 funds on contact tracing, 73.1% (n=49) and 71.4% (n=5), respectively. A little over half of Principal survey respondents, 59.7% (n=77%), reported spending COVID-19 funds on contact tracing. Roughly half of Principal survey respondents (51.9%; n=67) reported spending on school-based screening programs. One School Nurse reported they used a CDC grant to help staff with contact tracing.

Vaccination

About 40.3% (n=27) of SD survey respondents and 28.6% (n=2) of ESD survey respondents reported they used COVID-19 funding to support vaccination clinics at schools, respectively. Additionally, 24.0% (n=31) of Principals and 14.3% (n=9) of School Nurses reported using funding to run vaccination clinics at their school. SD respondents more frequently reported using COVID-19 funding to combat vaccine hesitancy, with 14.9% (n=10) of SD respondents and 42.9% (n=3) of ESD respondents reporting use of funds for this reason. Approximately 12.4% (n=16) of Principal and 3.2% (n=2) of School Nurse survey respondents reported using funds to combat vaccine hesitancy.

Wraparound supports

About 58.2% (n=39) of SD and 71.4% (n=5) of ESD survey respondents reported using COVID-19 funding for wraparound supports. Some SD and ESD interviewees reported using COVID-19 funding to ensure students received meals they would typically receive during the school day. For example, some interviewees reported that, in addition to the typical school meals offered (i.e., breakfast and lunch), some provided dinner as well.

Some SD and ESD interviewees reported using COVID-19 funding for mental health and social-emotional learning supports. One ESD reported they received a grant from Google to provide mental health support during the pandemic, “We worked with Google, they gave us a grant for a hundred thousand for mental health support. There were other partners along the way also, of course, that offered funding.” - ESD Interviewee

Some SD and ESD interviewees also reported using COVID-19 funding for additional school days or summer learning programs to support students.

About 29.5% (n=38) of Principals and 20.6% (n=13) of School Nurse survey respondents reported using COVID-19 funding for wraparound supports.

Media + communication

About 58.2% (n=39) of SD and 71.4% (n=5) of ESD survey respondents reported using COVID-19 funding for COVID-19 testing communications. As stated above, SD and ESD survey respondents and interviewees reported using funding to translate COVID-19 messaging and to create culturally-tailored messaging. One SD and ESD interviewee reported using COVID-19 funding to purchase communication tools to improve emergency response. Similarly, 46.5% (n=60) of Principals and 14.3% (n=9) of School Nurse respondents reported using funding for COVID-19 testing communications. Although Principal survey respondents reported using funding for media and communication, this was not something that participants brought up during focus groups.

“We were doing three meals a day actually, and running buses all over the county. We were doing a grab and go breakfast. And then, the second one was a lunch and a supper. And I think we did 600,000 meals.”

—SD Interviewee

Technology

SDs also reported spending a large amount of funding to improve technology access for their students. Over half of SD and ESD interviewees reported using COVID-19 funding for technology and other distance learning supports, which is unsurprising given the overwhelming number of study participants who reported their district was not fully prepared for a complete transition to distance learning. One Principal reported securing funds from Facebook to ensure students' technological needs were met during the onset of the pandemic.

“We spent quite a bit of money just trying to create a more robust online experience. So, we spent a lot of money on Chromebooks for all the kiddos because we were not a one-to-one school. And so, we needed to make sure that all the kids had devices and then hotspots for people that didn't have very good internet and just that kind of stuff for when we were virtual.”

—SD Interviewee

“It was everything from PPE, to devices, to hotspots. I was paying between \$20,000-\$26,000 a month for hotspots for kids, because we have people that just didn't have Wi-Fi, and it was purchase of devices, and a learning management system, and ESSER I. So, I tried not to spend a lot of money on people knowing the grant would run out.”

—SD Interviewee

“Facebook met with us and kind of was like, what are your needs? So, early on we were able to make sure that everyone had computers, people that didn't have internet, we had buses that went out to have kind of places until we were able to get hotspots so that we could give hotspots to people that didn't have internet.”

—Principal Focus Group
Participant

Modification of school buildings

Education study participants reported using COVID-19 funding to modify school buildings to reduce risk of COVID-19 spread in schools and meet public health mandate requirements in a number of ways. These included:

- improved or new ventilation systems in school buildings;
- single-room ventilation systems (classroom filtration systems);
- signage in school buildings;
- plexiglass dividers for use throughout classrooms and other areas; and
- purchasing single-child desks to enable social distancing.

Necessary improvements to funding processes + mechanisms

Key players in Oregon’s public health response to the COVID-19 pandemic in schools, including SDs, ESDs, Principals, and School Nurses, were appreciative of funding received to support COVID-19 response in their communities. Nevertheless, study participants reported experiencing the following funding-related issues:

- lack of clarity around use of funding, including changes to funding;
- inflexible use of funds for specific items that certain schools or districts might not have needed;
- funding amounts were not distributed to communities based on need;
- delays in receiving fundings;
- short duration for spending funds; and
- heavy reporting requirements for funding.

“I spent \$250,000 on desks so that students are on individual student desks, because they were in tables before. So, there were some challenges to overcome that without the finances, we could not have opened and followed the requirements there.”

—SD Interviewee

“We use those dollars for HVAC system improvements, possibly classroom filtration, any kind of furniture things that we had to do, if people wanted to have plexiglass things in the office, or on teacher desks, or things like that. So, some PPE stuff”

—SD Interviewee

The most frequently reported barrier to efficient use of COVID-19 funding to support school response was the same for Principals and ESDs—spending requirements associated with the funding source—with 28.7% (n=37) of Principals, and 57.1% (n=4) of ESD respondents reporting this barrier (Figures 10 and 11). Reporting requirements associated with the funding source was another frequently reported barrier among Principals (24.0%, n=31). About one-fifth (21.7%, n=28) of Principal survey respondents reported the length of time it took to receive funds was a barrier to the efficient use of COVID-19 funding. The most frequently reported barrier by School Nurse survey respondents was hiring new employees (23.8%, n=15), followed by school/district administrative requirements (22.2%, n=14), and spending requirements (20.6%, n=13).

Figure 10: Barriers to efficient use of COVID-19 funding for SDs and ESDs

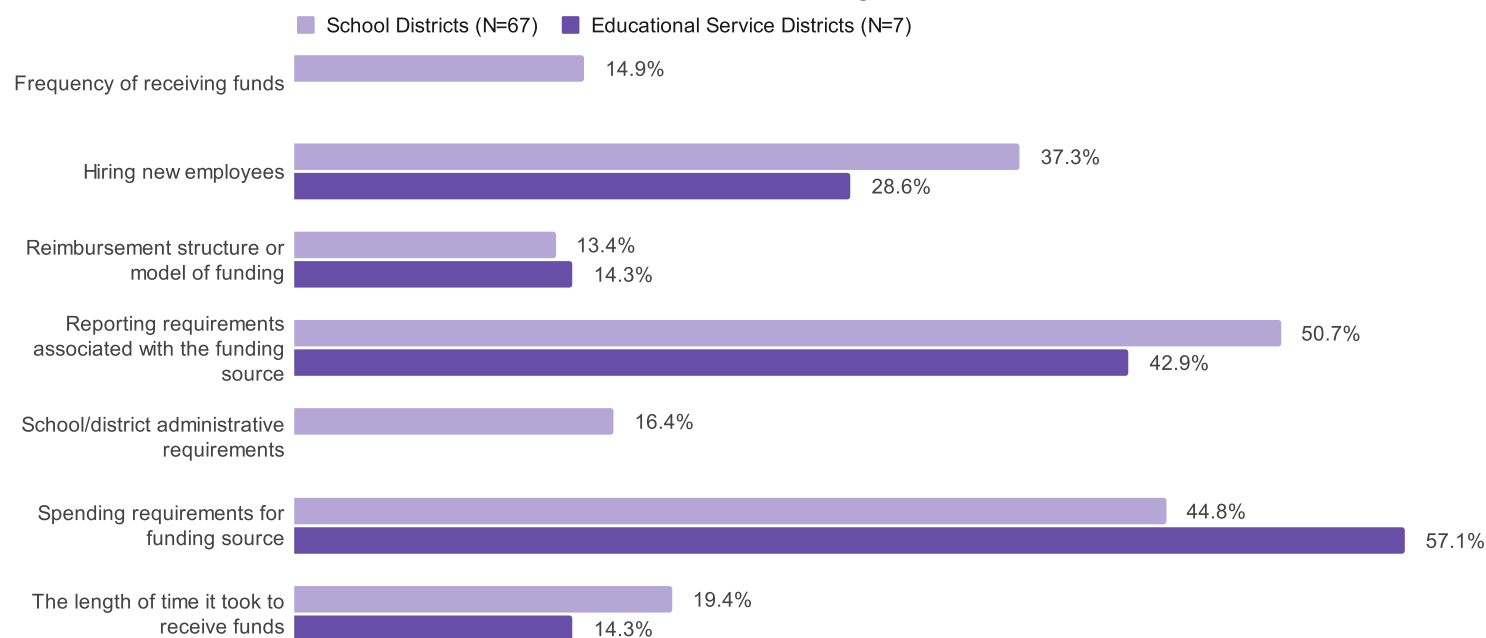
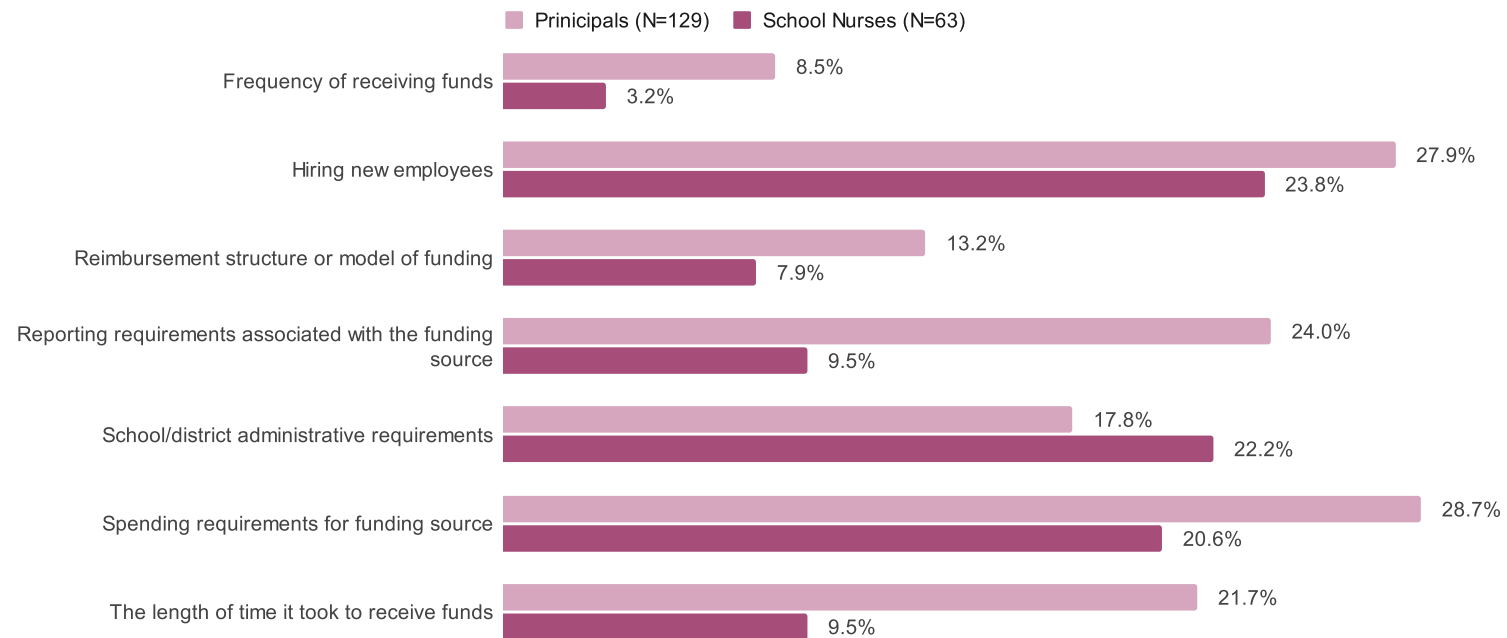
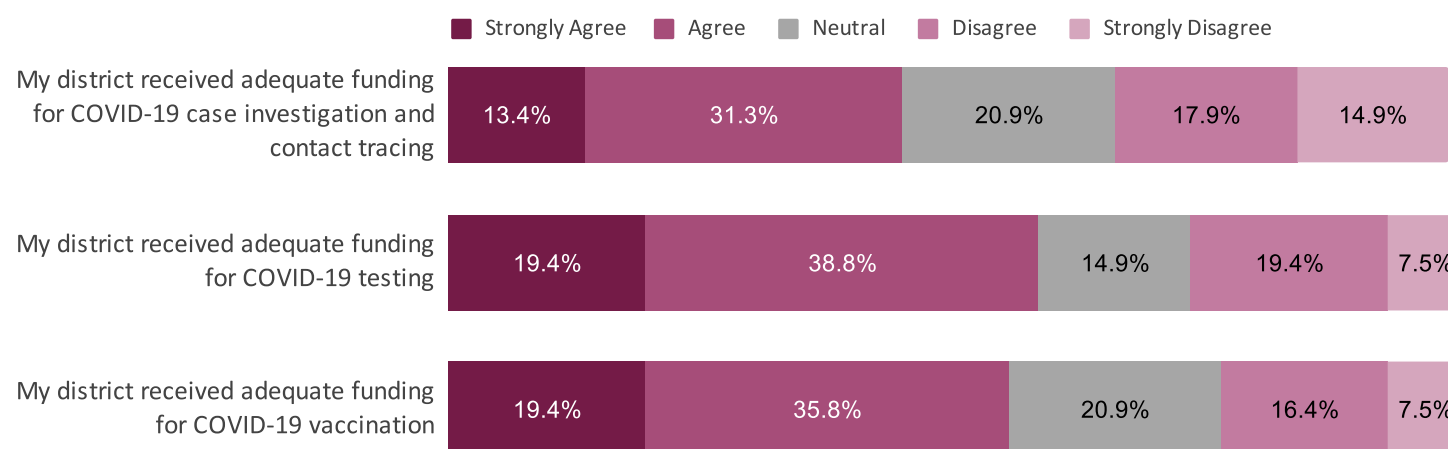


Figure 11: Barriers to efficient use of COVID-19 funding for schools



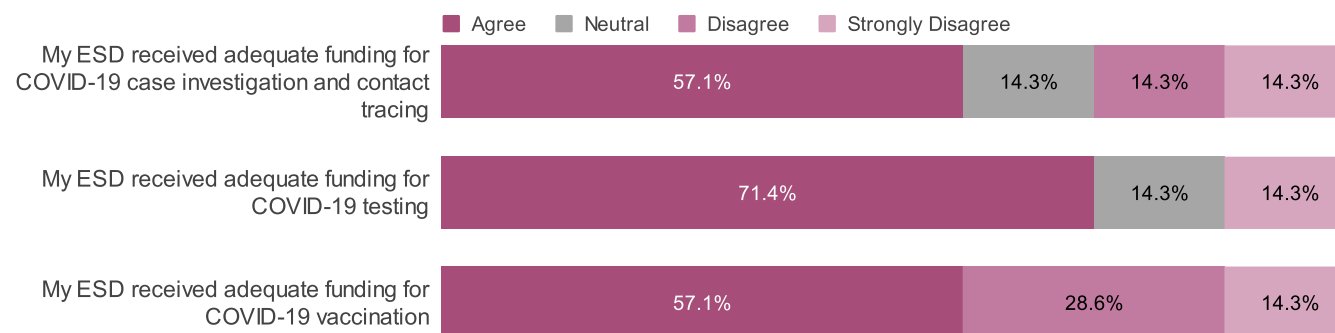
All educational survey respondents were asked whether their district or school received adequate funding for specific COVID-19 response activities. About 44.7% (n=30) of SD survey respondents agreed or strongly agreed that their district received adequate funding for case investigation and contact tracing and about one-third (32.8%, n=22) disagreed or strongly disagreed (Figure 12). Over half of SDs agreed or strongly agreed (58.2%, n=39) that they received adequate funding for testing and 55.2% (n=37) reported they received adequate funding for COVID-19 vaccinations.

Figure 12: Adequate funding for COVID-19 response activities (SD respondents, N=67)



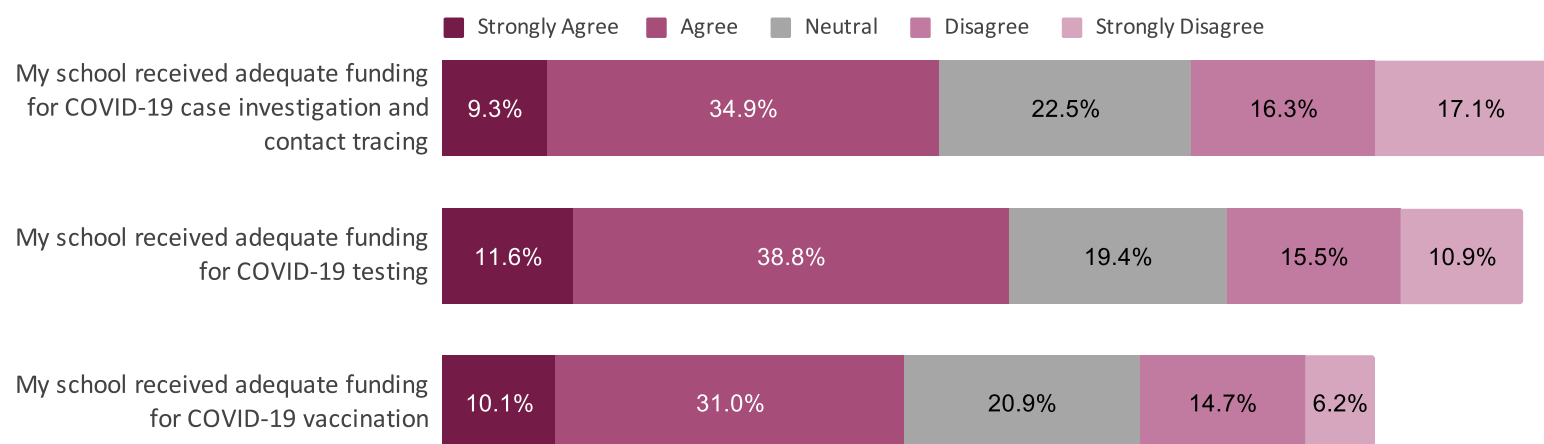
Over half (57.1%, n=4) of ESD survey respondents agreed or strongly agreed that their ESD received adequate funding for COVID-19 case investigation and contact tracing (Figure 13). Almost three-fourths (71.4%, n=5) and over half (57.1%, n=4) of ESD respondents agreed or strongly agreed that they received adequate funding for testing and vaccinations, respectively.

Figure 13: Adequate funding for COVID-19 response activities (ESD respondents, N=7)



Approximately 44.2% (n=57) of Principal respondents agreed or strongly agreed that their school received adequate funding for case investigation and contact tracing and a third (33.3%, n= 43) disagreed or strongly disagreed (Figure 14). Half of Principal respondents (50.4%, n=65) agreed or strongly agreed that their school received adequate funding for testing. Less than half of Principal respondents (41.1%, n=53) agreed or strongly agreed that they had enough funding for vaccinations; 17.1% (n=22) of reported they were not involved in COVID-19 vaccination.

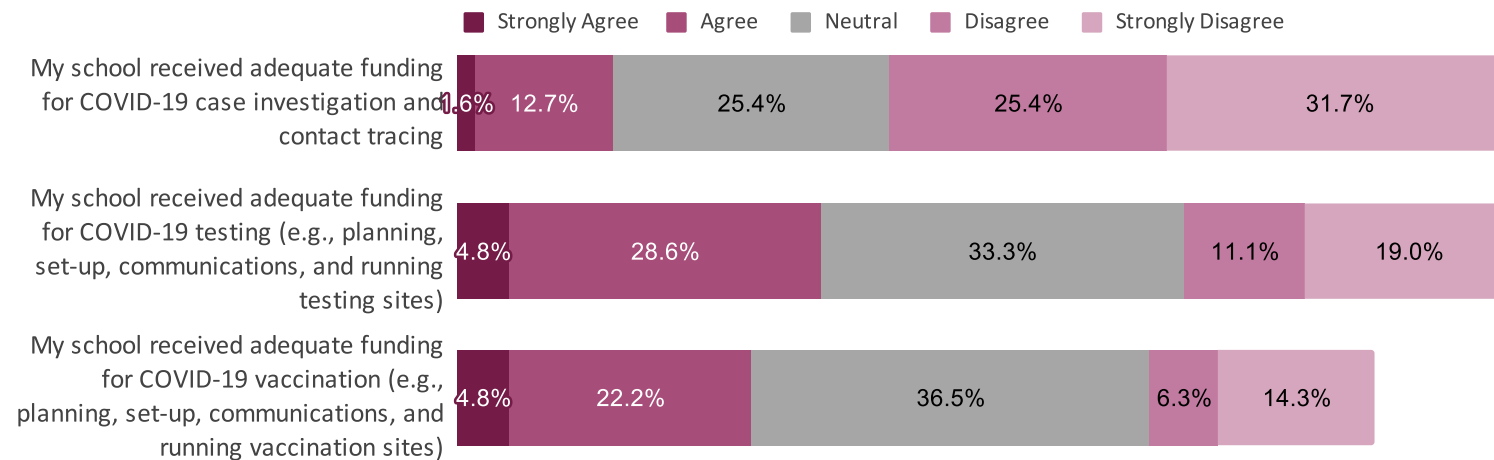
Figure 14: Adequate funding for COVID-19 response activities (School Principal respondents, N=129)



Note: Responses to each activity do not equal 100% because these represent all responses except for "N/A, My school did not engage in these activities"

Among all educational study participants, School Nurse survey respondents most frequently disagreed or strongly disagreed that their school received adequate funding for COVID-19 case investigation and contact tracing (57.1%, n=36); only 14.3% (n=9) of respondents agreed or strongly agreed with this statement (Figure 15). A larger percentage of School Nurses agreed or strongly agreed that they received adequate funding for testing (33.4%, n=21), and vaccinations (27.0%, n=17).

Figure 15: Adequate funding for COVID-19 response activities (School Nurse respondents, N=63)



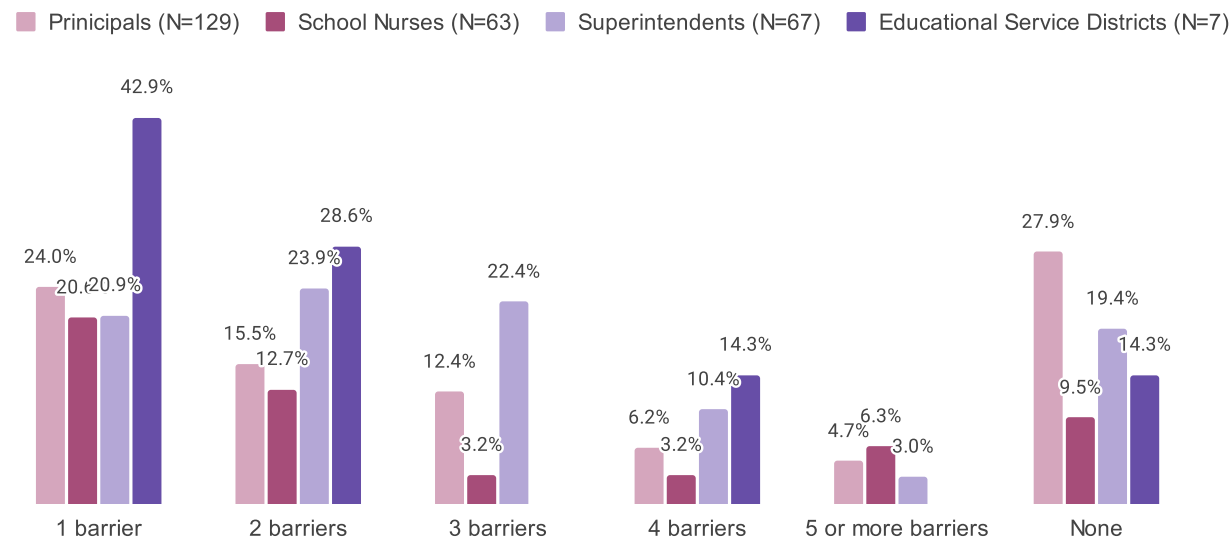
Note: Responses to each category do not equal 100% because these represent all responses except for "N/A, My school did not engage in these activities"

Unrestricted + flexible funding

SD and ESD survey respondents reported their district experienced many barriers to the efficient use of COVID-19 funding (Figure 16). Frequently cited barriers to the efficient use of funds included spending requirements associated with the funding source, hiring new employees, and the length of time it took to receive funds. These barriers were echoed in interviews with SD and ESD interviews.

Figure 16 displays the number of funding-related barriers experienced by each educational informant group for this study. Looking across various informant groups, nearly one-third (27.9%, n=36) of Principal survey respondents reported they did not experience any barriers to efficiently using COVID-19 funds. SD survey respondents reported experiencing the largest number of barriers relating to use of funds, which is unsurprising given that most funds were distributed at the district level.

Figure 16: Numbers of barriers experienced in the efficient use of COVID-19 funds



“A lot of the federal money had certain restrictions on it that just really had to, I think because school districts are not public health agencies, I think it was just trying to navigate what was allowable and what wasn't allowable, would've been the biggest challenge, but they made it work, to be able to utilize those funds to support where they could.”

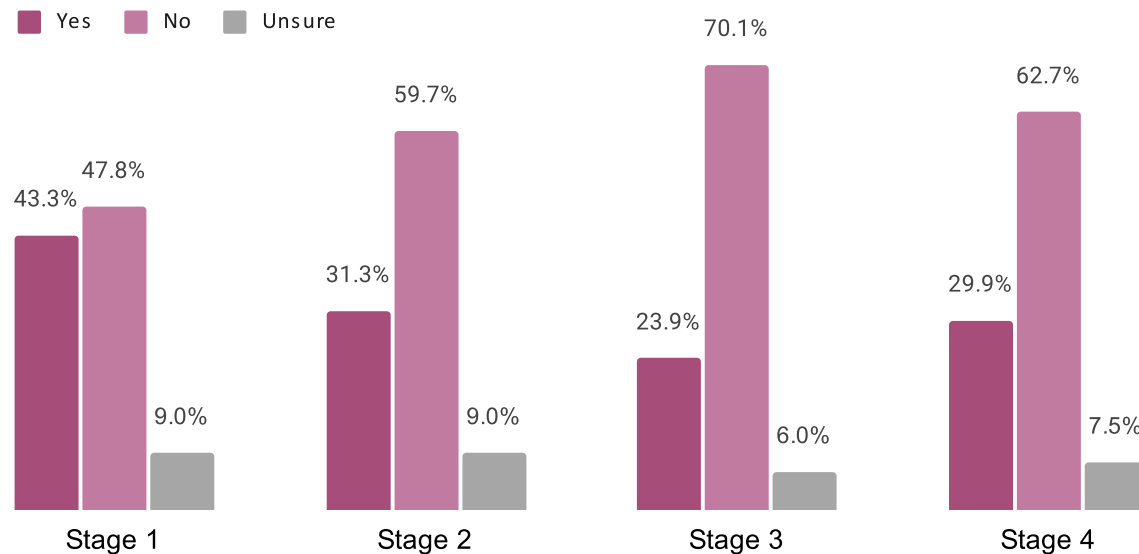
—ESD Interviewee

Predictable funding schedules + timelines

Study participants involved in Oregon's public health response in schools were asked whether they worried about being able to have enough funds to support ongoing COVID-19 response in their district or school during specific stages of the pandemic.

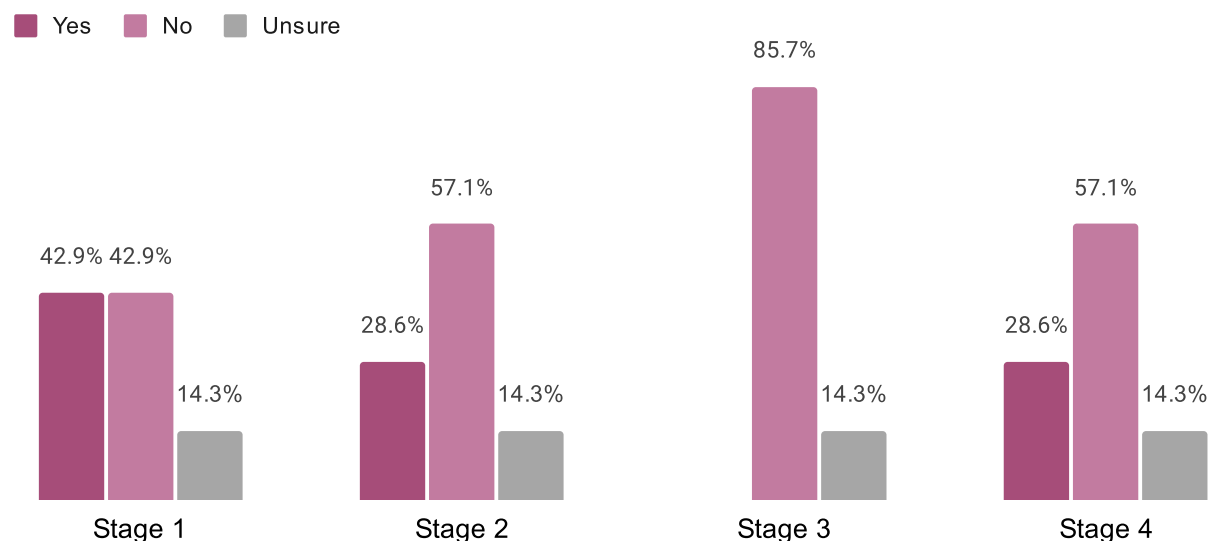
During Stage 1 of the COVID-19 pandemic, 43.3% (n=29) of SD survey respondents reported they were concerned about continued funding to support COVID-19 response (Figure 17). The percent of SDs who reported this response decreased slightly across Stages 2 and 3. In Stage 4, however, there was a 6% increase in the number of respondents who reported they were worried about funding, escalating from 23.9% (n=16) in Stage 3 to 29.9% (n=20) in Stage 4. Across all stages, 13.4% of SD survey respondents (n=9) were worried about continued funding to support COVID-19 response in their district.

Figure 17: Did district worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (SD respondents, N=67)



With the exception of Stage 1 of the pandemic, the majority of ESD survey respondents reported they were not concerned about having enough funding to support their school community (Figure 18). During Stage 3, not a single ESD respondent was worried about running out of funds. One respondent was unsure about funding predictability across all stages.

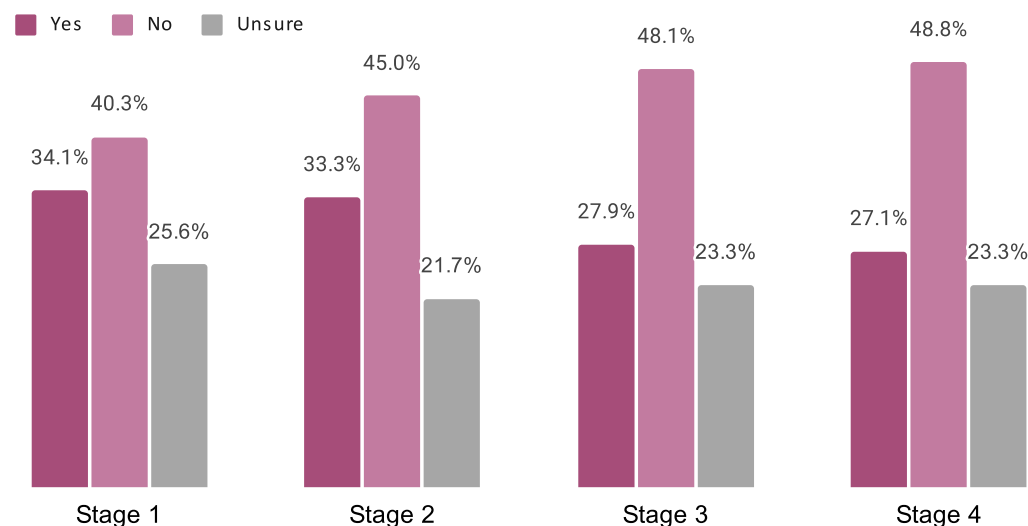
Figure 18: Did ESD worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (ESD respondents, N=7)



In comparison with SD and ESD respondents, a smaller percentage of Principals were worried about whether they would have enough funds to continue supporting COVID-19 response. About one-third of Principal survey respondents were worried whether they would have enough funds to continue to support their school's COVID-19 response 34.1% (n=44) in Stage 1 and 33.3% (n=43) in Stage 2. Funding worries among Principals diminished over time, with nearly half of survey respondents reporting they were not worried about funding by Stage 4.

Some SD and ESD study participants reported that tight timelines to spend COVID-19 funding was a challenge and they appreciated when timelines for specific funding sources were extended.

Figure 19: Did school worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (School Principal respondents, N=129)



“We ended up with quite a bit of cash we had to figure out how to spend. I hate to say it out loud, but it was almost like too much money in a short amount of time. So, we were glad that they extended the timelines. It's not over. And so, having an extended timeline, I mean even through 2024 is not totally extended but better than being done now. So, that's how we're going to do some of these construction kind of things that will help us in the future. Again, replacing a rooftop, they're called RTS rooftop units for heating, ventilation, and air conditioning (HVAC) and things like that. So, those projects are still underway.”

—SD Interviewee

Easier reporting, consistent requirements, + easy to use data systems

The most frequently reported COVID-19 funding-related challenge encountered by SD survey respondents was reporting requirements associated with the funding source, with 50.7% (n=34) of survey respondents experiencing this barrier. For Principal survey respondents, reporting requirements associated with the funding source was the third most frequently cited barrier to the efficient use of COVID-19 funding. Reporting requirements seemed to be more frequently brought up as a barrier in districts that did not have as many staff members.

Solutions for staffing + sustainability after COVID-19 funding

A large number of educational sector study participants reported staffing-related barriers, including the hiring and training of staff, hindered the efficient use of COVID-19 funding. Approximately 37.3% (n=25) of SD respondents and 28.6% (n=2) of ESD respondents reported hiring new employees was a barrier to efficient use of funds; 27.9% (n=36) of Principal survey respondents also reported that hiring new employees was a barrier to the efficient use of funds. Some schools reported they either did not have a school nurse at all or had to share a nurse during the pandemic, which they felt hindered their response. It is important to invest in additional school nurse support for schools to aid in response to future public health emergencies.

“When they have to write reports, that's a full-time job for a person. When I have to write those same reports, it can't be a full-time job because it has to be divided amongst all the other hats that I wear. And I'm not the only superintendent in that boat. All of us were in that boat. So we needed the funds as badly as everybody else. We needed the ability to purchase the same resources that everybody else was purchasing. The level of accountability at times made it feel like we shouldn't have accepted the money. It almost felt like we are being punished more than the machines, than the big schools who have staffing for that work.”

—SD Interviewee

“The injection of funding into the state and down to the schools has been a little bit confusing. While valuable, it's one time; we knew immediately that we couldn't use it for staffing or anything that required sustainability because of the stimulus nature of the money. It was designed to be a one-off.”

—SD Interviewee

“I think areas of improvement honestly could be for funding to be extended beyond the current deadline. Because we're not done with the pandemic, I still have dollars. I still would like to be able to use those to support kids and staff. Just because there might be a June 30th or whatever deadline on funds doesn't mean we're out of the woods yet. Not even asking for more money, but if I could extend the money that I've got further, that would be wonderful.”

—ESD Interviewee

“It had to be used as a one-off. So purchasing things one time with no expectation of sustainability or that we would do it again in future years sort of became the expectation. As the rules have changed with ESSER III, most recently, one-off purchases are not as easy as they were. It's sort of feels punitive to have those funds available to us now the way they're being overseen.”

—SD Interviewee

Operationalizing the COVID-19 response

Operational coordination

An event the scale of COVID-19 was uncharted territory for Oregon's schools. Although some Oregon schools had emergency response coordination experience with prior events, such as influenza, wildfires, or norovirus, these were localized events where operational coordination and response was handled at the local level. Thus, a formalized response at the state level, where there was structural alignment and coordination between state agencies such as OHA and ODE, had not been necessary.

OHA's support to Oregon's pandemic response in schools focused on relaying timely, accurate information about COVID-19, updating public health mandates, and answering questions on these topics for those directly involved in the response. In addition to providing funding to support COVID-19 pandemic response in schools, ODE's role in Oregon's public health response in schools focused on interpreting public health mandates provided by OHA for schools, providing guidance to school districts, and answering questions about how to adhere to the mandates in schools. As part of ODE's role in response coordination, they reported collaborating with various education partners throughout the duration of the pandemic, including SDs, ESDs, principals, school nurses, school faculty, and staff.

During Stage 1 of the pandemic, ODE worked on creating centralized modes of COVID-19 communication, which resulted in the formation of a COVID-19 ODE email inbox. ODE reported they worked with OHA on any public health-related communication pieces, which was no easy task.

“For those kinds of past activities that haven't been pandemic level in nature, flu maybe cross that line. It was really local action where the interaction happened and there wasn't as much formal structured alignment between the state agencies.”

—Educational Sector Interviewee

“I might meet with a group of nurses, hear their concerns, digest it internally, bring it to the OHA/ODE joint meeting, come up with a solution and then figure out how it would make that iterating guidance.”

—ODE Interviewee

One ODE interviewee reported it took “hundreds of hours” to coordinate with OHA to centralize COVID-19 messaging and communication. As ODE worked through their response, they were examining how other states and countries were responding to inform Oregon’s response in schools; ultimately, this research developed into the Ready Schools, Safe Learners document and subsequent iterations. School districts and ESDs reported they appreciated ODE’s lead and guidance on developing guidance and procedures in schools.

ODE was also responsible for managing the COVID-19 response plans required by each SD and served as a reopening advisor for SDs. ESDs provided staffing for Reopening Advisors (now called Communicable Disease Preparedness Liaisons) through a contracts with ODE. The state provided documents to guide policies and procedures in schools, which study informants appreciated. As the pandemic progressed from Stage 1 to Stage 2, ODE reported they tried to return to local decision-making.

“So we moved from a hundred plus page body of very detailed, very researched, very specific guidance that had been contextualized through OHA on the public health side and through ODE on the education side to a scaled down resiliency framework is what we called it for Ready Schools, Safe Learners that really put in motion, the concept of returning to local decision making on these things,

elevated the things that had existed prior to the pandemic that schools were going to, over time, become increasingly reliant on for managing communicable diseases. And really then starting to construct a framework that centered students and families in how schools were going to be moving forward with that local decision making to manage illness.”

—Educational Sector Interviewee

“And so, just all of that kind of guidance I guess, of what to do and when to do it and sample letters and spreadsheets for testing protocols and just sign-in sheets and just all of that kind of stuff was very helpful to not have to produce on our own. In fact, that would've been really, really difficult.”

—SD Interviewee

SDs reported some frustration with LPHA coordination, which seemed to come from the large amount of unanticipated public health responsibility that was given to SDs.

Principals felt supported by their SDs and ESDs, particularly relating to the development and implementation of COVID-19 plans at the school level. Development of building- and school-specific COVID-19 response plans varied throughout the state. For some districts, it was a very coordinated effort where multiple informants were brought to the table. In other instances, guidance was sent to Principals and decisions were made at a school level. Some School Nurse interviewees reported they were largely not responsible for decision-making for their schools and instead were responsible for implementing public health mandates in their school.

Many Principal focus group participants reported their LPHA was a large partner who aided them in across multiple areas of COVID-19 response at the school level. Specific areas of operational coordination mentioned by Principal interviewees included PPE procurement and COVID-19 information and guidance changes.

Some study informants, however, noted disconnects in response coordination between the educational and public health sectors. This was most noted at the school-level, as Principals and School Nurses reflected that unclear role delineation caused confusion and in some instances, hindered the school's ability to timely respond. One School Nurse reflected on this disconnection in response coordination: "I was under the impression that LPH would take the leadership role and handle everything with some assistance from us, not the other way around."

"It felt, and still feels like schools shouldered so much of the public health burden of our young people and communities during this time. We became public health departments and that is not our jobs."

—SD Interviewee

"As a nurse in the district we were the last to know of policies and procedures. We had no role in decision making and found it very frustrating."

—School Nurse Survey Respondent

“So, I'm gonna say that our local health department was probably the largest asset for us. They partnered with us obviously by getting some supplies to us initially masks, hand sanitizer, stuff like that. Setting up, you know, opportunities for our staff to get vaccinated and eventually other groups within our school. But we met with them, we actually had a pretty good system within our county and we met with them, I think it was about at least biweekly we met with them. And so, they came and gave us an update of what was going on and things that were coming down the pipe maybe or things that had changed.”

—Principal Focus Group
Participant

“I was on a leadership team. We made all decisions for our buildings based on the guidance. And so, that there was, I think there was about [15-35] people that sat in a room and came up with all the building level guidance... We had all of our Principals, or all of our district admin Principals. And then we had counselors and we had our deans of students and I think there were some teacher leaders that were also involved. We had some representation from our union on there so we could all collaborate on what this was gonna look like and also to control the messaging.”

—Principal Focus Group
Participant

“A lot of paperwork and frameworks and guidance and all that. I do feel like for me in [county name], I did feel really supported both from my district level administration and also the county health department. And I felt like there was a contact at the county health that I could call if I had questions and they would get back immediately. I felt like our administrators at the district level were extremely supportive in helping us create our blueprints and follow through and just a lot of support.”

—Principal Focus Group
Participant

Utilizing existing plans + structures

Emergency Operations Plan (EOP)

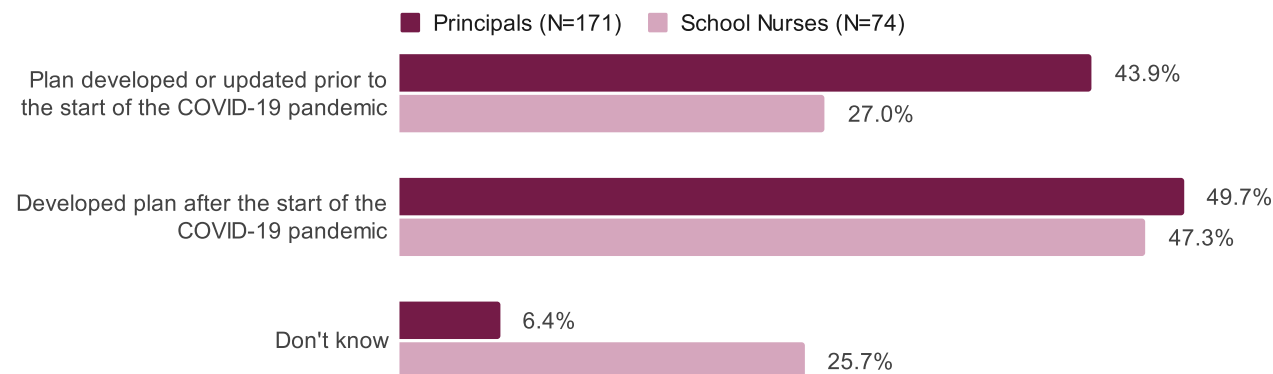
Most Principal survey respondents (49.7%, n=85) stated their school did not have an EOP before the pandemic, but developed one after the start of the pandemic; 43.9% (n=75) stated their school already had an EOP in place prior to the start of the pandemic. A handful of Principal survey respondents (6.4%; n=11) did not know about the existence of an EOP for their school.

Similar to Principal survey respondents, most School Nurse survey respondents (47.3%, n=35) reported their schools did not have an EOP at the start of the pandemic, but developed one after the start of the COVID-19 pandemic. Just over a quarter of School Nurse respondents (27.0%, n=20) reported their school had an EOP in place that was developed prior to the start of the COVID-19 pandemic.

Communicable Disease Management Plan

Less than half of Principal survey respondents (44.4%, n=76) reported their school had a Communicable Disease Management Plan in existence prior to the pandemic and half (49.7%, n=85) created one after the start of the COVID-19 pandemic. Notably, one respondent (0.6%) stated that their school did not have a Communicable Disease Management Plan and 5.3% (n=9) did not know the status of a Communicable Disease Management Plan in their school.

Figure 20: Existence of a School Emergency Operations Plan (EOP) at school



Most School Nurse survey respondents (51.4%, n=38) reported their school had a Communicable Disease Management Plan in existence prior to the pandemic.

Areas of response

Education sector survey participants were asked about the specific ways they responded to the COVID-19 pandemic at the district- or school-level. The following sections will delve into specific activities associated with the COVID-19 response in schools.

“Helping districts with those plans, supporting technical assistance. And that involved our education staff and our school nurses pulling together to help schools stay open.”

—ESD Interviewee

Figure 21: Ways SDs and ESDs responded to COVID-19 pandemic

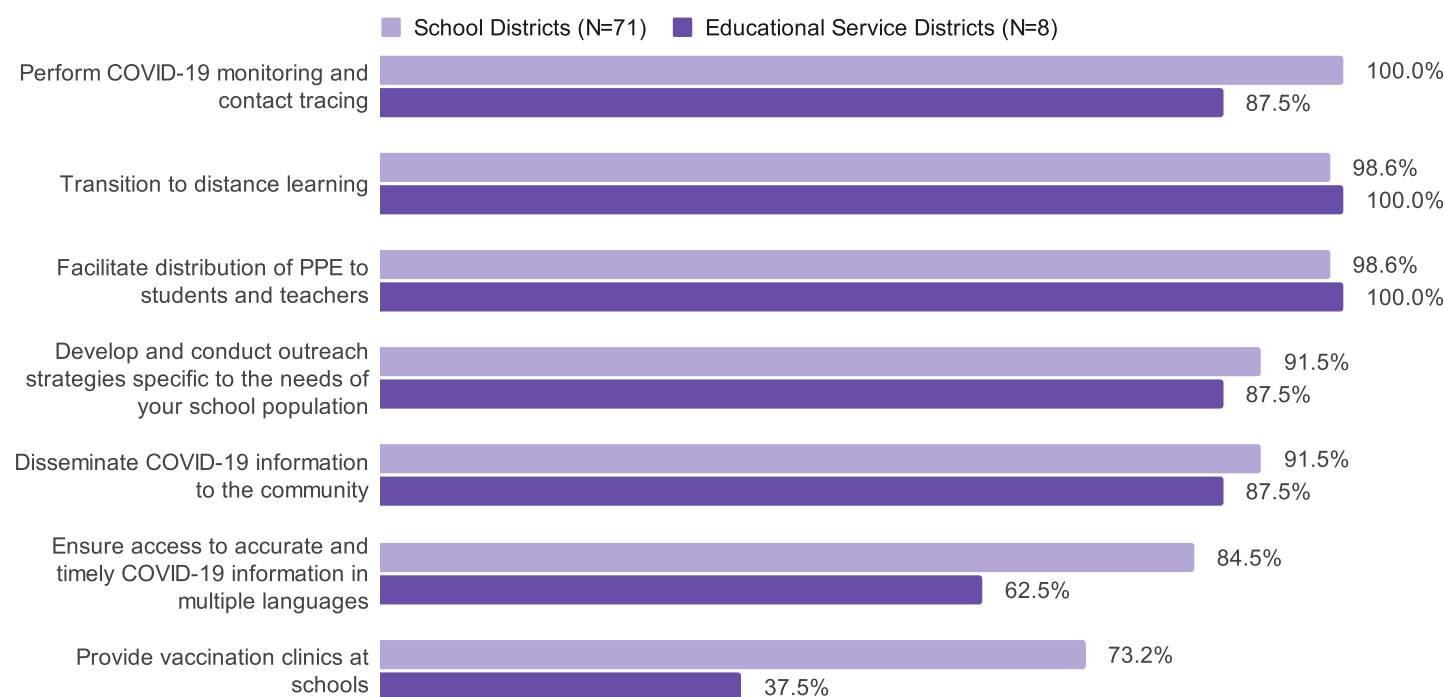
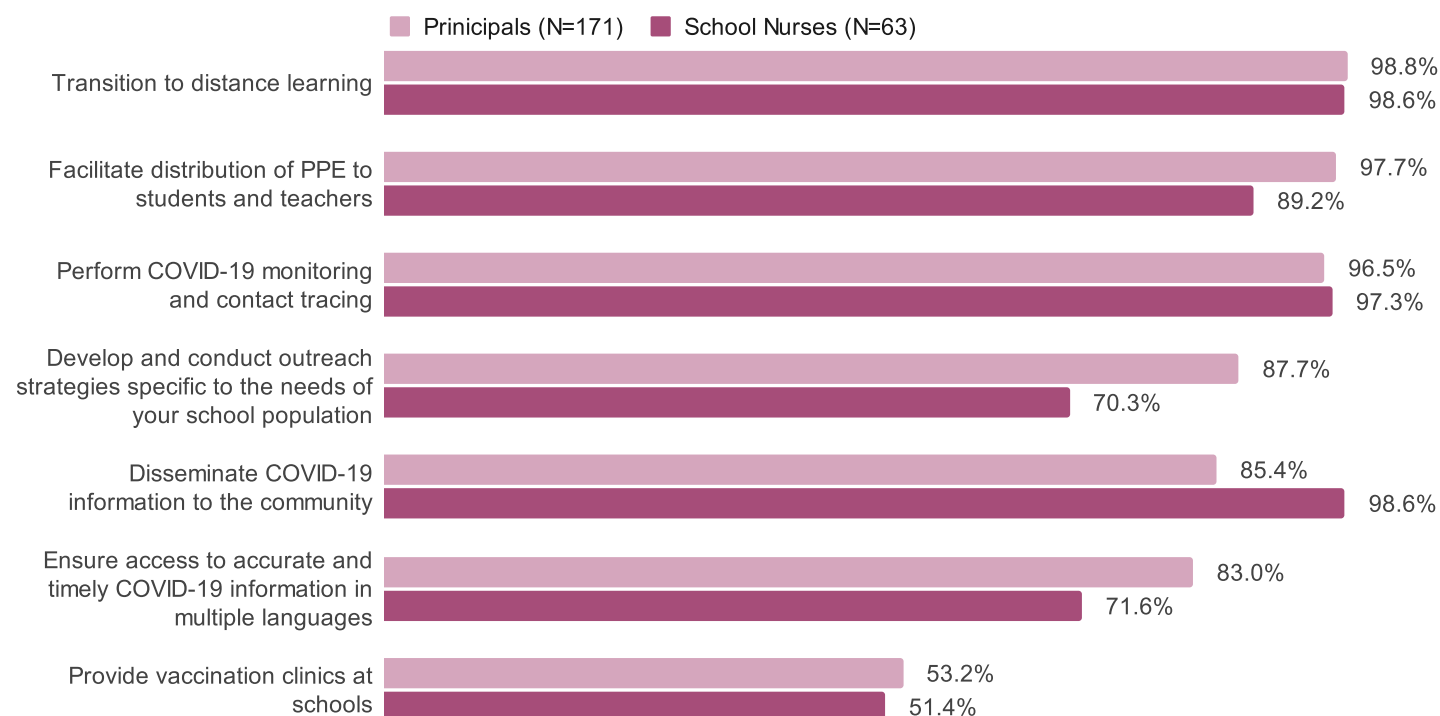


Figure 22: Ways that schools responded to COVID-19 pandemic



“So in Stage 2, when was it? I remember [summer 2021] feeling fairly optimistic and then July not, because we were starting to see the Delta variant coming in. So that included, in that summer period and rapidly into the fall, very quietly, standing up a whole set of resources to support districts that may have to make a decision to close temporarily or shut down in-person learning due to COVID during the Delta surge.”

—ODE Interviewee

Contact tracing + testing

All (100%) of SD survey respondents reported performing contact tracing and COVID-19 monitoring as part of the pandemic response at the school level. Nearly all (96.5%, n=165) Principal survey respondents and School Nurses (97.3%, n=72) reported performing COVID-19 contact tracing and monitoring as part of their response at the school level.

OHA and ODE distributed PPE and COVID-19 test kits to SDs. Some test kit distribution from the state was coordinated and supported by ESDs. Principals also reported support from LPHAs and district-level staff to acquire COVID-19 tests, and other supplies necessary to the response. Some SDs reported their district supported COVID-19 testing sites, some of which were set up on-site at schools.

One Oregon Education Association (OEA) interviewee mentioned that their organization was not involved in contact tracing, but provided information about contact tracing and its effectiveness to their educators throughout the stages of the pandemic.

Challenges

Of the challenges associated with the COVID-19 pandemic, one of the most onerous and most challenging aspects of the response was COVID-19 tests. SDs reported there was confusion regarding who would be responsible for contact tracing, as initially LPHAs were to be responsible for contact tracing. Further, study participants reported that due to LPHA capacity issues, contact tracing became a responsibility that schools took on. One SD reported that having established relationships with the school community, and specifically, parents, aided with contact tracing.

“COVID testing sites. They would set up sites for the public to just come to, that kind of thing. They had many of those in schools. We were trained to do COVID testing as well. In hindsight, it just seemed so simple. At the time when [employee at the Department of Education] from the department of Ed came on and they were like, okay, everybody's going to learn to do testing. I was like, you are nuts. They did. Districts did their own testing and got trained to do that, and not with the PCR [polymerase chain reaction test] or whatever, not the deep way up there testing, but with the tests that everybody does at home now without thinking that was new.”

—SD Interviewee

Contact tracing requirements were largely viewed as unrealistic for the school setting across multiple education study informants. Contact tracing was reported as a huge challenge (and in some instances, a burden) on school staff, especially given the lack of experience and knowledge about contact tracing. The second most cited barrier in COVID-19 response for Principal survey respondents was creating scripts for contact tracing (32.2%, n=55). A little over one-third (37.8%, n=28) of School Nurse survey respondents identified a lack of locally available PPE as a top barrier in responding to the COVID-19 pandemic. On this note, most SD and ESD interviewees noted the difficulty of learning and executing contract tracing while mitigating COVID-19 in their schools. Large surges of positive COVID-19 cases, such as those associated with the Omicron variant, made it increasingly challenging for school staff to keep up with contact tracing. A few respondents mentioned that in Stage 3 the pandemic was becoming overwhelming and taxing on people, making compliance with contact tracing incredibly difficult. As the pandemic progressed, cooperation with public health requirements for a few respondents was dwindling, which added to the challenges of contact tracing, as it was difficult to get some individuals to cooperate with contact tracing procedures. Some SD and ESD interviewees wondered why they were even asked to keep up with the onerous task of contact tracing.

“The challenge came from contact tracing, because originally the health authority said they were going to handle the contact tracing, and then they just didn't have the capacity to do it. And we could do it so much quicker and frankly better. When we would call home and tell parents that they needed to keep an eye on their kid, they heard it better from us because we're local and we know their kids rather than OHA or [Northern Oregon County] that there's no relationship built. I'm glad we were able to do that work, but I think it was a misstep at the beginning that OHA say they were going to handle it all. They didn't have the capacity.”

—SD Interviewee

“But there was not a good, easy way for them to do contact tracing through that, or even to figure out how to notify a particular cohort. There was no easy button that's like, "Email everybody in this cohort." So it was a time consuming process for the school districts to then have to figure out, okay, here's the cohort we're looking at. Let's find all the emails for every student in that cohort. It was so much put on the schools.”

—ESD Interviewee

“I think the most difficult thing, and I think this is just the scope of trying to actually do this and it became a little bit hilarious at times, was the contact tracing. Just looking at the video, we had to assign seats on the bus so we know which kid was sitting how far apart from the other kid. And you don't know if they're getting it in school, or if they're getting it home.”

—SD Interviewee

“But they were just totally overwhelmed. I mean, the scope of trying to do contract tracing for that many people, for that many schools across that many areas was probably foolish to even imagine you could do. So, I think the contract tracing was really a little bit of a disaster, just because of the scope, which is crazy.”

—SD Interviewee

A few Principal focus group participants reported that part of their role during the COVID-19 response was to support epidemiologic data collection and reporting for the county by assisting with contact tracing, and/or documenting positive cases. Principals reported that due to constantly changing quarantine and isolation guidance, they spent a burdensome amount of time creating new scripts for contact tracing.

“Contact tracing and tracking in schools was a challenge at first. I would be on the phone for hours communicating close contacts and receiving information from families about their exposure. Not until we created a system did I feel we were managing the pandemic.”

—Principal Focus Group Participant

“Staff to handle the sheer volume especially when students were involved in activities/athletics/and back in person. Tracing all the potential contacts was time consuming and we needed an added FT staff to do this well.”

—Principal Focus Group Participant

“Once we had students back in the building, and the contact tracing and the guidelines, our job was completely different than what a normal school administrator job would look like. So the majority of my day sometimes would be creating contact tracing lists for our public health, our county public health, and calling families and getting work and having them pick things up.”

—Principal Focus Group Participant

Some School Nurses felt like OHA employees did not have in-depth knowledge of the school system and were providing guidance that was difficult and sometimes, impossible to adhere to in a school setting. A specific example of this was contact tracing. School Nurses reported that contact tracing felt ineffective when students had contact with so many people both inside and outside of the classroom, making it virtually impossible to find out everyone who had been exposed.

Epidemiological data access + use

Education sector study participants often reported utilizing COVID-19 epidemiological data to inform COVID-19 pandemic response. Epidemiological COVID-19 data were used by schools to track increases in new cases, prepare for return to in-person learning, and examine district and school-specific trends in COVID-19 infection. This largely included using data to determine if additional measures were needed to mitigate the spread of COVID-19 in their school community.

Data access

At the district level, SDs and ESDs received their COVID-19 related data from various state and federal sources, including the OHA, ODE, and CDC. A local health and science university, Oregon Health and Science University, was also cited by SDs and ESDs as a vital source of COVID-19 data. Some ESDs and SDs also received information from local sources, including their LPHA or an internal database created by the ESD. Finally, a few interview participants mentioned using other sources, such as local or national news or online databases.

“When we had enough data to prove that contact tracing was not working in a school setting because kids leave school and do a lot of activities. It took a long time for people to listen to us, and we were about ready to lose, I think most school nurses in Oregon, if we continued that model because it was constant circle work.”

—School Nurse Focus Group Participant

“The Oregon Department of Ed and OHA were consistently giving us updates on that data so I felt like I had access to all the data I needed.”

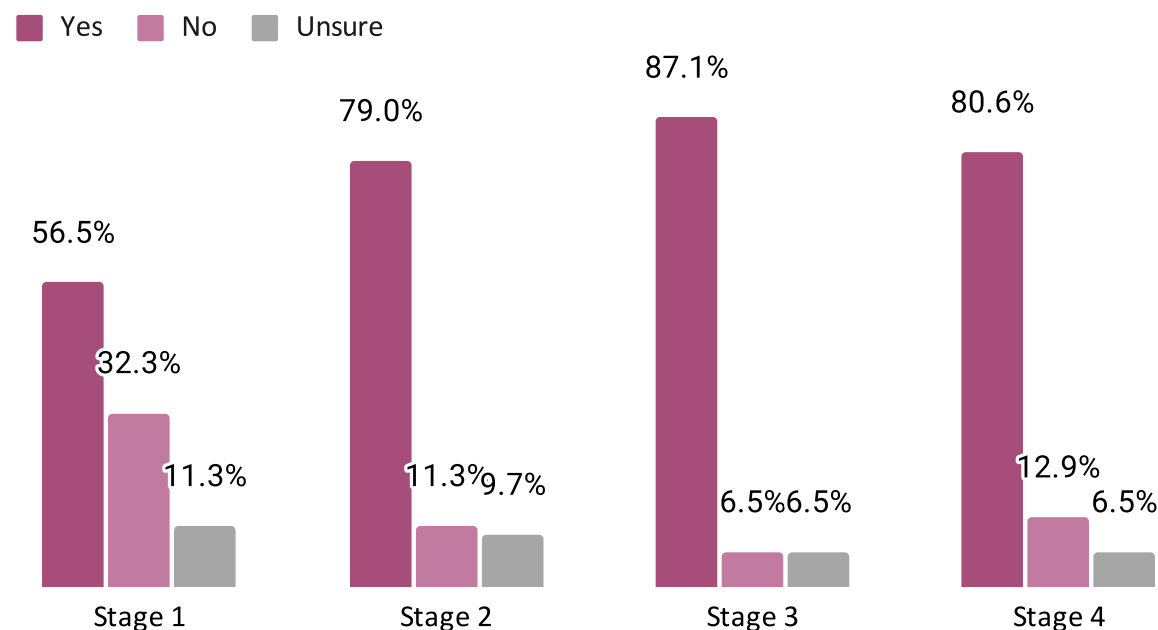
—SD Interviewee

SDs, ESDs, and Principal survey respondents were asked if they had access to local epidemiological data to guide their COVID-19 decision making. Most respondents reported that accessibility to COVID-19 epidemiological data varied across different stages of the pandemic (Figure 23). During Stage 1, a little more than half (56.5%, n=35) of SD respondents reported they had access to local epidemiological data and nearly one-third (32.3%, n=20) reported they did not have access. Access to data increased from Stage 1 to Stage 2, and then again from Stage 2 to Stage 3.

“We used all of the available data sources. So anything we could get our hands on, of course, national news. But we got the weekly release of the numbers.”

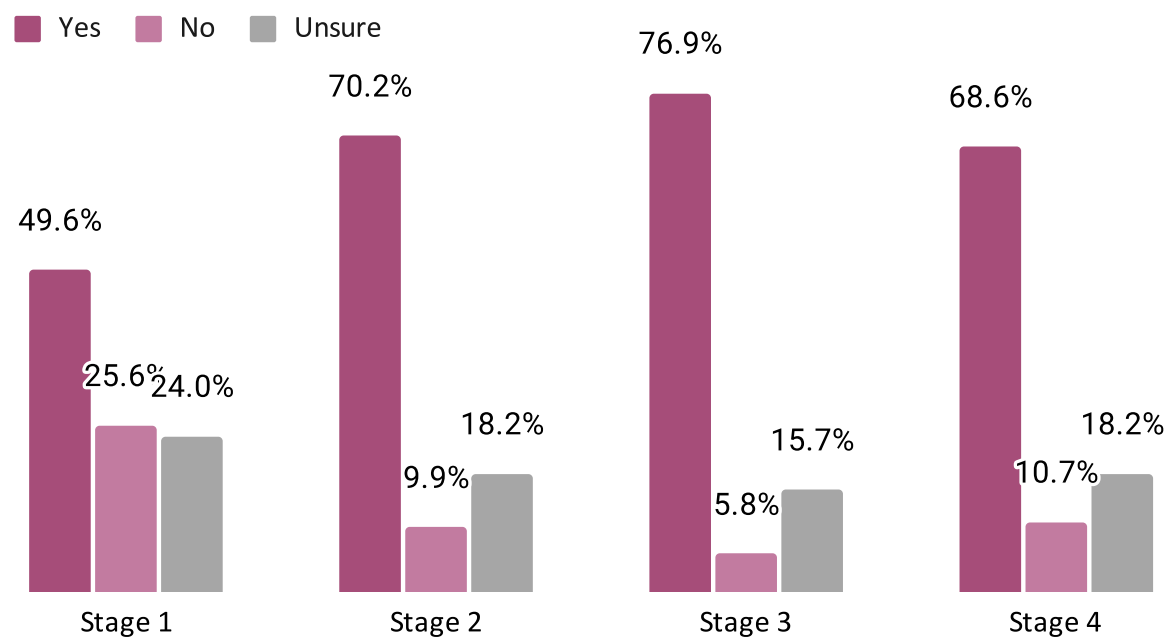
—SD Interviewee

Figure 23: Access to local epidemiological data to guide COVID-19 decision making by stage (SD respondents, N=62)



In comparison to SDs, a smaller percentage of Principals reported having access to local epidemiological data (Figure 24). The highest number of respondents reporting they did not have access to local epidemiological data was in Stage 1 (25.6%, n=31). The highest number of respondents reporting they had access to local data was in Stage 3 (76.9%, n=93).

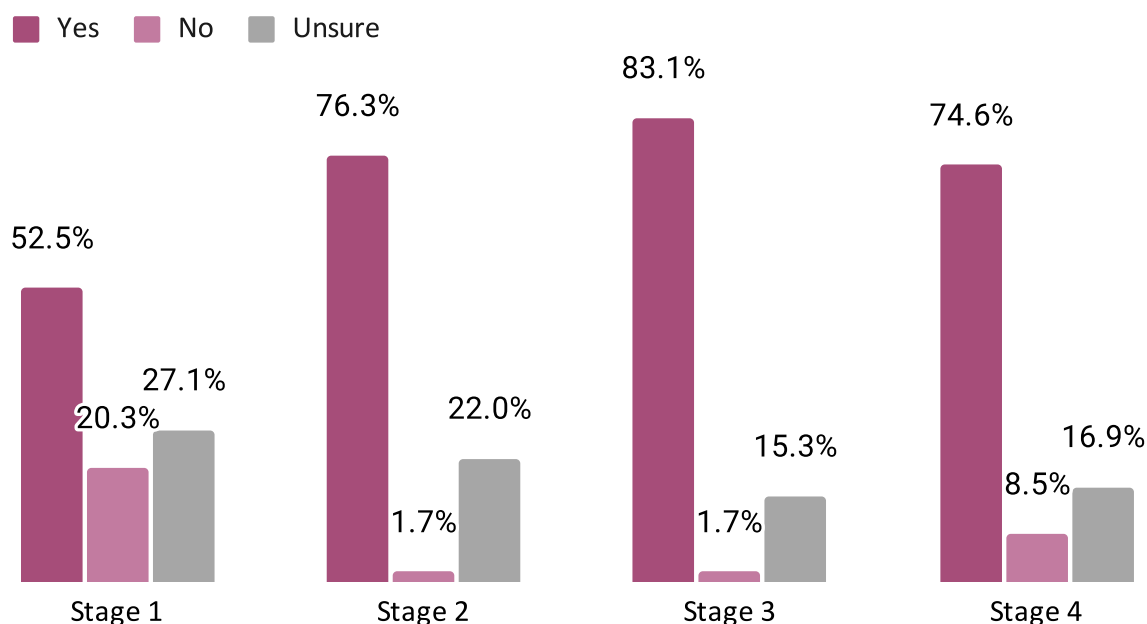
Figure 24: Access to local epidemiological data to guide COVID-19 decision making by stage (School Principal respondents, N=123)



In Stage 1, a little over half (52.5%, n=31) of School Nurse respondents felt that they had access to local COVID-19 data (Figure 25). Data accessibility increased as the pandemic progressed; in Stage 2, 76.3% (n=45) of School Nurse survey respondents reported they had access to local COVID-19 epidemiological data. Similar to other informants, data accessibility at the local level decreased from Stage 3 to Stage 4.

Overall, local epidemiological data accessibility for educational informants increased from Stage 1 through Stage 3 before falling in Stage 4. This may be attributable to increased epidemiological capacity from additional supports brought on to LPHAs during the pandemic response. Declines in local data availability access in Stage 4 may be attributable to reductions in the frequency of COVID-19 communications from public health organizations (e.g., LPHAs, OHA) and reduced COVID-19 reporting requirements.

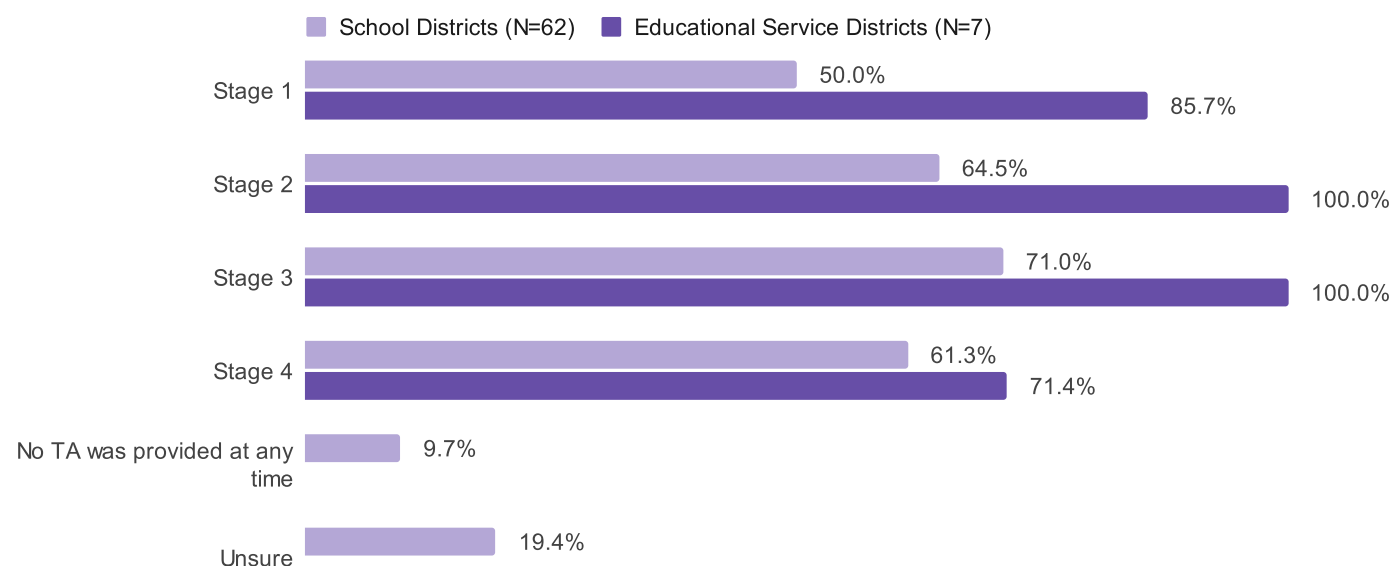
Figure 25: Access to local epidemiological data to guide COVID-19 decision making by stage (School Nurse respondents, N=59)



Technical assistance

Survey respondents were also asked if they received technical assistance (TA) to access, understand, or use epidemiological data. Only about half of SDs reported their district received TA to access, understand, or use epidemiological data in Stage 1 (Figure 26). Although many SD survey respondents reported receiving TA during one or more stages during the pandemic, nearly 10% (n=6) reported they never received TA during any stage of the pandemic. Forty-five percent (n=28) of SD respondents reported receiving TA during every stage of the pandemic. A higher percentage of ESDs reported receiving TA than SDs.

Figure 26: Stages during which TA was received by SDs and ESDs to access, understand, or use COVID-19 epidemiological data



SDs and ESDs who reported receiving TA were also asked what entities they received support from. SDs reported receiving TA that was provided by LPHAs, ODE, ESDs, and OHA. One SD reflected how much they appreciated the support received from their ESD, “My ESD was invaluable and coordinated all our regional agencies and our responses.” One SD reported their LPHA was not very helpful when it came to TA due to staffing shortfalls.

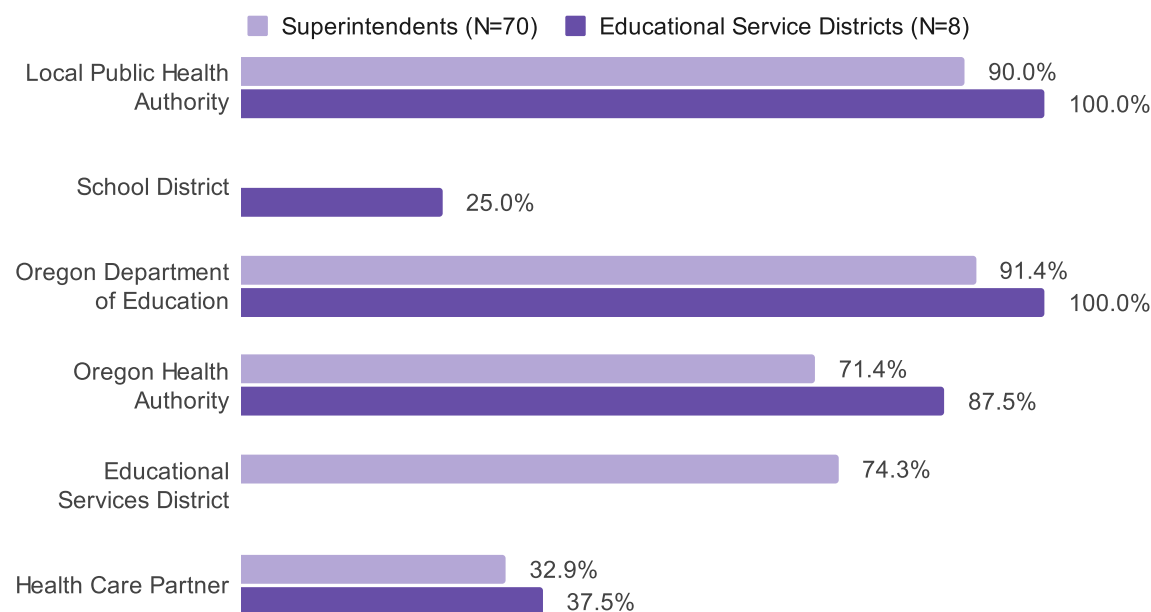
Figure 27: Entities that provided technical assistance (TA) to support COVID-19 response in SDs and ESDs

“I would say that the local health authority was the least helpful during all of the pandemic. They were too understaffed and not able to provide timely assistance.”

—SD Interviewee

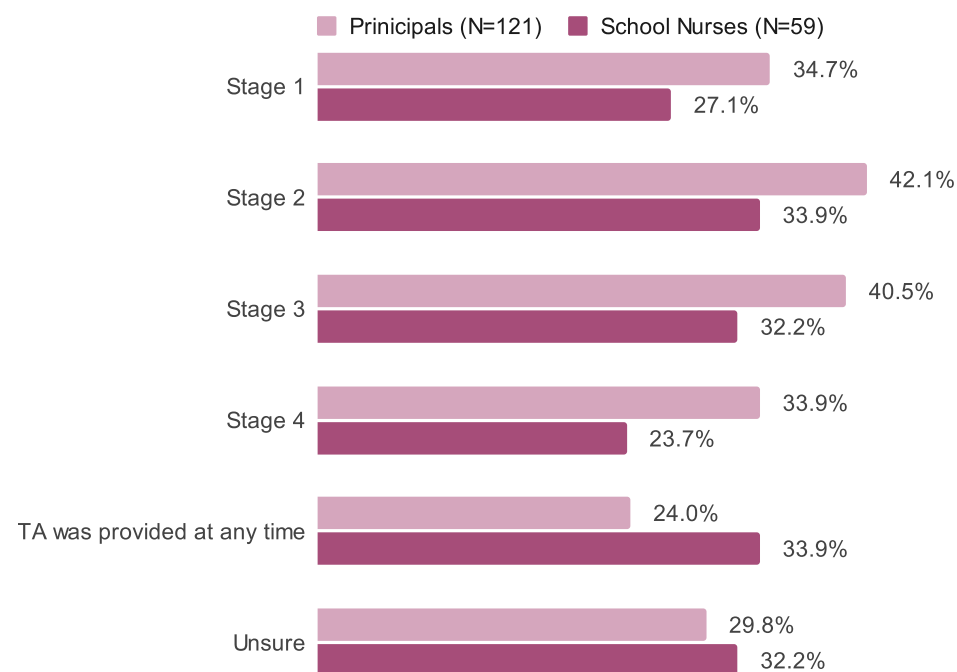
“Support was through [NE Oregon county] and from the Oregon Public Health Authority. [An Oregon University] here locally was really instrumental in sharing projections and the data around that. We used that data to talk with our staff and our board, so they were key players in providing the information.”

—SD Interviewee



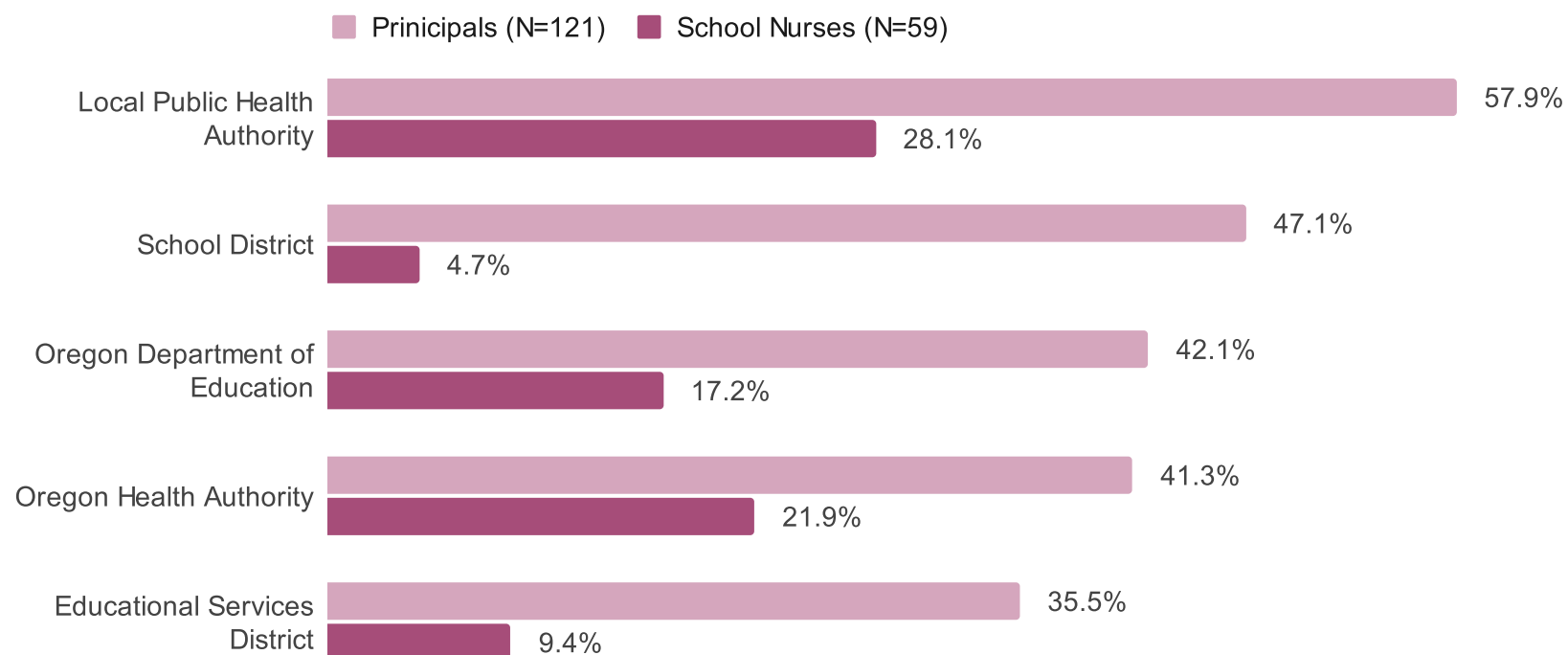
Principals and School Nurses were also asked whether they received TA to aid with epidemiological data access, interpretation, or use (Figure 28). About one-quarter (n=29) of Principals reported not receiving any TA at any time, and about one-third did not know (n=36). About 27.2% (n=33) of Principal survey respondents reported receiving TA during every stage of the pandemic. Approximately 33.9% (n=20) of School Nurse survey respondents reported not receiving any TA at any time, and another third did not know (n=19). About 20.3% (n=12) of School Nurse survey respondents reported receiving TA during every stage of the pandemic.

Figure 28: Stages during which TA was received by schools to access, understand, or use COVID-19 epidemiological data



Principal and School Nurse survey respondents who reported receiving TA were also asked what entities they received support from (Figure 29). Principals most often reported receiving TA from LPHAs or their school district (57.9% and 47.1%, respectively). TA was provided to Principals by ODE, OHA, and ESDs. Similar to Principals, School Nurses most frequently reported they received TA from LPHAs (28.1%, n=18). School Nurses also received support from OHA, ODE, and ESDs, in that order. One Principal respondent included a comment in “other,” indicating they received TA from OHSU and one School Nurse reported they received TA from a health care provider.

Figure 29: Entities that provided technical assistance (TA) to schools to access, understand, or use COVID-19 epidemiological data



Successes

One SD interviewee reported having access to epidemiological data at the local level was invaluable to their district-level response.

Two ESD interviewees mentioned creating their own internally developed database, which was created and maintained in partnership with their LPHA, was "the most robust school site COVID data in the state." Another ESD representative mentioned that their school site's COVID-19 database was used by both the ODE and OHA to "to communicate out to all the school districts in the state." One ESD reported, "the county used our spreadsheets to know when to open outbreak investigations and things like that."

Challenges

Educational informant study participants reported some challenges accessing local epidemiological data — a critical piece of information to inform local decision-making. As stated above, 32.3% (n=20) of SDs and 25.6% (n=31) Principals reported not having access to any COVID-19 epidemiological data during Stage 1.

A few SD and ESD interviewees voiced the challenges they had with COVID-19 epidemiological data, which included the following:

- COVID-19 reporting was insufficient and incomplete and, therefore, unable to inform a complete picture;
- data was challenging to relate to school-aged children, and a preference for data that helps kids understand mitigating

"We would look at it also in comparison to other counties at times, depending on our situation, because there was a time where in the middle of it, we were one of the highest counties for spread rate. And so we tried to keep on top of that, and we tried to work with the health department to implement strategies, which we eventually did, I believe, to slow down that rate of spread so that data was invaluable."

—SD Interviewee

- investigation spread is more practical; and
- relating to other counties' data slowed the receiving and analyzing of data.

Principals and School Nurses reiterated some of the same challenges reported by SD and ESD interviewees, but also reported the following:

- TA received was sometimes minimal and not timely;
- uncertainty around availability of TA; and
- inconsistent TA from different organizations.

Vaccine distribution and administration

Roles in vaccine distribution and administration

ODE reported that although there may have been some awareness around possible choices and implications of prioritizing educators for vaccines, the organization did not “have any input or vantage point into that decision”. ODE reported they were involved in “operationalizing the decision to prioritize educators.” As mentioned previously, a coordinated response of this scale had not been done before, so in the beginning of the pandemic and during the transition to Stage 2, when vaccines became available, ODE reported navigating uncharted territory to create plans to determine who qualified for prioritized vaccine availability and the subsequent structure of prioritization.

The majority of survey respondents reported they were involved in vaccine distribution throughout varying stages of the pandemic.

“We read through every report from OHA. We actually had asked for and never got the data we needed, rarely got the data we needed. We had asked the state epidemiologist, [name], several times for some updated metrics and data, and that rarely came. And what that did is, it actually, when that didn't come, so there were shifts, as you probably are aware, around cohort sizes, and distancing, and all sorts of things that happened as they were looking at data. And we followed the recommendations on all that. But, in terms of the actual data, we had asked for some updates on data that rarely came, or came late, or was irrelevant..”

—SD Interviewee

For some study participants, this meant coordinating and hosting vaccine clinics at schools. For school districts and schools that did not host vaccine clinics, this looked like giving school staff time off to receive the vaccine.

The process for school-based vaccine clinics varied between schools, with some schools hosting vaccine clinics in their facilities and others not hosting vaccine clinics at all. Approximately 73.2% (n=52) of SD survey respondents and a total of three (37.5%) ESD survey respondents reported providing vaccination clinics at schools.

“And there was a lot of confusion about who was going to get the priority vaccinations, and then there was a log jam. And then there was that first set of breakthroughs where you all figured out. I remember you figured out these all calls, where we changed strategy to get more people and then it resolved itself.”

—ODE Interviewee

“I think what was unique and new about the vaccination work was the end product was not dissemination and teaching of a set of guidance. The end product was an arm and a shot finding each other and making magic happen. And that was the new challenge. There was this thing that had to happen after that

communication happened, that involved cold chain that wasn't always as just as we might have wanted it to be prior to the pandemic skepticism about the entire thing, concern about the prioritization process, the mechanics of trying to get even a subsection of four and a half million people vaccinated at one time.”

—ODE Interviewee

Of Principal and School Nurse survey respondents, 53.2% (n=91) and 51.4% (n=38) reported they provided vaccination clinics at their schools, respectively. Many School Nurses shared that vaccine clinics were managed by their local health department in school facilities and were available to the whole community.

Vaccine Distribution and Administration Partners

SDs coordinated with LPHAs by offering schools as a site for vaccine clinics, which benefitted the schools to allow their employees to get vaccinated. Most interviewees were pleased with the vaccine clinic coordination with LPHAs; in many cases, the LPHA did the coordination and administration of vaccines and the SD provided the location. One SD and one ESD partnered with their local hospital to coordinate vaccine clinics at one of their schools.

Many Principals felt supported by their SD and/or ESD in running vaccine clinics that were open to students, staff, and in some cases, the surrounding community. Many School Nurses also shared similar sentiments regarding vaccine clinics that were managed by their local health department but conducted on school facilities.

One Principal reported that although they did not have a school nurse, they partnered with their ESD to support vaccination access for their school community. Another Principal reported partnering with the fairgrounds to run vaccination clinics.

Vaccine Prioritization

Again, OEA interviewees reported substantial advocacy for the Oregon educator vaccine mandate, based on their belief that this requirement would

“We worked with our local public health department to offer some drive-through vaccination clinics and those pieces. So there were some group efforts without a doubt.”

—SD Interviewee

“The ESD, we don't have an onsite nurse, so we worked with, they gave us the school nurse access to them and they did a phenomenal job to help. They also did the vaccination. They were very involved with the health authority to do the vaccination clinics and get that up and running. And then as a district we partnered with the health authority to make the vaccinations available on site.”

—Principal Interviewee

mitigate the spread of COVID-19 in schools. In this regard, OEA also advocated for educators to receive paid leave to receive the vaccine. Throughout the pandemic, OEA reported a lack of involvement in the distribution of vaccines- they did not host vaccination clinics.

Lessons Learned and Areas for Improvement

Some Principals noted issues with vaccine supply for school staff.

School Nurse interviewees reported that for some, hosting vaccine clinics on school grounds made some families feel like their children were being forced to vaccinate. Many School Nurse participants shared that demonstrators or protestors came to their vaccine clinics. A couple of School Nurses mentioned that their school's administration would not host vaccine clinics or publicize them, which felt like a miss since the school was a more trusted community location.

Rural school districts and schools reported more vaccine-related challenges than their urban counterparts. A couple of SD interviewees reported that vaccine accessibility was an issue for their district. For one interviewee, the fact that their rural county did not have a single hospital was a challenge. Given that hospitals were a large partner for hosting vaccine clinics, this was a specific challenge that rural communities faced. Another SD interviewee reported their community relied heavily on public transportation, which they believed was a barrier to vaccine uptake in the beginning.

“We came out strongly in favor of the requirement the educators be vaccinated. This caused some angst with our members, but we felt like it was the right thing to do given what we knew about the science and given the other desire to have environments where students could come back together.”

—OEA Interviewee

“I would say during our vaccine drives, not one organization had enough vaccines for our staff. So we had like the health department, [health care provider], and then the hospital. So, kind of at our drives we get split up into three just so that we could have enough vaccinations.”

—Principal Focus Group Participant

“We did have demonstrators, people here protesting, and that just made it really, really stressful.”

School Nurse Focus Group
Participant

“There was not administration motivation to have the hospital host vaccine clinics at our school sites, which I think would've really been good in terms of some access issues. Some of our families are really afraid of hospitals, institutions, and schools as a safe place.”

—School Nurse Focus Group
Participant

“The problem for our community is that a lot of our folks take public transportation, all of those things people were a little more leery to do to go out into public to still get a shot. So I do think that folks who maybe wanted to be vaccinated but struggled to get access to these really large convention center style vaccination clinics, it was hard in the beginning, but then slowly after that we started to see more local clinics that we could actually host in our schools where parents could come and get access. Then obviously once kids were eligible, the same thing happened.”

—SD Interviewee

“Vaccinations, I'd say were a little more difficult in our area because we don't have a hospital... we had to set up vaccination clinics. And there were some at the fairgrounds, there were some at the local [hospital] office in town, we had some at the schools for staff. So, that was a little more difficult getting access because we're a small rural county.”

—SD Interviewee

Vaccine Distribution and Administration Successes

A few SD and ESD interviewees mentioned success around vaccination for both students and staff. For some SD and ESD interviewees, ensuring access to vaccinations was a large success for their district. One success was allowing staff time off to receive the vaccine. Two SDs said that they were able to set up and support vaccination clinics to help those who may not otherwise have access to vaccines. For schools who hosted vaccine clinics, they reported they partnered with varying organizations, including their LPHAs, hospitals, as well as other health care or community partners.

Some SD and ESD interviewees mentioned setting up increased access to vaccinations and making sure vaccinations were available to their students as successes for their district.

Personal Protective Equipment (PPE) Distribution

Roles in PPE Distribution

There were varying ways the schools acquired PPE. ODE interviewees reported they coordinated with other state agencies to rapidly acquire PPE for schools, especially schools who were struggling to secure PPE. In many instances, the SD or ESD received PPE and then dispersed PPE to individual schools. Some Principals, however, reported that they were responsible for ordering PPE. When supply chain issues were at a peak, some Principals reported relying on acquisition of PPE from community members. SDs and schools also reported that they largely felt supported from LPHAs and district-level staff to acquire PPE, including masks, hand sanitizer, and other supplies necessary to the response.

“We supported vaccination clinics by having them and making them available by being open and following all these detailed guidance that went along with being open. So again, we did those stage as well.”

—SD Interviewee

“I think vaccine distribution was probably the number one. When that thing came out, whether you believed in it or not, there was really no lag in it being accessible for anybody that wanted it.”

—SD Interviewee

“We started actually offering vaccination clinics to our staff. The other piece that we did do on vaccinations, so we allowed staff to take time off of work to go get vaccinated. So if they had an appointment at 11:00 in the morning, they could leave work, drive. We would actually pay their mileage to and from the vaccination clinic and let them just do that on their work time. So we did what we could do to really promote vaccination to make it easy for them to get vaccinated so that we had high vaccination levels in our agency.”

—ESD Interviewee

“I was in [elementary school in Central Oregon] , and we hosted [vaccine clinics] in the gymnasium of our building for the whole district and the whole town, really. We worked with [our LPHA] for the dosages, but then our school nurse administered the vaccines along with some other partners. I don't know where exactly they came from, but they were medical professionals. I believe we hosted three vaccine clinics while I was there and hundreds of people, we had a long line out the door waiting to get vaccinated.”

—Principal Focus Group
Participant

“We certainly gave input to the state about how to supply, how to make PPE readily available to educators and school staff and we advocated for the distribution of PPE.”

—OEA Interviewee

OEA interviewees reported that although the organization advocated for swift distribution of PPE to educators and school staff, the organization was not involved in the distribution of PPE to schools. To this end, OEA interviewees discussed how they informed their members about the resources available for personal protection. The respondents also mention how they gave input to the state about how to supply PPE and make it more accessible. The respondents clarified that they advocated for following the science of COVID-19. Therefore, they strongly supported the protection of their educators and being able to have PPE available to them. OEA interviewees also reported they provided feedback on the Ready Schools, Safe Learners Resiliency Framework for re-opening, which conveys messaging about PPE advisory for educators.

PPE Distribution

Almost all (98.6%, n=70) of SDs and 100% (n=8) of ESD survey respondents reported distributing PPE to staff and students during COVID-19. Similarly, nearly all Principals (97.7%, n=167) reported facilitating distribution of PPE to students and staff. Many SD and ESD interviewees reported success in procuring and distributing PPE. Success in distribution of PPE was also noted by Principal focus group participants, who reported receiving adequate amounts of PPE and other COVID-19 supplies. In some instances, however, Principals reported the process of receiving PPE was chaotic.

PPE Supply Chain Issues and Shortages

A challenge brought up by some SD and ESD interviewees during Stage 1 of the pandemic was securing PPE. Interviewees faced supply shortages and reported large delays in receiving resources. Due to supply shortages, some SD and ESD interviewees reported inflated costs of PPE and other supplies.

“Reopening and giving out masks, all of the stuff, we still have hand sanitizer all over the place, which is good. I feel like we did a pretty good job. I'm sure we could have done better in some areas, but in general, given our size and all the stuff that everybody was dealing with.”

—ESD Interviewee

“We were given masks, testing kits. It got a little overwhelming 'cause there was times I didn't even know where the stuff was coming from. It would just show up or I was told to go to my district office and pick it up and have it readily available.”

—Principal Focus Group Participant

Just over a quarter (28.1%, n=48) of Principal survey respondents identified a lack of locally available PPE as a barrier to COVID-19 response. A Principal survey respondent recalled that although they did receive supplies, they were inadequate or received after they were needed.

Some School Nurse interviewees reported supplies their school received were incorrect. For example, one School Nurse mentioned receiving masks from OHA that were not the proper fit for their students, and therefore, unusable.

“At first, it was nice to realize there was a lot of supportive resources available until you hit the realization that having money to spend on something doesn't do any good when something's not available. So test kits, masks, cleaning supplies, shortages in all those areas that took a long time to fill and people realized that they were not there and they were filling them as quickly as they could. But having money to fix a problem is no good if the things you need for the problem aren't available. So there was resource issues.”

—SD Interviewee

“Stage one it is we were looking at, well, procurement of different things like masks, disinfectants, and sanitizers, things like that was a shift for me. We were looking to suddenly get large quantities of all those items, and there was difficult to find at the very beginning because everybody was gobbling up the supplies that were out there.”

—ESD Interviewee

“I'll say I believe we got face shields. Our district received quite a few face shields at one point, and we got some mask, but it initially was not nearly enough. And then I think some maybe shipments came in later. We got some covid tests early on, but again, it was a similar thing, like, when the need was really high, the supply was pretty low, and then when the need got lower, the supply was higher. So a little bit after the fact, after when we really needed them.”

—Principal Survey Respondent

Public Information Dissemination

Educational sector study informants reported they worked diligently to ensure meaningful dissemination of COVID-19 information to their school community and more broadly, to the public. Importantly, an effective public health response to emergencies is one that has successful and effective communication to all affected communities, while simultaneously recognizing that different information dissemination approaches should be tailored to meet the needs of individual communities. As schools had prior experience with mass-reach communication to their school community, they had existing skills and tools they could utilize to effectively reach their target population.

Roles in Public Information Dissemination

A key aspect of COVID-19 pandemic response in schools was public information dissemination. ODE reported they were highly involved in COVID-19 information dissemination to school districts, schools, and supporting entities. Additionally, ODE reported they created specific routes of communication to schools and ESDs for COVID-19 information.

SDs, ESDs, Principals, and School Nurses all reported they were highly involved in public information dissemination at varying levels. SDs and ESDs were involved in district and county-level messaging, whereas Principals and School Nurses were involved in messaging at the local (school) level.

In order to adhere to the public health mandates, SDs and ESDs devoted their time to staying informed on the pandemic and the changing public

“I would say local messaging, it was more about us taking the information we had and saying, “Okay, parents. These are the rules. This is what we have to do.” Because our local community doesn't tune into OHA to say, “Hey, what are the rules right now? And how do they impact me?” They wait for me to say, “This is how it impacts you. This is what has to happen in schools.”

—SD Interviewee

“I would say my main role in supporting the public health response was really just trying to facilitate the most accurate information as quickly as possible with clarity...”

—Principal Focus Group Participant

health mandates that applied in schools. They did this by participating in meetings with public health leaders where information and guidance were disseminated. In this capacity, all SD and ESD interviewees partnered with their LPHAs to ensure they were providing their community with the most up-to-date information and guidance.

Principal focus group participants reported that a main role they assumed during the pandemic was communicating with families about requirements for schools and the impact this would have on student instruction. Within their role as communicators, Principals reported that COVID-19 communications came initially from the county or district level. Once information was received by school administrators, they further adapted and disseminated information to their school community. Approximately 87.7% (n=150) of Principal respondents reported their school developed and conducted outreach strategies specific to the needs of their school community.

School Nurses also played a large role in COVID-19 information dissemination at the school and local levels. School Nurse study participants mentioned communicating COVID-19 information in the following ways:

- sharing the rationale with staff to following public health protective measures;
- hosting virtual parent nights to answer questions;
- translating information written in medical terminology to more digestible jargon;
- creating classroom exposure letters;
- creating or maintaining dashboards; and

“And then also just a lot of the communication was like in teacher speak or in doctor speak, and it wasn't necessarily friendly for our general public to receive that information. So, making it digestible was needed.”

—Principal Focus Group Participant

“We created these out of nothing roles in each ESD, which we ended up coining, reopening advisors, but these each ESD staff and intermediary person who was meeting with us on at least a weekly, to get information and context and boil up. It worked really well. High trust, speed. I think they solved a lot of problems that otherwise would've gone unattended to.”

—ODE Interviewee

- ensuring other staff members were on the same page with current response protocols.

OEA mentioned they also communicated daily with different members about their concerns and challenges with public health protections or lack thereof. When communications came out from ODE or Oregon Occupational Safety and Health Association (OSHA), OEA interviewees mentioned that the union would encourage those communications to involve the educator's perspective.

Public Information Structures

The structure of bringing together state epidemiologists and other health leaders with SDs and ESDs was cited as a successful approach in both COVID-19 information dissemination and overall support of SD and ESD understanding of COVID-19 data trends to inform decision making in their pandemic response. This partnership, SDs and ESDs reported, enabled many to be able to both disseminate information to their communities and make sense of Covid-19 data trends internally. Interviewees felt like they were getting the needed information on a regular basis (i.e., weekly meetings). The most frequently mentioned successful partnerships (mentioned by nearly all interviewees) were those where COVID-19 updates and communication was provided to them from state and local partners, including OHA and ODE.

ODE held weekly meetings for school districts throughout the pandemic, which were also noted as a successful approach. An ODE interviewee reported establishing a cross-posting system where COVID-19 guidance and structures that were posted on ODE websites would be forwarded to LPHAs and vice-versa.

“It evolved from being a this is our district plan as it relates to the teaching staff and our employees, to this is what the plan is for parents...I kind of felt like I was some sort of publicity public relations (PR) director more than a Principal for a while.”

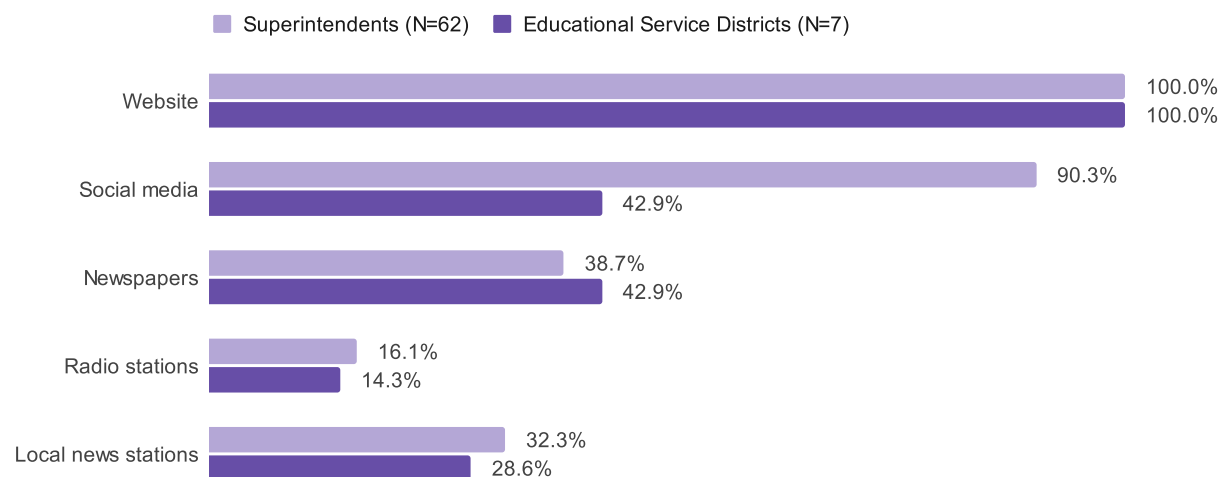
—Principal Focus Group Participant

“Every two weeks, okay, now we know this about COVID so now you need to do this. That deep bone aching exhaustion that was really a brain exhaustion as people were trying to do all these new things really, really impacted educators in a very significant way.”

—OEA Interviewee

SDs and ESDs reported using this information to directly inform their response and communication to their school communities. All SD (100%, n=62) and ESD (100%, n=7) survey respondents reported providing public health messaging through mass-reach communication platforms. Both SD and ESD respondents provided information on their websites and nearly all SD respondents utilized social media. Roughly a third of both SDs and ESDs reported utilizing local news stations and newspapers. “Other” mass-reach communication platforms used by SD survey respondents included podcast, direct email, Parent Square, newsletters, Blackboard Notification System, and phone (text, voice).

Figure 30: Mass media communications platforms utilized by SDs and ESDs to communicate COVID-19 information

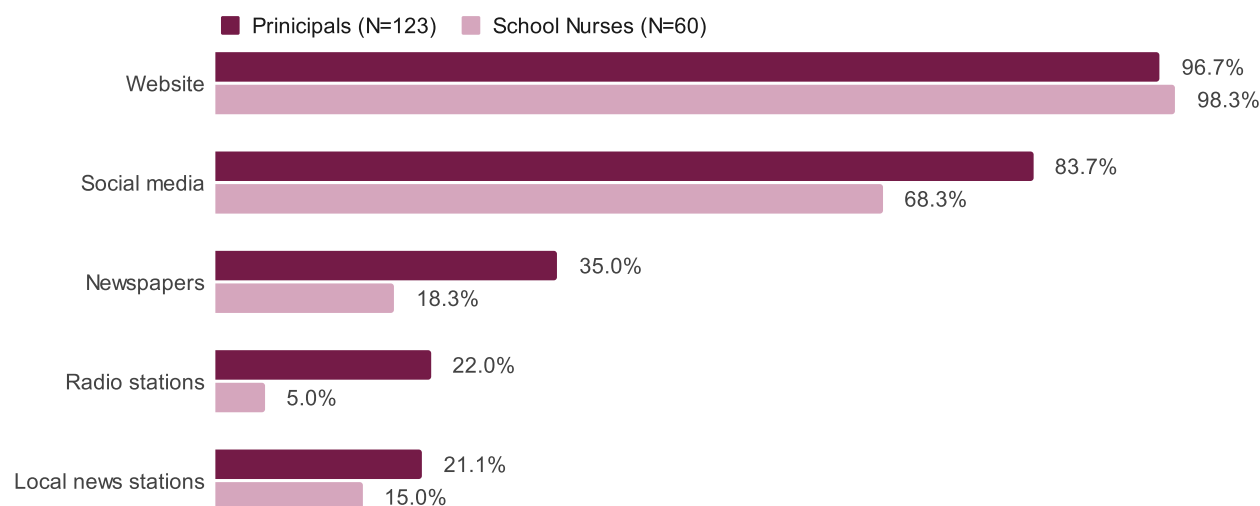


“We finally did work out a really good system early on, relatively speaking, up cross posting information. Everything that went to superintendents was forwarded to local public health. Major local public health announcements, not things about Orpheus or how to enter data, those weren't, but other things on changes in guidance and structures and things were cross posted out to superintendents, rule updates, all of those sorts of things. So just working with the overall local and state system partners to try to create cohesion around the guidance that both agencies were putting out.”

—ODE Interviewee

Most (96.7%, n=119) Principal respondents provided information on the school's website and many reported using social media to communicate COVID-19 information (83.7%, n=103). "Other" mass media outlets include email, apps, mail, phone (voice and text), fliers, newsletters, webinars/zoom, ParentSquare, and Remind. All (100%, n=60) of School Nurse survey respondents reported providing public health messaging through mass media communication methods. Most School Nurse respondents (98.3%, n=59) also reported using the school website and many used social media to communicate COVID-19 information to their school community (68.3%, n=41). "Other" mass media outlets used included their agency website, mass emails and texts, notes and letters to home, ParentSquare, Youtube videos, district Zooms for families, school and district newsletters, and the Remind App.

Figure 31: Mass media communications platforms utilized by schools to communicate COVID-19 information



"Our coordination with the [Southeastern Oregon County] Health Department was invaluable. We have monthly superintendents meeting for our county. At every one of those meetings we had participation from the [Southeastern Oregon County] Health Department. We would get updates usually from the head of the health department. they did an outstanding job communicating with us."

—SD Interviewee

Public Information Dissemination Successes

At the district level, SD and ESD interviewees discussed working diligently to communicate COVID-19 information to their school community, including students and their families. This included communicating specifically about public health requirements, guidelines, and mandates.

A couple of Principal focus group participants stated they had success with the use of virtual platforms for various communication — including COVID-19 specific communications — with their students and families. Importantly, Principals noted hosting COVID-19 communication Q&As in both English and Spanish.

“We really tried to work through with people each stage to the best we could. Trying to make sense of like, “These are the decisions we've got. This is what it is.” So trying to make sure we're getting information out there and providing the updates to our families, and our kids, and our staff, trying to help our staff feel comfortable.”

—SD Interviewee

“With stage three vaccinations, just making sure the word got out there to the right groups of people, because of course, at first it was like certain vaccines were open only to certain groups of people. We were communicating with those groups of people and just making sure that people knew where to go and how to get vaccinated, those kinds of things.”

—ESD Interviewee

“Virtual assemblies, our parents got to see a little bit more at times for like we did virtual conferences, virtual assemblies. So there were, we videotaped the assembly and then put it on our Facebook page or our website. So parents got to see that we do celebrate successes.”

—Principal Focus Group Participant

A significant communication success that School Nurses shared was taking COVID-19 communications and making them more easily digestible for their communities. School Nurses also felt like their communications with staff members about why they were following specific protocols were helpful.

“All of our communication came from the central office and then we were tasked to communicate our individual plans for CDL [comprehensive distance learning] and our cohorting models. That took the form of print materials, emails, but also community parent Zoom for question and answers that we were able to kinda help with their understanding of what it would look like and the reasons behind what we were doing, so.”

—Principal Focus Group Participant

“We did a lot of parent, a virtual parent, nights in English and Spanish, with the Assistant superintendent, superintendent and myself, and we would just be there to answer all the parent questions. We'd have a little piece that all 3 of us had something to say for the first, like 15 min, and then we just took rapid fire questions for the next 45.”

—School Nurse Focus Group Participant

“ODE, different staff members from ODE, [ODE person] one time even, came on and then Oregon School Activities Association (OSAA), [OSAA member] , joined us. They would do monthly Zoom meetings that they would be willing to come and just, kind of an open forum on asking questions. But I thought that that was a good support even if they didn't have the answer. The fact that they put themselves out there and just listened to the frustration.”

—School Nurse Focus Group Participant

“But I would like to add a shout out to the Coalition of School Administrators (COSA). I mean we, Oregon Association of Secondary School Administrators (OASSA), I remember we had our Zoom connections and stuff just to be able to communicate and reach out to other districts and get creative and think how to do things. But you know, same thing, that district took care of a lot of the safety protocols and ensuring we had all that safety place and we did vaccine clinics here at school. But just that collaboration piece, you know, resources to help teachers with professional development was huge as well.”

—School Nurse Focus Group
Participant

“The other thing that we did with that, that was good was the communication. Anything that went out of the district went through our public relations person, but basically the superintendent and I had to vet it before they sent it. And so that allowed us to team talk about it as we needed to, and it wasn't just the public relations department sending out what they had read on the CDC website, which I had to correct quite a few of those initial and continual announcements because they were just pulling out what they could Google.”

—School Nurse Focus Group
Participant

Public information dissemination challenges

SDs and ESDs interviewees reported that in addition to LPHAs, they relied on State and National agencies for pandemic-related information. A large challenge SDs and ESDs faced when working with these partners was information dissemination, as the frequency with which guidance and information received from these agencies changed made staying up to date difficult. In addition, there were times where SDs and ESDs reported receiving conflicting guidance from OHA and ODE, CDC and OHA, or Local Emergency Management (EM) and Local Public Health (PH). In turn, this led to ESDs being unable to keep up with information requests from SDs during intense periods in the pandemic. Over time, SDs and ESDs reported improved alignment of information and guidance over time.

“One of the greatest challenges we faced was really, well, the amount of information that was available to the public that they might not understand. And the inconsistency that sometimes came up throughout the pandemic between CDC guidance, which we had always pointed our schools and everybody to previous

to COVID, the difference between CDC guidance and OHA investigative guidelines for COVID-19 at particular times during the pandemic. So we would get a lot of pushback from people who did know where to go look at the investigative guidelines, where to go look at CDC recommendations, and would see that they don't

match up and would see times that we potentially, as a team were giving guidance that looked different to them than what they had just Googled or found on the CDC website.”

—ESD Interviewee

Communication challenges were still reported by some SD and ESD interviewees during Stage 2 of the response. These challenges were similar to those communication challenges reported in Stage 1, as interviewees still reported receiving conflicting information from OHA and their local LPHA. One ESD described wishing they could have done more of the communication support for SDs in getting information to their school communities.

Another SD interviewee reported that uncertainty about reopening dates affected their ability to accurately communicate this information to their school community.

Similar to SDs and ESDs, the greatest challenge reported by Principals and School Nurses relating to COVID-19 public health communications was the frequency of changing guidance from the state. Ultimately, trying to quickly digest, adapt, and disseminate communication that was ever changing was a challenge.

Implementation of new public health guidance at the last minute was the most frequently noted challenge among School Nurse interviewees. School Nurse interviewees also reported that there was a “lack of timely information.” For example, many School Nurse interviewees mentioned that new guidance would come out at the end of a weekend or school break, so they had little time to plan and communicate with their staff and families.

Principal survey respondents were asked to select which challenges hindered the effectiveness, scale, or quality of their school’s response. The top challenge was the politicization of public health (70.8%, n=121), followed by inconsistent guidance from state government (70.2%, n=120), and inconsistent guidance from local public health authority (59.1%, n=101).

“Sometimes like literally as we're pushing send, we get another thing. So that was a challenge was just how quickly things were changing, and trying to stay on top of it, and some of the frustration of the families saying, 'Well, you just said this.' It's like, 'Yeah, that was yesterday but now it's today and it's different.'”

—Principal Focus Group Participant

“I think one of the challenges was really Omicron broke it, broke the communication system pretty quickly, because the State guidance came out over winter break. We came back in [winter 2021], and then we had 100 cases before the end of the day, and so we were in this loop of not knowing how to navigate.”

—School Nurse Focus Group Participant

Public health mandates: Compliance + enforcement in schools

Executive Orders for Schools

As noted in Report 1, evidence-based, population-level public health mandates to slow the spread of the virus were central to Oregon's approach to responding to COVID-19. Acting under executive authority, Oregon's Governor, Kate Brown, issued over 40 Executive Orders (see Appendix B) specifying public health mandates. According to individuals from Brown's office and the OHA, public health mandates such as masking, school closures, limited social gatherings, and restrictions on indoor dining were developed with input from the CDC and the Association of State and Territorial Health Officers. The decision to close Oregon's schools in order to control the spread of COVID-19 was described by OHA Director interviewees as among the most difficult decisions in their careers. Public health leaders agonized over the cost-benefit ratio of closing schools, acknowledging the potential harms to students and families. In the end, the decision was made to suspend in-person learning in schools in order to reduce the onslaught of COVID-19 hospitalizations and deaths; the following timeline outlines major events in COVID-19 school closures and reopening (Ballotpedia, n.d.):

- March 12, 2020: Gov. Brown announced that schools across the state would close from March 16 through March 31.
- March 17, 2020: Gov. Brown announced that the statewide school closure, scheduled to end March 31, was extended to April 28.
- April 2020: Gov. Brown closed schools for the remainder of the academic year.

“There were some very difficult decisions as we thought about schools being a very opportune place for spread of a respiratory disease, public schools being compulsory and knowing that we had responsibility for all students and staff in those settings, including those with underlying conditions, students with special needs who are at higher risk, deserve that same opportunity as everyone else. And so how do you balance those needs? So I think the school decisions are still the ones I go over again and again in my head. But again, I go over those in the context of what we've learned since then.”

— OHA Director Interviewee

- June 2020: ODE released guidelines for schools to reopen for the 2020-2021 school year. Under the plan, individual public and private schools would need to submit an Operational Blueprint for Reentry to their local public health authority before they reopened. The Ready Schools Safe Learners Framework: Guidance for School Year 2020-21 outlined requirements for in-person instruction at schools including physical distancing, face coverings, ventilation and air flow, hand washing, and communicable disease management ([OHA], 2022).
- July 2020: Gov. Brown announced the metrics that would guide school reopening decisions. Counties needed to have 10 or fewer coronavirus cases per 100,000 people and a 7-day positivity rate of 5% or less for three consecutive weeks before in-person and hybrid instruction could resume. The state also needed to have a positivity rate of 5% or less for three consecutive weeks before any in-person or hybrid instruction could resume.
- August 2020: ODE released updated school reopening guidelines that allowed schools to reopen to in-person instruction if the school had 250 students or fewer, was in a county with fewer than 30,000 residents, and if the county had reported no more than 30 COVID-19 cases in the past three weeks.
- October 6, 2020: ODE announced the state would disregard positivity rate data from September in determining whether school districts could reopen. The announcement meant school districts could reopen for in-person instruction if their counties met the state's case count criteria until October positivity data was available.
- October 30, 2020: ODE released updated school reopening guidance. Under the rules, schools in counties with less than 50 new coronavirus cases per 100,000 residents over 14 days could resume full-time, in-person learning. Previously, the state only allowed full-time, in-person schedules in counties with 10 or fewer new cases per 100,000 residents each week over a three-week rolling average.
- January 2021: school reopening metrics, which determined when schools could open, became advisory instead of mandatory.
- March 2021: Gov. Brown issued an executive order requiring public elementary schools to reopen no later than March 29 for hybrid or full-time in-person instruction. The order also required public

schools to open for grades 6-12 by April 19. Parents could still keep their children in fully remote instruction.

- July 2021: Gov. Brown announced that masks would be required indoors at K-12 public schools in the state.
- Aug. 2021: Gov. Brown announced that all teachers and staff in K-12 schools would be required to be fully vaccinated against the coronavirus by Oct. 18 or six weeks after full FDA approval of a coronavirus vaccine.
- By September 2021 public schools were open for in-person learning but experienced COVID-19 related disruptions and closures throughout the school year.
- February 24, 2022 OHA announced it would end the statewide school mask requirement on March 19.

Roles in public health mandate development and enforcement

ODE played a substantial role in disseminating COVID-19 information throughout each stage of the pandemic.

An administrative leader for OEA mentioned that the education labor union began monitoring the COVID-19 outbreak during Stage 1, during which they reported having to quickly transition to becoming more of an advocacy group instead of a representative organization. In early Stage 1, OEA's advocacy involved providing OHA and the state leadership (i.e., the governor) with supporting evidence that: 1) the pandemic would last longer than initially predicted; and 2) schools needed to close sooner, rather than later. Out of concern for their members, OEA interviewees mentioned the organization implored the Oregon state government to close schools in order to slow the spread of COVID-19. This advocacy, one OEA interviewee reported, was in collaboration with the Coalition of Oregon School Administrators and the Oregon School Board Association.

During an interview, OEA reiterated challenges the labor union initially faced when advocating for school closures. The respondent implied that advocating for school closure was strenuous and contended by the state of Oregon.

“But I do believe it's at the heart end of stage one, as we were dealing with issues of compliance with the public health aspect of enforcement and what I would call like a crisis of jurisdiction, a lot of management facilitating school district leaders with their education service districts, with their public health, with their nurses with OHA trying to coordinate who has responsibility for what.”

—ODE Interviewee

“The first week of March and so I would say we were monitoring, but as a pandemic and especially in the month of March as it progressed, we became more of an advocacy organization.”

—OEA Interviewee

“I think the very first thing was that we really advocated for schools to be closed and we pushed hard. And like I said, it felt like we had to push hard to get schools to be closed.”

— OEA Interviewee

An OEA interviewee maintained that the labor union's role in public health mandates was providing education and insight on best practices for their members health and safety, which was achieved via advocacy and lobbying on behalf of its members. Although OEA did not specifically implement public health mandates, they advocated for them because the union believed public health mandates best protected their members' safety.

Despite not being directly involved in the development of COVID-19 public health mandates (i.e., EOs), SD and ESD roles changed dramatically at the onset of the pandemic when they were tasked as leaders and decision-makers in implementing COVID-19 public health protections in schools in addition to their previous role as leaders in education services. Their role in implementing public health mandates in schools did not change much throughout the pandemic, however the policies and procedures they were implementing changed based on the stage of the pandemic and the mandates associated with that stage.

A primary role of SDs, ESDs, and Principals in Oregon's public health system response to the COVID-19 pandemic was implementation of public health mandates that applied to schools. As district leaders, superintendents were responsible for decision-making regarding the implementation of public health mandates and recommendations in schools. Many SDs and ESDs partnered with their LPHA to provide technical assistance (TA) on implementing the guidance in schools. To adhere to executive orders and public health mandates implemented by the state, OHA, ODE, SDs, and ESDs played a number of roles including:

- developing and distributing communications on public health

“It [my role] totally shifted in that my role historically has been to ensure that we're giving kids the best education possible with the tools that we have. And it really changed to me being more of someone who enforces what at that time was perceived to be public health protection.”

—SD Interviewee

mandates and associated changes in schools to staff, teachers, and the school community (e.g., students);

- closing schools and transitioning to distance learning;
- coordinating and delivering meals to their students and families while schools were closed;
- providing childcare to essential workers while schools were closed;
- reopening schools;
- distributing PPE;
- COVID-19 testing;
- contact tracing;
- hosting and coordinating vaccine clinics;
- managing school staff vaccine exemptions; and
- enforcing public health mandates in schools.

In addition to following public health mandates within their organizations and programs, ESDs described their role as supporting school districts to comply with public health mandates. ESD support to SDs varied by district. ESD support included:

- providing information on the latest guidelines for schools;
- supporting school districts' transition to online learning, including professional learning for teachers on how to use online meeting platforms and tools;
- acting as a reopening advisor for school districts during the return to in-person learning;
- technical assistance in understanding, implementing, and enforcing public health mandates in schools;
- writing or supporting districts in writing COVID-19 response plans;
- aligning the response in schools within the district; and
- ESD nurses supported contact tracing in schools.

Similar to SDs and ESDs, Principals described that their role in COVID-19 pandemic response in schools revolved around implementing public health requirements, keeping the school in compliance, and providing ongoing communication to families. Principals reported that they worked with their school districts and/or their local public health authorities (LPHAs) to interpret changing guidelines and envision and implement these guidelines in their individual schools.

Principals reported they were removed from the decision-making processes about public health mandates at the state and local levels. Some Principals did, however, report having authority over building-level plans. There were varying levels of decision-making discussed during focus groups with Principals; some reported they were involved in district-level decisions and others reported they just followed the guidelines that were “given” to them to the best of their ability. One Principal felt that being a school administrator for a smaller district gave them more autonomy.

To adhere to public health mandates, education study participants reported adopting numerous public health requirements (Figure 32). The top three public health requirements SD survey respondents reported their school district adopted were isolation and quarantine rules (98.5%, n=66), masking in public spaces/workspaces (97.0%, n=65), and prohibiting in-person attendance in schools (89.6%, n=60). All (100%, n=67) of SD respondents reported at least one public health requirement was adopted, and 43.3% (n=29) respondents indicated their district adopted all requirements listed. Other requirements written in by respondents as “other” included: handwashing, sending staff/students home if they were not feeling well, and temperature checks upon arrival to

“I think that we were like the intermediary between what the Health Authority guidance was, the governor's guidance. Like it was like we would interpret the guidance. So like ... what does distance learning look like? That's one small piece. What does teacher evaluation look like at this time? What does school safety look like at this time? What does transitioning to the end of the school year into summer, into the next year look like? So it was like plans on plans on protocols, on plans on protocols and pivoting constantly.”

—Principal Focus Group Participant

class. Nearly all Principal survey respondents reported adopting masking requirements (99.2%, n=127) and isolation and quarantine rules (98.4%, n=126). Many respondents also reported adopting requirements prohibiting in-person school attendance (93.0%, n=119), and prohibiting public gatherings (88.3%, n=113). A single Principal survey respondent reported that their school did not adopt any public health requirements. Other requirements Principals reported their school adopted included dismissal of unvaccinated staff, “cohorting”, and limiting both the number of athletic events and the number of attendees at these events. Similar to SDs and Principals, nearly all (96.8%, n=61) School Nurse survey respondents reported adopting masking requirements and isolation and quarantine rules (96.8%, n=61). Many School Nurses also reported adopting requirements prohibiting public gatherings (87.3%, n=55). A single School Nurse survey respondent reported that their school did not adopt any public health requirements.

Principal focus group participants described themselves as being on the “front-lines” of enforcing requirements among staff and students. In this role, Principals reported they took most of the burden for implementation of these requirements and ensuring their school complied with public health mandates.

One Principal mentioned that although they had a committee to help figure out how to implement public health mandates at their school, the responsibility of compliance fell to the principal.

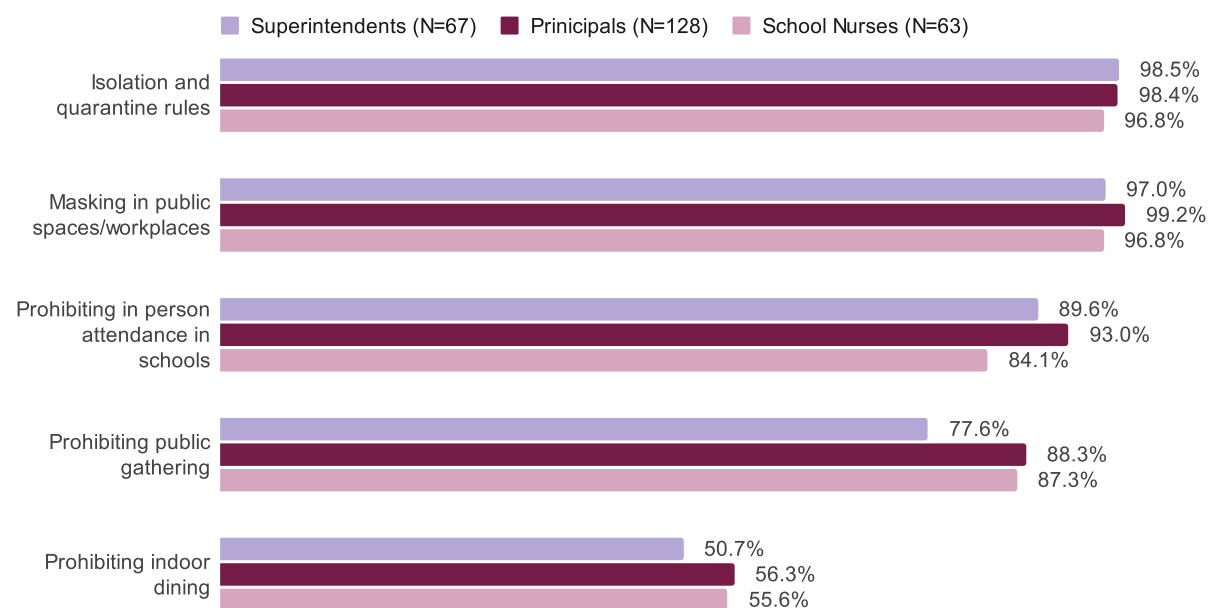
“I felt like my role, as far as making sure the safety protocols were followed, were right on my shoulders. I was the one holding the line and it was my responsibility to make sure we were masked, social distanced, everything was happening.”

—Principal Focus Group Participant

“But the bottom line was if something wasn't being followed, then I had to figure out how to get it rolling.”

—Principal Focus Group Participant

Figure 32: Public health requirements adopted by SDs



“And a lot of that was on the Principals. So at least in my experience, it was on me, it was on my team to do that. Even though teachers had their own role, a lot of that came, mask enforcement and the quarantine calls and all that stuff, so lots of pressure on us to do that, I think way more than even the district level, right? They were just telling us. So there's heavy, heavy layers of it. If this is the job forever, I don't know if I can do it 'cause this isn't fun.”

—Principal Focus Group Participant

School Nurses reported varying authority in decision-making. While many School Nurses described providing recommendations to their superintendent to implement, others shared that decisions would be communicated with them last-minute, with little opportunity for them to provide input. School Nurses felt like they were expected to communicate and enforce COVID-19 protective measures in their communities, which was difficult if they did not support the measures. School Nurses also felt frustrated with OHA and ODE because they did not feel that the right voices were at the table making decisions about how to respond to COVID-19 in schools. Some Nurses felt that these entities did not have adequate understanding of how schools functioned day-to-day to create appropriate guidance.

ESD and SD interviewees did not provide many details regarding how they enforced public health mandates in schools. Responses included providing education and reminders about masking and social distancing and providing supplies such as masks, sanitizers, and gloves. Some interviewees mentioned enforcing exclusion criteria for students who had tested positive for COVID-19 or been in contact with someone who had tested positive, which involved notifying families of the exclusion and when the student could return to school. A couple interviewees relied on their relationships and trust with students and families to encourage them to follow the public health mandates. One interviewee described enforcing the minimum requirements possible.

“I felt completely supported by my district, and yes, those were hard decisions to make, but I felt heard and I would go off nursing process judgment and the data we had in front of us.”

—School Nurse Focus Group
Participant

“We were not involved regularly with meetings. Sometimes they would come ask our opinion.”

—School Nurse Focus Group
Participant

“For my district initially, I really wasn't involved, very frustratingly, on my end.”

—School Nurse Focus Group
Participant

Although some School Nurse interviewees reported aiding with enforcement of public health mandates, others reported: “We just communicated because we weren't the police and we were getting beat up enough as it was.” School Nurses communicated public health protections with students and their families, particularly masking.

“You obviously had the people who didn't want to wear the masks and didn't want to get the vaccines but we followed the protocols that we were supposed to follow. And just again, pretty matter of fact, it was pretty easy. You did it or you didn't participate.”

—SD Interviewee

“Our 85 nurses and our School Health Assistants (SHAs) out there were constantly the deliverer of the news to families and parents specifically around what that meant for their students or when they could come back. Early on the pandemic, quarantine was 24 days long. And so our staff was frequently the bearer of bad news

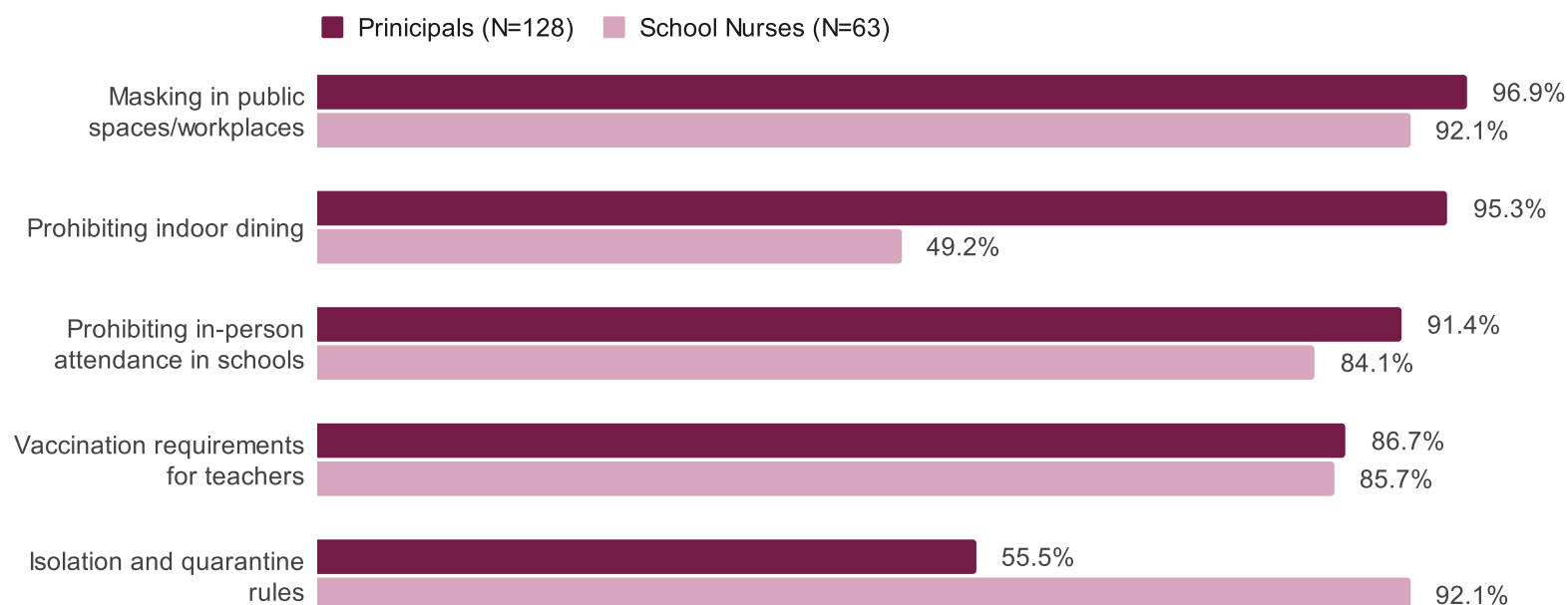
in terms of your student can't come back until after Christmas break or can't come back until, they can't go to graduation because they've been quarantined or those type of things. And when I say can't come back, it was never an enforcement, but it was just this is the public health guidance that your district is abiding by.”

—ESD Interviewee

Success with enforcement

Efforts to ensure compliance with public health mandates in school were met with varying responses. Although some schools reported substantial challenges with enforcement, there were some successes reported by schools. Figure 33 displays public health requirements that were enforced by schools.

Figure 33: Public health requirements that schools adopted that were enforced



Some SD and ESD interviewees felt a significant success for their district was being able to comply with public health mandates and changing guidelines. In turn, they reported high compliance brought success in mitigating the spread of COVID-19. Collectively, ESD interviewees reported more success with enforcing public health mandates than SD interviewees; only a single SD interviewee reported a success with public health mandate enforcement, compared to all but one ESD interviewees identifying one or more success. Successes were described by both ESD and SD respondents as students and staff complying with the mask mandate and successes communicating mandates and reminders through regular newsletters, signs in the building, and verbal communication. Providing feedback to LPHAs on the application of mandates in schools and making adjustments to guidance where needed was another success.

SD and ESD interviewees reported that sometimes, finding a middle ground was a success. One SD interview reported personal communication with some families about specific public health mandates helped to find “middle ground.”

“I think it helped them a lot to hear from the school districts, why that would be a challenge and the reasoning behind that from an education lens and not from a public health lens. So I think having those weekly meetings was just crucial for all of that. So then our health department could make changes or provide guidance based on the feedback that they were getting directly from the component school districts.”

—ESD Interviewee

“I think the masking, the distancing, contact tracing. I think all of that. They did a good job in this area.”

—ESD Interviewee

A few SD and ESD respondents mentioned that they balanced the divisive nature of Oregon's mandate for school administrators and staff to be vaccinated with success in school staff vaccination rates. However, one respondent mentioned that for school staff vaccinations to succeed in their region (Region three), they had to sign off on every vaccination exception form.

“Most of the time, I could get people... 'Hey, I know you don't agree with the mask mandate, but for the sake of your kid coming to school and us getting down the road, this isn't going to last forever. Will you just work with me on this? We're not going to send your kid home for not wearing their mask, but could you just help us be reasonable about it?' Most of the time, people were okay with that. I had to balance that between staff

members that were very much about making sure kids were masked, and then other staff members who were wearing their masks halfway down most of the day. So I think it was an influence versus authority and a reasonableness versus an absolute. There's just that middle ground in there to get through something like this with that many people involved.”

—SD Interviewee

“Staff had, of course we gave them time to go get vaccinated during the middle of the day. It was like go. And then of course, we had to monitor that everybody had a vaccination or a waiver or they got fired. I feel like we did that pretty well. We didn't have anybody we had to fire, but we would've if we needed to.”

—SD Interviewee

A few school education sector study participants mentioned they appreciated that decisions about the vaccine mandate came from the governor and others in leadership roles at the state level. For some participants, this made following through with enforcement less of a challenge.

Some Principals felt that their role of “communicator” bled into the job of “enforcer” - as they communicated with the school staff, students, and families about new or changing guidance. Although some respondents reported using traditional and well-established methods of communication (e.g., emails, Remind app) to get new or updated guidance to their school community, others reported using social media or other engaging methods to reach their school community.

“To be honest, it helped when the governor would make a declaration, emergency declaration, and just tell us what we had to do. I actually did appreciate her taking the heat on that, because it made it easier in the school district to go, ‘Hey, when the governor tells us what to do, we actually have to do it. That is the law.’ And so, that actually really helped us.”

—SD Interviewee

“And then we had little videos to talk to families and students about what it would look like, and we measured out the desks in the classrooms... We had signs about masking and social distancing. Our district did a great job communicating all those things. And so, once they were here in the building, we were just really holding the line, I guess,

to make sure everybody was following the rules, both for students and staff members.”

—Principal Focus Group Participant

Principals also shared some successes and high levels of adherence to public health mandates within their schools. Utilization of an array of enforcement models was cited as a success among Principals. Behavior modeling and clear messages, study participants noted, were associated with enforcement success. Nearly all respondents reported adjusting school schedules to have students attend school at different times. Other respondents implemented creative solutions such as QR codes to reduce crowding in the lunchroom, and “restorative talks” to address student push-back.

“We also had a lot of students that were self-monitoring and monitoring their peers and so we would have groups of students that would say, I don't feel comfortable with this student in my class who's not masking. And so, that would open us up to having some restorative conversations and we had community circles in our classrooms about what the impact of our choices are. So, we were able to use a lot of other strategies aside from some punitive pieces to have a clear understanding of

why it was important to do that. So, I feel like we didn't have as many of the active defiance. We had a couple of parents that that came in or grandparents that would make us think about it, but for the most part we were able to have pretty civil conversations and have a pretty high compliance rate.”

—Principal Focus Group Participant

“We put QR codes [quick response codes] on the tables so that when students had lunch they did their QR codes

and the same thing going to the library so that we could contact trace and we had a list of where kids were. So, that was really good. And the other piece was when we came back to, when we had the opportunity to remove our masks, we were worried about like how kids, how people would get into it and things like that. So, we just went around and talked to all the classrooms about the importance of respect.”

—Principal Focus Group Participant

Challenges with enforcement

Every educational sector participant—SDs, ESDs, Principals, and School Nurses—reported varied challenges with enforcement that changed throughout the duration of the pandemic. School administration and staff experienced multiple challenges associated with the enforcement of public health mandates in schools. Common challenges faced when enforcing public health mandates in schools included the following:

- confusion about how public health mandates applied to schools;
- inconsistent information about how confusion about how public health mandates applied to schools;
- changing public health guidance was onerous and took an incredibly large amount of staff time to update materials, policies, and plans and then communicate changes to the school community; and
- lag times between when a complaint was filed and follow-up, which caused frustration among those whom the complaint was filed against.

Although there was some overlap in the challenges experienced across education participants, there were different challenges associated with different levels of enforcement (i.e., district- vs. school-level enforcement). Politicization of public health mandates added a layer of complexity to enforcement.

District level challenges

The majority of SD and ESD interviewees described challenges with students, families, teachers, staff, and community members not wanting to follow the guidelines for public health mandates in schools. This included mandates relating to school closures, mask mandates, and vaccine

“There were a lot of difficulties for superintendents around the state. We had our own issues, because we had certain board members who thought they knew more about the science, who were making up science or politics about breaking the law and things like that. There were a number of districts that had very disruptive meetings, and superintendents who were threatened, death threats, all kinds of stuff. It was pretty gnarly. So, a lot of just the political... And that's just people are weird. So, it was just really hard.”

—SD Interviewee

mandates. District administration and staff tried their best to handle non-compliant individuals. In some cases, SDs reported that disagreement with mandates escalated to aggression, threats, or a combination of both towards school administrators, including themselves.

Some ESDs and SD reported difficulty understanding public health mandates or how to apply them in specific school settings. Interviewees also mentioned most of the mandate guidance was given in to them in forms that were hard to follow (e.g., used scientific jargon, did not make sense for school settings, did not apply to special school settings).

“Masks, the challenge with that was that you just had a couple staff members that really didn't agree with it. So they were loose and sloppy with it in the buildings. But typically those were handled pretty quickly. If it was noticed that somebody was not compliant with wearing a mask in the building was brought to the attention of their supervisor. It was a knock it off or we're going to deal with discipline thing. I think for the most part it went pretty well.”

—ESD Interviewee

“We're implementing government initiatives and government responses and just so that puts us in this awkward spot of either following the law or not and losing our funding. There were plenty of school superintendents who lost their job for following the law. I mean so many that they created legislation that a school superintendent can't be fired for following the law.”

—ESD Interviewee

“Our biggest one was maintaining distance during lunch for those that were quarantined during lunch. And the health department, honestly had an answer of, well, just separate the students, not realizing what that would've actually impacted the student.”

—SD Interviewee

School level challenges

Many Principals and School Nurses reported varying levels of adherence to public health mandates within districts and even the same school. In turn, this produced challenges when it came to enforcement. One School Nurse discussed varied levels of enforcement among school staff that occurred within the same school: “These differed for each school in our district. Some teachers kicked kids out of their class if they didn’t wear the mask properly or if they cleared their throat....what message is this sending to children? Some were more relaxed about it. Me as the nurse if I knew of a confirmed case would contact trace and exclude anyone who was exposed.”

SDs and ESDs reported a number of challenges related to enforcing public health mandates started in Stage 2, including community frustration building as they waited for schools to reopen. As schools started to reopen in Oregon, SDs and ESDs encountered new challenges in response to the pandemic, which included:

- enforcing vaccine mandates for teachers and school staff;
- COVID fatigue among community members and school staff;
- politicization of COVID-19 and associated mandates;
- enforcing masking and mandates for young children;
- community members refusal to wear masks; and
- navigating the reopening of schools, including entire classes closing down because of cases and teachers not wanting to return in-person for various reasons (e.g. their kids were still at home, they felt unsafe).

“Our district was one of only a few the adhered to public health protections in our region. This was important but was also overwhelming with the limited resources that we had, which I feel negatively impacted our execution of protocols.”

—School Nurse Survey Respondent

“I was point on one particular pain point with a district that basically opened against the rules and had public complaint and clear documentation. And when the brass tax came to hold them to account, we folded. And that does no one any favors.”

—ODE Interviewee

At the district level, study participants reported public health mandates were challenged from a human resources (HR) perspective. This was a particular challenge regarding the vaccination requirement.

“When we started the '21-'22 school year, the mandate around vaccinations was particularly challenged at the human resources level because, again, it's just a whole new layer of ensuring that people are vaccinated, having really difficult conversations with people who didn't want to get vaccinated, people who were looking for... Then having to be the decider of whether an exception is provided to an employee or not, while at the same

time knowing we're going through a public health crisis and we're not only liable for the employee and their health.”

—SD Interviewee

“When we came back to school in the fall of '20, the 2021 school year, we had our teachers work from their classrooms. And that was a challenge because teachers wanted to work from home for a variety of reasons. Their kids were at home. But we have

teachers who live in spaces where we couldn't support their internet. And just being able to provide them the resources that they needed to be able to teach, bringing teachers back was a challenge with our local unions. I'm glad we worked through that when we did because it made it a whole lot easier when we were bringing kids in.”

—ESD Interviewee

Adjusting the physical environment of schools to adhere to public health requirements was complex and challenging for Principals. Often, these adjustments put a strain on school staff via reduced or eliminated breaks so that classrooms could be rearranged or class sizes could be smaller. Principal survey respondents also reported not having enough physical space in the classroom to physically distance students. In turn, this led to inconsistent implementation and enforcement of guidance across some school districts. One Principal commented on this: “inconsistent enforcement of current regulations in order to maintain instruction — in a pandemic don't use words like 'to the best of your ability' either we need to do it or not.”

“But even just like in the building, like spending time on weekends and evenings, measuring out six feet between desks and taking out the ones that wouldn't fit and storing them, and going through all the hallways, and putting six foot markers, and just like a lot of extra time that may not have been seen at the district or state level.”

—Principal Focus Group
Participant

“We did breakfast in the classroom and lunch in the classrooms, which I think also helped, although that put a lot of pressure on our staff in terms of breaks and things like that.”

—Principal Focus Group
Participant

“I know that our building is older and so the age of our facilities caused some issues..but I would say just in general, facilities are a challenge in here in rural Oregon where they're older and we can't pass a bond.”

—Principal Focus Group
Participant

A couple of school administrators reported receiving OSHA complaints. In one instance, a Principal stated the complaint was received so late that it was no longer relevant to current practices (e.g., outdoor masking guidance had already changed). In another instance, a Superintendent reported they received multiple OSHA complaints that they did not feel were valid.

Some Principals felt that although they tried to enforce public health mandates, they did not have proper authority to enforce specific measures.

“One other thing to add would be enforcing all of those public health protections, and then you would get an OSHA complaint and you wouldn't know where it came from. Or sometimes it would be months later. I got one for the beginning of September but I didn't receive it until January. And it was because the guidance had changed about outdoor masking like that day.”

—Principal Focus Group
Participant

“But we dealt with... We had staff that didn't want to be at work. So we had OSHA complaint after OSHA complaint because we had staff that didn't want to be at work and were looking for reasons not to, right. So that was difficult to be in that spot where we want people here, so we need to do this, but just dealing with the feeling like we're always being negative.”

—SD Interviewee

“If we are going to require it from OHA we need to have the power to enforce.”

—Principal Focus Group
Participant

Making sure staff adhered to isolation requirements caused major staffing issues, one Principal reported.

Some respondents also said that enforcing the vaccine mandate caused some staff to leave the school. Others reported that clear agreements with the union about vaccine requirements seemed to assuage some of the tension around this issue.

“We had to send people home, right? If you had contact or there was this or that. So, we're sending like, we're literally like having substitutes all day every day. One time I had 22 teachers out. So, we're subbing and like kids aren't getting their education even though we were back in a building when they have a sub or two, you know, a different sub every day or you know, and then we're bringing in really young

folks that don't have the experience. I don't wanna say young, I say young, old, it doesn't matter, right. That they weren't really qualified to, that was really tough. Real, real tough.”

—Principal Focus Group
Participant

“But one thing that we also had to do is making sure our staff got vaccinated. So, I'm in a pretty rural area and so that was like, we lost staff because of that. And so, I think that was something that we kind of had to push onto people and maybe they weren't one to receive that.”

—Principal Focus Group
Participant

One of the most common challenges mentioned by Principals was dealing with the emotions of parents and other community members about public health requirements that the school had to implement and enforce.

Multiple Principal focus group participants reported that a lack of support from law enforcement was a barrier to addressing community push-back to public health requirements.

“And then the second was just, and again, it wasn't every single parent in the district, but we work in a relationship driven field oftentimes. And when those relationships were, you know, felt like they were broken and how hurtful people were towards us on social media over things that were completely out of our control.”

—Principal Focus Group
Participant

“I think that there was no support from, yeah, law enforcement or other agencies. There was none. And they made public statements stating that they would under no circumstance come in and support us in those efforts unless there was some sort of harassment or unruly type of behavior going on.”

—Principal Focus Group
Participant

“One thing I wish we had more of is just help on holding that line in the sand, because we got so much push back. And there were just days that I dreaded because I was getting yelled at by staff, by families.”

—School Nurse Focus Group
Participant

School Nurses reported using an array of strategies to improve adherence to public health measures. This included providing teachers with the tools they needed to successfully implement protective measures and clearly communicating expectations to students and teachers. School Nurse interviewees, at times, thought it was difficult to implement protections that were just “recommended” by the guidelines they received. Additionally, as the pandemic progressed, some School Nurses thought that after a while, it was challenging to enforce policies that they believed were no longer “best practice”, but ultimately had no decision-making authority.

“Our county is pretty conservative maybe regarding masking. I literally had my life threatened over asking someone to wear a mask. I had milk thrown at me. I had all kinds of things happening. And once the masks were gone, in all reality, the conflict with the parents went away.”

—School Nurse Focus Group
Participant

“I think one of my greatest challenges was enforcing the policies. Once the policy is no longer aligned with best practice for lack of a better word, right? Especially after just spending so much time teaching and educating and partnering and building that trust. It felt like a rupture to that relationship that I just worked so hard to cultivate.”

—School Nurse Focus Group
Participant

“It depends on your school board or your school district, whereas ours was a little bit more conservative, meaning, you need to mask up, you have to wear a mask, whereas other school districts in the state were not, and it just is so frustrating how it was so different. So it was left upon each school district and I felt that wasn't too cool, to leave us high and dry like that.”

—School Nurse Focus Group
Participant

Ways to improve adherence in schools

School administrators, including SDs and Principals, felt their lack of involvement in public health mandate decision-making hindered COVID-19 pandemic response in schools. Importantly, Principals also felt they could have brought valuable insight to the table if they had been offered a seat. Principals reiterated that although Oregon took a “one size fits all” approach, schools were “not a one size fits all.” Principals reported that for future public health emergency responses, there should be leeway and decision-making at the local level, especially given the vast differences in schools (e.g., geography, population served) throughout the state.

“Through the whole process, especially as we returned the Fall of 2020, Winter of 2021, it felt like everything was being done to teachers and being done to staff and they didn't really have a voice, or any way to like provide input on maybe what was working or not working. And just thinking about what was working in our school, we could have done more of is having teachers share some promising practices, maybe more workaround instruction and things like that while they

were able to find comply with them but also make sure the kids were learning. And then I think about that as a whole, if there would've been maybe a chance for a little bit more voice and some different levels of communication on what was working and not working in the classroom so that our teachers and our staff had an opportunity to kind of be part of some of the decision making or information gathering.”

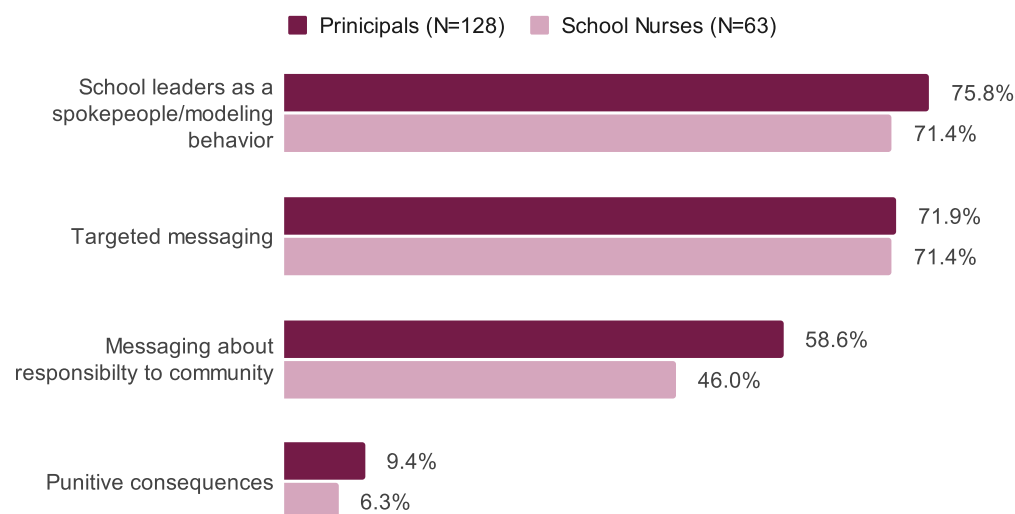
—Principal Focus Group
Participant

“School district superintendents were put into a horrible situation, where we were made to look like we had decision making power in our district to write our plans and set our rules, but the mandates were so clear and restrictive that we had little wiggle room to apply local context into our decisions.”

—SD Survey Respondent

Figure 34 shows the strategies that Principals and School Nurses found to be most effective for enforcing public health mandates in schools.

Figure 34: Strategies that were most effective for schools for enforcing public health mandates



Among Principals who reported punitive approaches to enforcement of public health mandates, there was consensus that it was ineffective, especially for masking.

“We did, I mean we communicated constantly. Initially we tried to be like, we would give the kids a warning to put their mask back on in class. They didn't do it. They go to the dean's office, you have a conversation and then we would suspend them, which, so that was a very short-lived experience. 'Cause the parents were like, I'm not gonna come and get them. So, I think for two weeks we probably tried to be punitive and then we were just like whatever. So, I think it was just the verbal reminders by the end, which was generally not effective.”

—Principal Focus Group Participant

Study participants involved in Oregon’s COVID-19 public health response in schools were asked about potential strategies they thought could improve adherence to public health mandates in schools. Some SDs and ESDs reflected on the fact that many people “don’t really like mandates” and were unsure about how policy changes could impact this. They did emphasize, however, the importance of community engagement and connections to hold the community together during challenging times. A clear theme identified by many respondents (SDs, Principals, and School Nurses) came back to the importance of clear, consistent communication with the school community.

Other respondents also recommended building upgrades as a way of improving adherence. Principals reported that school building improvements could make school staff more comfortable with their working conditions. Specific building infrastructure investments that were cited as a way to potentially improve adherence to public health mandates included:

- upgrades to outdated HVAC systems;
- renovated classrooms with adequate windows and/or doors to allow airflow throughout each individual classroom; and
- creation of larger classrooms to allow for social distancing.

“I think when people are confused and they don't feel like they have a whole picture, they might not be adhering to those mandates as much. And so just keeping that communication constant and clear and having all of our staff kind of on the same page, we did a lot of really deliberate communication to keep everybody in the up and up so that there was less kind of going around in the background or not doing things or following through or things like that.”

—Principal Focus Group
Participant

“We had huge union complaints around like, ‘you want me to go in and you give me this little baby air purifier. Like that's not feeling super comfy to me with 38 kids in a class.’ So I think that any sort of facilities upgrades, the HVAC stuff is great but that can't always be seen by teachers. And so I think our facilities are old and outdated. They're not meant to like give space and give airflow like in a really genuine way where we could pop a door open or a window open. So I would love some mass facilities upgrades if that is on the table.”

—Principal Focus Group
Participant

“We have some old school, old facilities in our district that could have had almost the classes of 21, 20 and still meet the six feet. And then we have some new buildings that were built in the last couple years that we were struggling to get 12 and 11 in because of just the way that things were spaced.”

—Principal Focus Group
Participant

“Right now in the late stage of stage four, we're really looking to how do we build the operational muscle of school districts to be able to manage communicable disease meaningfully with the

understanding that community expectation has changed. So that it's something that they are doing, but it's not sucking up every ounce of resource, attention and energy. They're doing it in service of the academic achievement, outcomes, meaning, purpose, belonging, and connection that they're trying to foster in their school communities. And that's a long pathway. So working through that pathway to get to a place where we have done that, where we've built that operational muscle, knowing that this is communicable disease management expectations for all of us are higher than they were in 2019.”

—Principal Focus Group
Participant

Transitioning to distance learning

As part of Oregon's public health response to the COVID-19 pandemic, all Oregon schools were closed for in-person instruction from March 16, 2020 through June 2020. Based on COVID-19 positivity rates, many schools remained closed for much longer into the pandemic.

Preparedness for distance learning

SD, ESD, and Principal survey respondents were asked to reflect on how prepared their district was to transition to distance learning (Figure 35). A little under half of SD survey respondents (45.1%, n=32) felt their district was moderately or highly prepared, and a little over half (54.9%, n=39) felt they were minimally or not at all prepared. Not a single ESD survey respondent felt their ESD was highly prepared to transition to distance learning, although most respondents (62.5%, n=5) felt their ESD was moderately prepared to respond. Feelings of unpreparedness to transition to distance learning at the district level were echoed in interviews. In comparison with SDs and ESDs, more Principals (64.9%, n=111) felt their district was minimally or not at all prepared to transition to distance learning. A little over one-third of Principals (35.1%, n=60) felt their district was moderately or highly prepared; SDs and Principals were asked about whether the abrupt transition to distance learning required adoption or adaptation of existing policies. Almost half (47.5%, n=34) of SD survey respondents reported they had to change existing policies (Figure 36). Four SD survey respondents (5.6%) reported they adopted new policies and changed existing policies.

Figure 35: Preparedness to transition to distance learning for educational instruction delivery

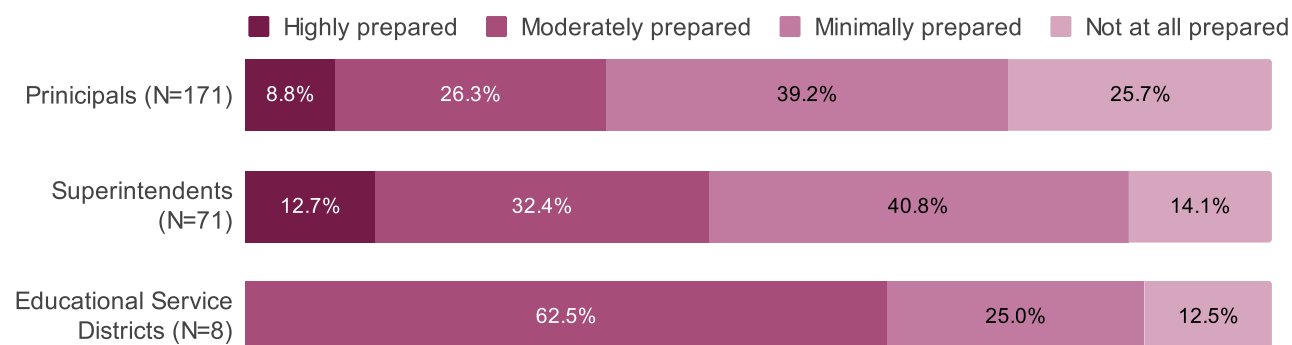


Figure 36: Abrupt closure of schools and resulting transition to distance learning required changes to existing policies (SD respondents, N=71)



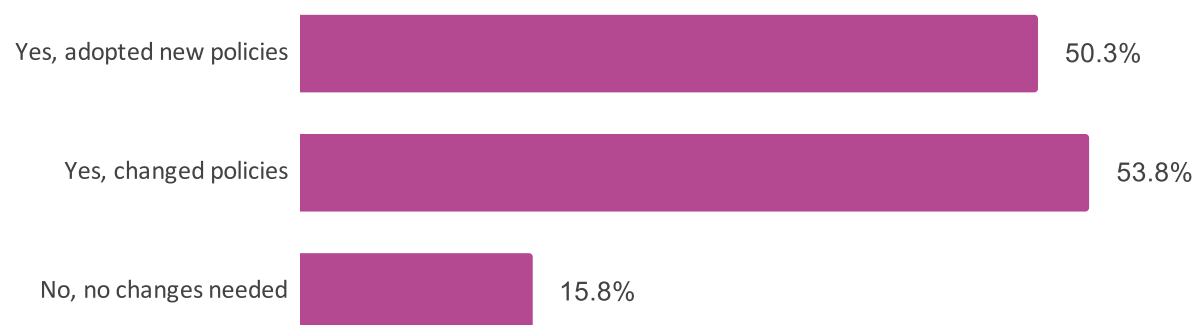
Some respondents selected both options for yes, so the total equals more than 100%

Principal survey respondents reported more policy changes than SDs. Half of the Principals who responded to the survey (n=86) reported adopting new policies for their schools during the transition to distance learning (Figure 37), and slightly more than half (n=92) reported changing existing policies.

Challenges with distance learning

As previously reported, challenges associated with distance learning were frequently cited as a reason for feeling unprepared to respond to the COVID-19 pandemic. A leading challenge in Stage 1 across a majority of SD, ESD, and Principal study participants was the transition to distance learning and remote work for staff. Interviewees reported that the challenges associated with changing the instructional education delivery method in such a short time frame ultimately made the quality of educational instruction suffer.

Figure 37: Abrupt closure of schools and resulting transition to distance learning required changes to existing policies (School Principal respondents, N=171)



“Distance learning was rough on kids and families. I feel that, in hindsight, we would have been much better off if the state had allowed us to continue to hold in-person learning.”

—Principal Focus Group Participant

Principal survey respondents were asked to rank aspects of the transition to distance learning from most challenging to least challenging (Figure 38). Training and preparedness of teachers in distance learning methods and delivery was ranked as the most challenging aspect, with 38.0% of Principals (n=46) reporting this as their top challenge. This was followed by technology infrastructure, which was identified as the most challenging aspect for 23.9% (n=29) of Principals and then by training preparedness of students in using distance learning technology (21.5%, n=26). Platforms or systems to manage distance learning was cited as the most challenging aspect for 16.5% (n=20) of Principals.

Figure 38: Ranking of most to least challenging aspects of transitioning to distance learning (School Principal respondents N=171)



“I would say that we did not do as well in instruction as we could have done. It's hard to say that, because it was so radical and so fast. It wasn't like, 'Hey, in six months you're going to do this.' It was like, 'We're doing this next week.' So, I think just the compressed timeline on that made... You can do the operational things like tech and food. But when it came to things like learning how to be a good online instructor for kids that you're not going to see for God knows how long, I think that was really hard.”

—SD Interviewee

When preparing to transition to distance learning and throughout stages of the pandemic when distance learning was provided, ensuring students had the necessary technology (e.g., computers and internet access) to participate in remote learning was a substantial challenge. Technology-related challenges associated with district learning were more common in low-income communities and communities living in rural areas. For rural areas, a lack of technological infrastructure was something that schools worked with multiple community partners to overcome. One Principal reflected on this, “There seemed to be a lack of awareness around how communities of poverty would be impacted by distance learning—including rural schools with little to no internet access.”

Principal survey respondents were also asked to evaluate the effectiveness of their school’s delivery of distance learning (Figure 39). Less than 10% of respondents rated their school’s delivery of distance learning as “excellent.” The majority of respondents (59.5%, n=72) evaluated their school’s delivery of distance learning as fair or poor.

Figure 39: Effectiveness of school's delivery of distance learning (School Principal respondents, N= 121)



“We just didn't have systems in place to do remote. And I think we really faltered. We just didn't do a good job with education. I think we've really failed kids in terms of their experience and what they needed was just not met. And so, on the school side of things, we weren't ready to pivot quickly to online school. We had kids that didn't just have the things they needed to be successful. They didn't have devices, they didn't have Wi-Fi, we didn't have a learning management system. We had no way to really deliver this in a way that worked. We weren't ready to do it.”

—SD Interviewee

Many Principals also reported substantial community frustration about Oregon's COVID-19 response in schools. More specifically, there was frustration about why Oregon schools continued distance learning when schools in other states were fully open. One SD interviewee described challenges in communicating to their school community why schools in other states were reopening and Oregon schools were not. This was a common theme for schools in rural areas of Oregon. A Principal focus group participant reflected on this, "...community frustration that Oregon took a harder line than neighbors to the East of us. 'How can they be back at school but we cant?', 'How can that state be pretty much open but we still have restriction?,' 'Our numbers are not any better than states with more relaxed rules.'

Those involved in Oregon's COVID-19 pandemic response in schools reiterated that just because students have returned to school does not mean that challenges are over. For some study participants, the return to in-person learning has brought to light many issues facing Oregon students. As Oregon schools look ahead, they are faced with addressing student learning loss and socioemotional issues- a substantial challenge study participants reported they are working diligently to address. SD and ESD interviewees reported that the pandemic will have long-lasting impacts on students, which will impact all students, but particularly younger learners (e.g., Kindergarteners and first-graders prior to the pandemic start). Importantly, study informants attribute these current challenges directly to distance learning. Oregon school administrators also reported they are also still dealing with students who are not

"Stage two was very frustrating in that it seemed that the west side of the state was very slow to reopen, whereas we don't have a very big population in our county as far as people being close to one another. And so stage two was difficult for us in that it took a long time for the partial reopening to actually occur."

—SD Interviewee

"I think Oregon's poor response to the pandemic will be and is currently shown in drop in public education enrollment and increase in private and home school. As a person that has dedicated my life to public education, this is hard to see people lose faith in public ed."

—Principal Focus Group Participant

returning to in-person learning for a variety of reasons (e.g., transitioned to private or home school, dropped out of school).

Study participants also reported seeing substantial socioemotional issues, particularly mental health issues as students returned to in-person learning. As younger learners are still learning how to navigate the socioemotional realm in school settings, this is particularly relevant for these students. Mental health issues, however, study participants noted are more prevalent in older students. For older students, one interviewee mentioned that online learning became a habit so changing back to an in-person setting caused stress and burnout for students.

“There was a huge loss in continuity of education. Our kindergartners this year and our first-graders this year are completely disrupted to what kindergartners and first-graders were prior to the pandemic. Their preschooling, their kindergarten years have been turned on their heads. So we are going to suffer in education for the next 10 years.”

—SD Interviewee

“Stage four currently, we're still honestly trying to help the kids get caught up with, there's some huge learning gaps that they have as a result of this. And I'm not sure that we will ever get them caught up based on the length of time that it took, but that's where we're at right now.”

—SD Interviewee

“We are feeling the after effects of students being extremely isolated and it is very difficult to get students and families engaged in learning and regular attendance. Socially, emotionally and academically we took many steps back for making progress with our students and it shows.”

—Principal Survey
Respondent

Successes with distance learning

Across all study participants, the largest success with distance learning was that schools were able to transition to distance learning with little notice and preparation. Interviewees also reported that as school staff adapted to distance learning, the quality of educational instruction improved over time. Despite the numerous challenges related to distance learning, education sector informants reported their schools tried their absolute best to continue to provide Oregon children with the best possible education given the ongoing pandemic.

Many SD and ESD interviewees discussed successes their district had during the initial transition to distance learning. Some respondents mentioned that their biggest success was distributing various technologies, such as sim cards and laptops for students, for online communication and learning accessibility. Lack of technology access and internet capability for students was a considerable challenge for schools. School administration and staff worked diligently to provide technological resources to students, particularly during the initial transition to distance learning. One ESD respondent described their success in their alignment with other districts in their response including cohesive use of tools and processes.

During the pandemic response, a few Principal focus group participants reported that hosting online virtual forums during COVID-19 was a success and aided in community building.

“While our initial response to 'emergency distance learning' was very difficult (Stage 1), given time and resources, we were able to create an adequate distance learning program beginning in the fall (Stage 2) that worked for most students.”

—Principal Survey Respondent

“Especially in Stage 1 and Stage 2, [NORTHERN OREGON ESD] did a really good job, like you said, of keeping all the districts aligned and everybody having the same response, using the same tools, having the same processes.”

—ESD Interviewee

“Locally working with my team, I have an amazing IT [Information Technology] department that is like, 'Okay, we're going to go get every single Chromebook out of buildings. We're going to go get [more than 5,500] Chromebooks and bring them to the district office.' So that my... The team that I have here in place stepped up.”

—SD Interviewee

“First part of Stage one, we shut down and went to remote instruction. So that was the general request. Our ability to do something like that, that we'd never done before was, I mean everybody in the state was doing it, but the fact that we did it is still kind of amazing. Education doesn't change that quickly.”

—SD Interviewee

“Those Zoom forums the Principals we're holding were really, really great for building community. They would do sessions, [highschool name] did one, for like a six week, on how to teach your student at home. And so, the parents that Zoomed in on that kind of built a support group for each other 'cause they were all high school parents struggling with getting their kids to do the work. So, I think they, that was a definite success.”

—Principal Focus Group Participant

Some Principals reported that distance learning allowed their school to serve as a resource for other aspects of the pandemic response. One example of this is schools serving as a site for childcare providers to ensure healthcare workers and other first responders had access to in-person childcare.

Some Principals reported there is a value in keeping distance learning for some student populations who may have otherwise dropped out of school. “And I think because we went through the pandemic, more students are comfortable with online learning. And so, what I'm seeing this year is students that maybe traditionally would drop out because maybe they have to work to support a family or they have social anxiety so they don't want to come into school and rather than dropping out, we have an option for them that's a virtual academy. And I think it, I mean it didn't exist before and I know I'm not the only district that now has a virtual academy and so I think we're able to have less students dropping out because we have more options for them.”

Food services

Throughout the COVID-19 pandemic, Oregon schools continued to provide food services to their students and families despite school closures. SD, ESD, and Principal interviewees, specifically, reported prioritizing access to basic food services students would receive in-school during school closures. It is evident that continual provision of food service throughout the pandemic was a substantial success in Oregon's response to the COVID-19 pandemic in schools. Some schools reported creating a “catering service” of sorts, where school staff (e.g., administrators, teachers, bus

“When we first closed down in March of 2020, our school became, well, we closed, and then we were a childcare provider for first responders in the community at the school that I was Principal of. So, we brought together a group of staff to take shifts and rotations to provide childcare for medical personnel and law enforcement, and just first responders.”

—Principal Focus Group
Participant

“From a food service standpoint, we were able to convert into a catering service very quickly, and used our buses to deliver meals to homes. We fed kids and we got them connected.”

—SD Interviewee

drivers, cafeteria staff) delivered food to students' houses. Others reported their cafeteria served as a central "hub" for pick-up of meals.

Numerous community partners supported school efforts to provide food services to those in need. Some Principal interviewees reported partnering specifically with CBOs and faith-based organizations to ensure student access to food service. Some Principals reported their local grocery store provided brown paper bags to aid in implementation of food service delivery. Schools serving homeless students also reported partnering with specific CBOs to ensure food access for this special student population.

Despite considerable success with Oregon schools' ability to continue food service, there were logistical and resource challenges that schools faced. Principal survey respondents reported that feeding children in rural areas was a major challenge that hindered their school's COVID-19 response.

"When the initial two-week shutdown happened, we, that first week, started delivering food because we know we have a lot of students with food insecurity. So we were out on buses during the first week of the shutdown right away, delivering meals, breakfast, and lunch. Administrators were... I mean, we sent staff home, but administrators were riding bus routes morning and at lunch delivering food because we know that's a need in our community."

—SD Interviewee

“So, initially we might've been sending home packets or making sure that families had access to food through our school lunch program. There was quite a bit of that. And so just kind of making sure that our cafeteria was accessible so that our school bus drivers could pick up the lunches to deliver them to local community centers or parks so that families had access. But it changed in a lot of ways. But I think, you know, information provider, food provider, when necessary, and then of course an educational provider as time morphed on as well.”

—Principal Focus Group
Participant

“And our local churches, their community partners, they began to bring lots of snacks, snacks and Top Ramen. Just stuff like that that kids would have because we would deliver their lunches. But depending on the family's situation, that didn't cover dinner, or it didn't cover snacks. And growing kids actually need more than just three meals a day, they really do need snacks. And so, we had lots of our church community partners that would provide food for us. And then just the way to get the food to them in the bags and different things.”

—Principal Focus Group
Participant

“We also have an organization that helps us with students that are homeless or need food. So, they partnered with us to work with them to, we delivered food together or just helping to get things into students hands. They were a really strong partner.”

—Principal Focus Group
Participant

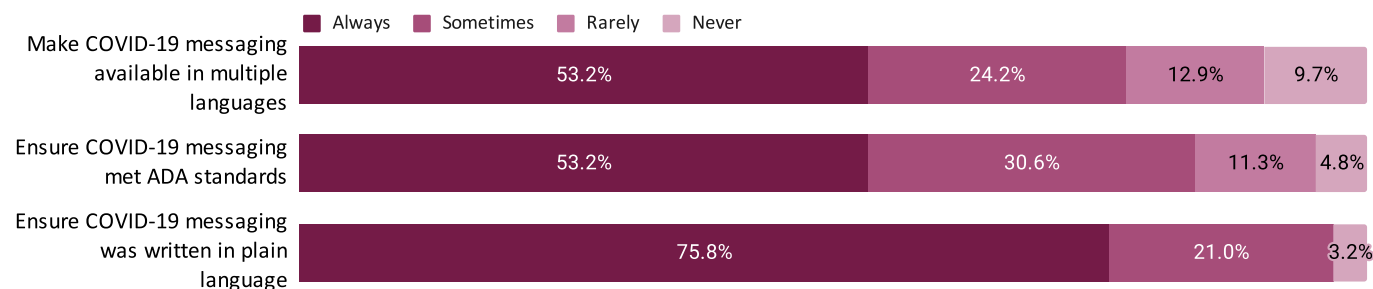
Public health messaging and communication

As mentioned above, public health messaging and communication was integral to the COVID-19 response in schools. Public health information typically flowed from ODE to SDs and then to Principals. Timely information sharing across partner organizations (SDs, ESDs, schools, LPHAs, ODE) was cited as a key success in the response. Simultaneously, however, the frequency with which public health messaging changed for schools hindered response at both the district and school levels.

Use of public health messaging best practices

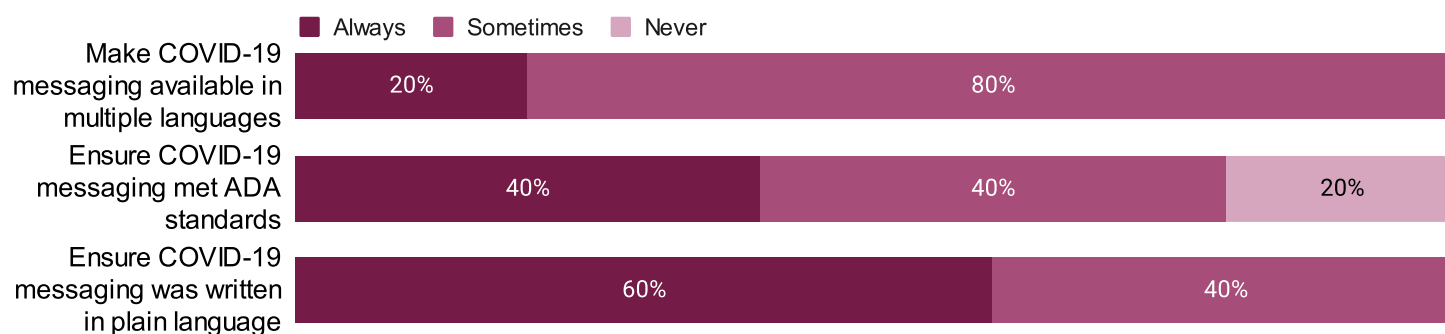
SD survey respondents were also asked to reflect on how their district incorporated accessibility standards into their public health messaging. Nearly all (96.8%, n=60) reported that COVID-19 messaging was always or sometimes written in plain language, most respondents (83.9%, n=52) reported that messaging always or sometimes met Americans with Disabilities Act (ADA) standards, and 77.4% (n=48) reported that messaging was always or sometimes available in multiple languages. About 9.7% (n=6) of SD survey respondents reported never making material available in multiple languages, 4.8% (n=3) reported not meeting ADA standards, and 3.2% (n=2) reported that they never ensured messaging was in plain language (Figure 40).

Figure 40: When developing targeted public health messaging, school districts did the following (SD respondents, N=62)



The 62.5% (n=5) of ESD survey respondents who responded affirmatively that their ESD developed and disseminated COVID-19 public health messaging were asked to reflect on how their district incorporated accessibility standards into their public health messaging. All ESD respondents (100%, n=5) reported that COVID-19 messaging was always or sometimes written in plain language and that messaging was always or sometimes available in multiple languages. The vast majority of ESD respondents (80%, n=4) reported that messaging always or sometimes met ADA standards, and one respondent reported that messaging never met ADA standards (Figure 41).

Figure 41: When developing targeted public health messaging, ESDs did the following (ESD respondents, N=5)



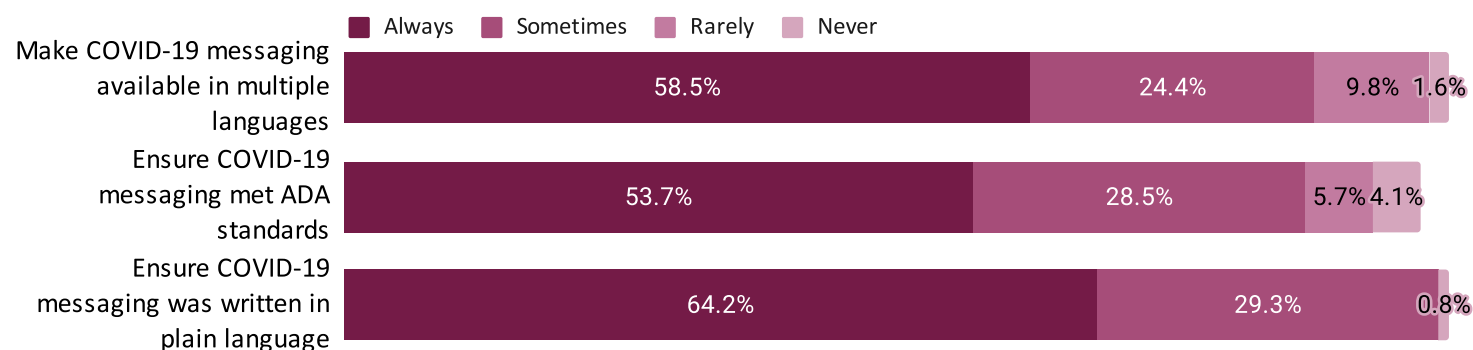
Similar to SDs, nearly all Principal survey respondents reported that COVID-19 messaging was always or sometimes written in plain language (93.5%, n=115), and reported that messaging was always or sometimes available in multiple languages (82.9%, n=102). Most Principal respondents (82.1%, n=101) also reported that messaging always or sometimes met ADA standards. Approximately 4.1% (n=5) of Principal survey respondents reported never ensuring messages met ADA standards, 1.6% (n=2) reported never making messaging available in multiple languages, and 0.8% (n=1) of respondents reported never ensuring messaging was written in plain language (Figure 42).

Overall, schools worked hard to ensure they adhered to public health messaging best practices, which included the development of tailored COVID-19 health messaging. Culturally-responsive communication and language access was brought up by a couple of Principal focus group participants. Some Principal focus group participants reported offering parent meetings, video tutorials, and other COVID-19 communications in both English and Spanish during their response to COVID-19.

“We did a lot of tutorial videos. And kids did 'em, and we showed what that means and trying to make it as cool with the cool signage and all that stuff, as culturally responsive and appropriate as we can and at least it helped in terms of the visuals, which I mean, we're still peeling stickers off the floor.”

—Principal Focus Group Participant

Figure 42: When developing targeted public health messaging, schools did the following (School Principal respondents, N=123):



Messaging about public health mandates

ODE reported they worked with OHA to develop messaging about public health mandates for schools. ODE felt that OHA was a strong partner who helped them articulate the science behind specific mandates.

The majority of SDs rated ODE's communication during the COVID-19 pandemic favorably, with over 70% (n=44) of survey respondents selected good or excellent. A handful of SDs rated ODE's communications as poor (4.8%, n=3) and the remaining respondents rated ODE's communication as fair (24.2%, n=15).

Some SD and ESD interviewees felt there was a benefit in public health mandates for schools coming from state agencies, as they (school districts) could present neutrality on the subject. For example, school administrators and staff could state they were "following the law as a state employee/state-funded school district" as opposed to agreeing or disagreeing with the mandates.

Some respondents mentioned issues with being told conflicting messages about which PPE to purchase and distribute, costing schools resources.

Challenges

ODE reported that although there were many successes with public information dissemination, there were a few instances where inconsistent information was pushed out from varying organizations. One ODE interviewee noted that instances where inconsistent information was coming out from ODE, OHA, and LPHAs were few.

"I think that there was really good, coherent, aligned communication between OHA and ODE throughout about expectations... So I think the messaging was really aligned and that really supported the expectation of the implementation of those protections. And I think throughout OHA has been a strong partner on helping us articulate and keep updated on the evidence base of those public health interventions."

—ODE Interviewee

"We got mandates and we had to take care of that. I think actually it really helped."

—SD Interviewee

One ODE interviewee also noted that the constantly changing messaging- sometimes messaging that was intended to be a bit more nuanced- made people feel more confused and recognized public trust was lost along the way.

“Overall, it made my job easier in one sense that it wasn't on me to make the call. There were a few things I could make a local option call on. And so it was simply getting as much information, trying to explain the why, and even if they didn't understand the why, saying it's still going to be that way, so on we go. And trying to do that with as much communication from lots of different strategies and methods as possible.”

—ESD Interviewee

“We bought face shields because ODE, like the guidance, said you could wear face shields. And we bought the ones even that sat on your neck and went up because kids are down below the teacher. So we felt those were safer. And then so we spent how much money on face shields, and then they came out and said, “Yeah, you don't get to... We can't wear those. They're not safe.” So we have cases of these expensive face shields sitting in the warehouse that for what?”

—SD Interviewee

“We maybe had a few times where people were feeling like they were getting a different message from OHA/ ODE and their local public health authority. And I feel like those were easily solved and not as frequent as they could have been.”

—ODE Interviewee

“A lot of paying attention and reading and keeping updated to CDC recommendations, OHA recommendations, ODE requirements and recommendations. And those things kept changing on us.”

—ESD Interviewee

A couple of SD and ESD interviewees discussed challenges associated with the timing of public health information flowing from OHA and ODE. Specifically, school districts mentioned that receiving communication at the same time as the public presented a large communication challenge and further stressed relationships with the school community.

Most SD and ESD interviewees (all but one), mentioned that communication and messaging regarding public health mandates were confusing for a couple of reasons. First, SDs and ESDs received mandates and guidelines flowing from different entities; only sometimes were guidance from these different entities congruent. For instance, many respondents mentioned receiving guidelines or directives from their nearest LPHA that only partially matched guidance from OHA or ODE. Some respondents reported they interacted with more than one LPHA, which also caused confusion and additional inconsistencies with guidelines. Secondly, many respondents noted that changing guidelines and mandates based on new information was challenging and unsustainable. Respondents mentioned that guidelines would change within a week or two after disseminating guidelines to their students and families.

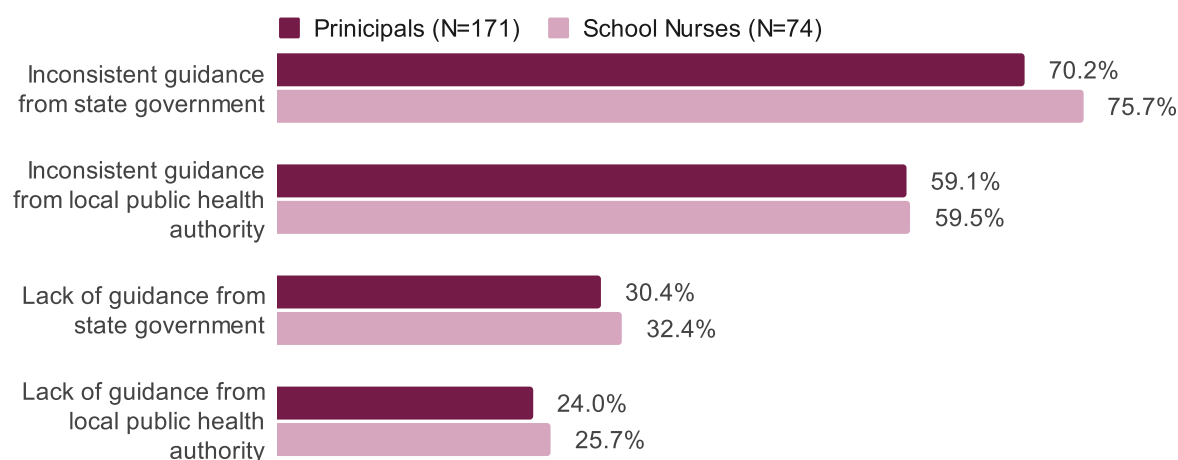
Translation of public health messaging was a challenge that school districts encountered during their COVID-19 response. One ESD also discussed the long turnaround time associated with the translation of materials, which resulted in a lag time between when messaging was ready for dissemination and when the messaging actually got out to the community. Another reported having a hard time reaching some families during the pandemic who spoke languages that the district typically didn't perform translation for (e.g., Farsi and Trukese).

“The challenges that under this much pressure with this much politics in America, all it does is create very messy messaging and communication and the nuance gets lost and people just feel confused. And so we went from a message to a message, to a message, to a message with different rules, with different processes, and the normal public, much less educators. So at some point we lost people's ability to follow the thread lines. And I think that's an unintended consequence of an effort to be more nuanced, but we need to face the music a little bit about that.”

—ODE Interviewee

Challenges associated with the timing of public information were more frequently reported among study participants involved in the pandemic response at the school level (e.g., Principals and School Nurses). At the school level, inconsistent guidance from the state and inconsistent guidance from LPHAs were the most frequent communication challenges reported by Principals and School Nurses (Figure 43).

Figure 43: Guidance challenges that hindered the effectiveness, scale, or quality of COVID-19 response in schools



“That was one of the barriers in general with getting out timely messaging throughout the pandemic for us, was a lot of times the translation services would take five to seven days to be able to actually translate from English. Where we were ready and had messaging ready to go, but couldn't release it until all of the translations were available. So that's always a barrier.”

—ESD Interviewee

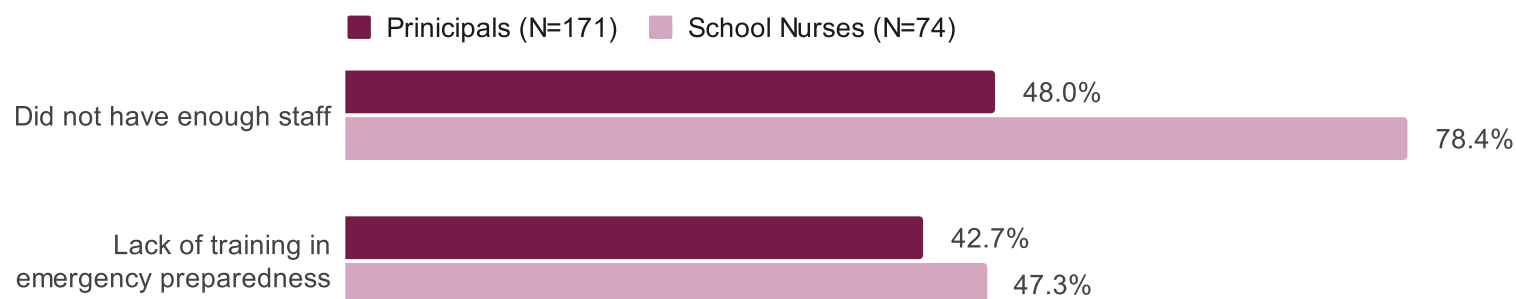
Workforce challenges in schools

Significant challenges to recruiting, on-boarding, + retaining public health staff

The education sector of Oregon's public health system response was not immune to workforce-related issues. Although some school administrators hailed the retention of teachers in their school as a success, other administrators reported substantial workforce loss.

Principals and School Nurse survey respondents both reported that a lack of school staff, as well as a lack of training in emergency preparedness, were challenges that hindered the COVID-19 response in their school (Figure 44). Onboarding new staff, specifically, was cited by Principals as a top barrier to COVID-19 pandemic response (46.2%, n=79). Workforce-related issues were also a point of discussion in interviews and focus groups.

Figure 44: Staffing challenges that hindered the effectiveness, scale, or quality of COVID-19 response in schools



Many Principal focus group participants reported that they had trouble retaining staff. Principal survey respondents reported similar workforce challenges and added further challenges, including securing substitute teachers when staff were sick, receiving time off for vaccination, or needing to isolate due to COVID-19 exposure. One Principal survey respondent reflected that they, “Did not have staff with the correct skill sets [i.e., social workers, public health professionals, nurses, communications managers, data analysts, contact tracers]”.

Similar to workforce challenges experienced in other sectors, mental health was a great concern during this time. Principals saw the toll starting to wear on their school staff, including administration and teachers. One Principal reflected on what they perceived was an absence of mental health support available for staff (and students).

Mental health of school administrators was also noted among participants at the district and local levels. One SD interviewee specifically mentioned the multifaceted nature of going through the pandemic while simultaneously trying to maintain a positive environment for students.

School Nurses also mentioned the challenges faced by being a part of the health care workforce, “It's difficult to describe all of the challenges. But another challenge was the resistance and aggression/abuse healthcare staff faced from the public [parents, students] and from other staff.”

“The burden of contact tracing fell entirely on extremely limited admin staff. We needed a FT [full-time] contact tracer but did not receive one.”

—Principal Survey Respondent

“We are a little bit handcuffed by the fact that the labor force is dwindled since significantly. So the type of instruction, the type of education that goes on, it is not at the quality level that it previously was and it is suffering. But we are supporting the individuals during this time. So that's probably what we're doing the best.”

—SD Interviewee

“Also the mental health of our staff, especially in Stage 3, because at the end of Stage 2 and into Stage 3, we really thought we were out of the woods. Then when we weren't, I think there was a huge collective depression and it led to a lot of staff turnover. I feel like that would've been better in hindsight if we were doing a better job of taking care of our staff as they were dealing with the fear that had been happening since 2020.”

—Principal Focus Group
Participant

“I would say [the] mental health of our staff and our administrators was a really big challenge. There were suddenly a lot of things that we were juggling, like little kids that couldn't go back to school or childcare issues or aging family members. And so, there were a lot of family stressors that were added onto all the regular stresses. And so, just trying to be the cheerleader and staying positive in all of that and trying to meet all of our staffs and communities needs while also having to do all of these technical pieces in addition and staying in compliance was a big challenge.”

—SD Interviewee

“It was the worst time as an educator. There were extremely long hours, we did not have local control, and I was asked to enforce rules that my community did not believe in. It divided our staff and community, and the administrators took the brunt of it.”

—Principal Focus Group
Participant

Best or promising practices employed to recruit, onboard, + retain staff during this period

Although some study participants named staff retention as one of their greatest challenges, others were proud of their ability to keep their staff together. A few Principals reflected on the “bonding” effect of the pandemic, reporting that going through such an onerous event together made their team stronger and more adaptive. Some SDs and Principals reported that balancing the personal beliefs of staff with public health mandates, and more specifically, the vaccine mandate, was challenging. Honoring and respecting people’s personal beliefs, however, through approving vaccination exemption forms, participants reported, aided in workforce retention.

Principals reported that in addition to all of the other roles they took on during the pandemic, they also ensured staff received emotional support. The empathy and emotional support provided by Principals ensured staff felt heard and had a safe space for sharing the challenges they experienced during the pandemic.

“I would say for us it was staff retention...I'd say there's a handful of staff that toyed with leaving the profession and to make it through in two separate buildings and not lose any employees, because of COVID, to me that was a success that I am very appreciative that they hung out and hung in with me and hung in with our kids and not quit on them. And they're still here and I don't know how.”

—Principal Focus Group
Participant

“The Principal really had to serve a role of an emotionally soft place to land for our teachers, for our educators who were keeping it together in front of the kids, but at the same time having their own personal lives in disarray and feeling a lot of parent guilt of not having enough time with their own kids in distance learning 'cause they're teaching. And so, more than ever before, we had to create space for processing that emotionally and supporting one another.”

—Principal Focus Group Participant

“I think we did really well at balancing that personal belief and professional obligation quandary. We lost very few people on the employment side because of the vaccination mandate. The reason for that was that I signed every single exception that came across my desk. I did not question their reasons for not getting the vaccination. We really worked hard to honor and respect people's personal beliefs. So that is something that I think we did well and we retained our workforce.”

—Principal Survey Respondent

Health equity

Rede asked education sector informants involved in Oregon’s public health system response to the COVID-19 pandemic how health equity and cultural considerations were considered during district and school response.

At the district level, SD and ESDs reported this was done by:

- ensuring students and staff were safe and supported during their time when in-person learning was not allowed;
- prioritizing populations who were at a higher risk of long-term consequences from missing in-person learning, which included students with learning disabilities such as blindness, hard of hearing, Autism, and other developmental disabilities;
- recreating individualized educational plans (IEPs) for students whose prior IEP did not align with distance learning;
- providing technology access and support for students, including the provision of laptops and stronger WiFi connections;
- assisting students with the transition to online learning via individualized meetings and home visits; and
- continuation of food services, including free or reduced breakfast, lunch, and dinner (or a combination of these).

Many education sector study participants reported prioritizing health equity in their COVID-19 response, which occurred via an array of mechanisms. Often, messaging at the district level was not tailored enough to meet the needs of the specific communities schools served. Accordingly, Principals

“Equity became a high priority, especially in Stage 1, [in] rural area[s]. Not everyone has access to internet, let alone high-quality internet. So being creative in how assignments were distributed to kids, making sure that it was both available online and in a paper format, distribution of meals.”

—ESD Interviewee

“When we created any kind of communication to families, it was almost always universally translated into different languages. But our component districts worked together to where one would translate it and then share it with the others so that it wasn't a barrier for the others to access those translated versions.”

—ESD Interviewee

and School Nurses spent a lot of time creating new, more culturally-tailored messaging for their school community. Although the provision of culturally-specific communication was a success, it simultaneously posed a challenge due to the frequency with which COVID-19 information and guidance was changing.

Regarding helping their students and family comply with public health requirements, some SD and ESD interviewees mentioned coordinating the set-up or implementation of vaccination clinics. Respondents also described translating COVID-related communications (e.g. vaccination and PPE information) into different languages and disseminating to students and families.

Specifically, one SD reported that a strong relationship with a Latino/a/x serving organization in their community enabled them to support Latino/a/x families during the pandemic.

Another interviewee valued their LPHAs role in conducting outreach to communities of color who were vaccine reluctant or unsure what information to trust.

A few Principals brought up that they became a “facilitator of community resources” throughout the pandemic, expanding from food service to things like housing and utility support. Principals reported that school staff tried their best to ensure student needs were met.

“In terms of PPE, we support a migrant education program for most of our districts. And then I know [Northern Oregon City] has their own migrant education program. But programs like that also tried to use some of their resources to have drive-through parent nights. And part of that would be providing food bags and extra masks and gloves, and things like that.”

—ESD Interviewee

“We had a very strong relationship with [Latino/a/x serving CBO] and that's our local nonprofit health provider. They were instrumental in making sure that there was access for families throughout the pandemic.”

—SD Interviewee

“Another real benefit that I did appreciate about [NE Oregon county]'s public health response, is that they did really try to specifically do outreach to culturally specific families, to our Black African American families, to our Asian families, particularly to families that were vaccine reluctant, concerned about who to trust with the public information. I do think that that partnership really did help some people feel more comfortable with how the district was responding, but more importantly how public health was responding to the crisis.”

—SD Interviewee

“As we're evolving the technology and the way in which we're presenting the information, we became delivery drivers as well. So, if students didn't have these resources, then somebody would deliver it. So, it could be me, it could be one of the teachers, it could be one of our aides, it could be a bus driver, it could be our custodian. But I mean, I think all of our roles really changed to meet the needs of families. And so we might be delivering a computer, we might be delivering [a] hotspot, we might be delivering food, you know? It really varied during that time.”

—Principal Focus Group
Participant

“How to address that when you know that there's been learning loss and those kiddos still aren't able to access an in-person education.”

—SD Interviewee

“So [students with disabilities] is what I recall being the biggest issue in trying to meet their needs because online learning was not effective for many of those students.”

—SD Interviewee

Challenges

SD and ESD interviewees discussed how the transition to distance learning exacerbated pre-existing educational disparities and postulated that these inequities may present later as educational gaps in students. Similarly, SD and ESD interviewees discussed their belief that inadequate social interactions due to distance learning or public health mandates may cause an increase in developmental delays, which may disproportionately impact specific communities. Specific communities that would be more prone to developmental delays because of a mask mandate would be those younger learners (e.g., preschoolers, K-2), for whom speech is beginning to develop and be fine-tuned. Similarly, children with learning disabilities likely had a harder time with distance learning. Children with IEPs, speech issues, etc.

SDs and ESDs reported that access to different resources throughout the states was not only a challenge in COVID-19 pandemic response, but presented a health equity challenge as well, as some areas of Oregon were more easily able to transition to distance learning or provide resources for students in comparison with other areas.

“The resources in our state are not equally spread around and are not the same. You can drive about an hour in any direction and your resources will change, the personalities will change. You can't just assume that we all think alike or we all have the same needs.”

—ESD Interviewee

“We definitely didn't put kids first which is what we should always do in every decision in schools.”

—Principal Survey Respondent

“I hope the state will consider how profoundly negative the impact of keeping students home was, and that they will do everything in their power to look for other ways to mitigate pandemics in the future without resorting to measures that so disproportionately harm students on the margins.”

—Principal Survey Respondent

Nongovernmental + community partners

About CBOs

The study team collected data from a diverse range of CBOs through three primary data collection methods: surveys, interviews, and focus groups. The study team received completed surveys from 61 CBOs, conducted four CBO focus groups with 25 participants, and conducted 33 CBO interviews. In total, the study team collected data from 85 distinct CBOs across all data collection methods.

CBO study participants served a diverse array of communities across Oregon, including the following specific populations:

- African American/Black communities;
- Asian/Pacific Islander communities;
- American Indian/Alaska Native communities;
- Latino/a/x communities;
- lesbian, gay, bisexual, transgender, queer, intersex, asexual, + (LGBTQIA+) communities;
- people with disabilities;
- people who are houseless/unhoused;
- people with mental health and/or substance use disorders (MH/SUD);
- refugees;
- older adults;
- youth;
- faith-based communities;
- rural and urban communities; and
- migrant and seasonal farmworkers.*

**Note that an in-depth analysis of the contributions of organizations and other entities supporting migrant and seasonal farmworker communities throughout the COVID-19 pandemic is forthcoming in Report 3.*

CBO study participants described and reported their contributions to Oregon's COVID-19 pandemic response. In addition, several other study participant groups described CBO roles in the pandemic response and associated contributions. Specific study informant groups that discussed CBO involvement in the COVID-19 pandemic response in Oregon included OHA Directors, OHA Staff and Managers, and LPHAs. Through conducting 12 OHA Director interviews, 20 OHA Staff and Manager interviews, 39 LPHA surveys, and 16 LPHA interviews, the study team gathered additional firsthand experiences and perspectives on the contributions of CBOs to the public health pandemic response. Insights from each of these study participant groups have been analyzed and are detailed in this section.

CBO contributions

CBO, OHA, and LPHA study participants all noted not only the breadth and depth of contributions that CBOs made to Oregon's public health pandemic response, but also the invaluable expertise they provided when trying to reach specific populations. CBO contributions were seen as critical to Oregon's pandemic response. From day one of the pandemic they mobilized to meet evolving needs on the ground and elevate community needs with state and local partners to ensure access to information, resources, and care.

According to CBO, OHA, and LPHA study participants, the wide array of CBO contributions to pandemic response efforts included:

- interpretation and translation;
- community outreach and public messaging;

“But funding the CBOs the way we did, now and current and into the future, funding the Tribes the way we did. The people that are on the ground doing the work, they're the experts. It doesn't matter if you're a MPH or a public health authority. It matters if you know your community and their needs. The state's responsibility is to support the community needs. Whatever that Tribe needs or whatever that county needs or whatever that region needs, it's our responsibility to support them because they're on the ground doing the work. They are the experts and they just need to tell us what they need and we need to support that.”

—OHA Director Interviewee

- partnership development and networking;
- program management, including adapting programming to virtual or hybrid;
- securing funding;
- procuring resources such as PPE and vaccines;
- quality control and safety;
- supervising and supporting staff, including caring for staff mental health;
- purchasing and delivering goods for community members (e.g., food, masks);
- supporting communities to learn and navigate technology (e.g., email, FaceTime, Zoom);
- individual case management and wraparound support;
- organizing testing and vaccine clinics/sites;
- volunteer coordination;
- elevating community needs to LPHA partners, including advocacy for services and resources to better support communities; and
- elevating community needs to OHA partners, including advocacy for policies, funding, and programming to better support communities.

When asked about their engagement in specific categories of pandemic response activities, the majority of CBO survey respondents reported engaging in an assortment of COVID-19 response activities. The most frequently reported CBO pandemic response activities included PPE distribution (85.2%, n=52), dissemination of COVID-19 information (85.2%, n=52), and outreach and engagement with priority populations (83.6%, n=51) (Figure 45).

Within each of these areas of work, the depth of attention and commitment that CBOs brought to these tasks was astounding.

“Every tidbit of information that was sent to us, we made sure to get that out in the languages of our clients. We created videos, all kinds of materials. In fact, I think we were one of the very few CBOs to attack this head on very early, understanding the need for culturally appropriate and sensitive media for our clients.”

—CBO Interviewee

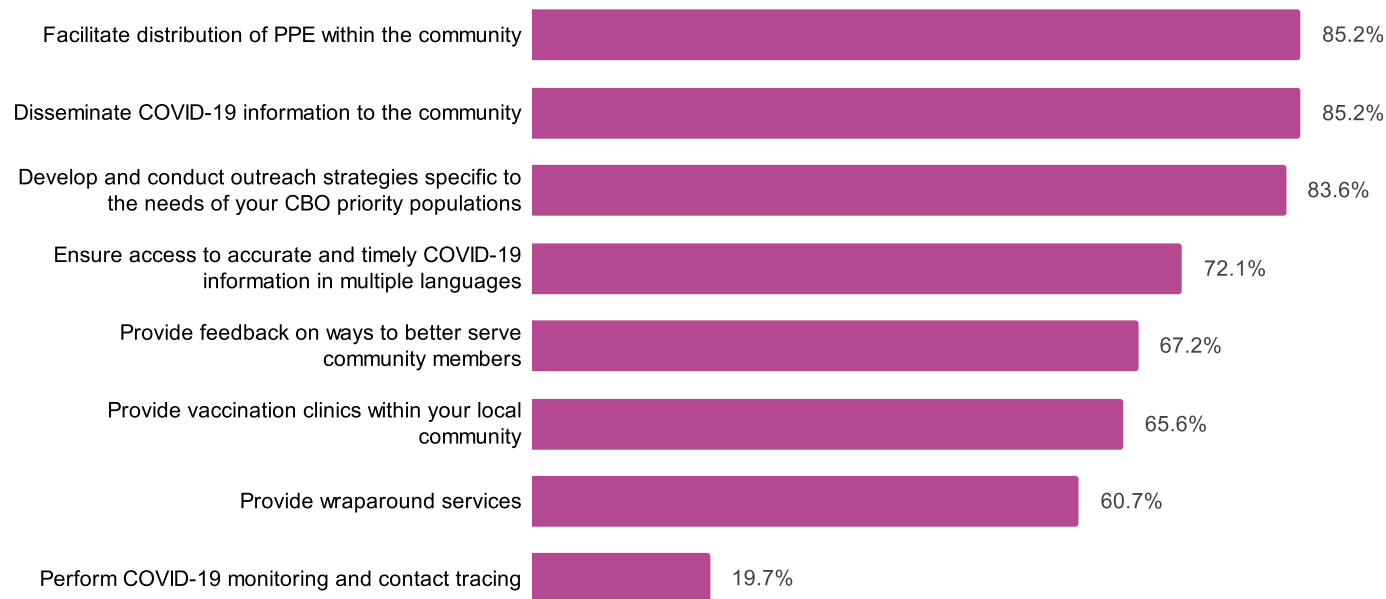
“We were serving as a wraparound services provider. When people would test positive in our clinic, we would make sure they could successfully quarantine by providing them with at least partial rent, grocery delivery that we paid for through state funds eventually, and paid their utilities so they didn't feel compelled to work.”

—CBO Focus Group Participant

“Our team was ready, willing and able to implement COVID protocols at our events and in daily operations. We are an extraordinarily flexible organization and built our capacity quickly to respond to the emergency.”

—CBO Survey Respondent

Figure 45: CBO COVID-19 response activities (CBO respondents, N=61)



When reflecting on the entire pandemic response, CBO interviewees and focus group participants described their greatest contributions as:

- partnerships and communication efforts to increase adherence with public health mandates; and
- informing and improving the rollout of the COVID-19 vaccine, during which CBOS played an integral role in vaccinating community members and providing culturally-tailored education about the vaccine to increase uptake.

OHA and LPHA study participants were closely aligned with CBOs in noting these important contributions and also elevated the messaging and communication work CBOs led as another pivotal contribution. OHA Director, Staff, and Manager interviewees described the critical role that CBOs played in building trust between state and local public health agencies and communities. Specifically, CBOs were often cited as “bridge builders” who fostered new relationships between OHA and LPHAs and an array of communities, including communities that have been historically harmed by systems (e.g., transgender communities, people experiencing disabilities, migrant and seasonal farmworkers, and others). According to OHA and LPHA interviewees, CBOs helped message important information to communities, effectively tailored COVID-19 public health messaging to the specific populations they serve, and added crucial language translation and interpretation capacity to ensure information was linguistically and culturally accessible and accurate.

“We were able to coordinate those vaccine clinics at trusted locations with trusted, comfortable staff there, so people were confident that what they were receiving was safe and that it was okay with their underlying health conditions to be vaccinated.”

—CBO Interviewee

“We underestimated the lack of trust that communities of color have in government institutions and healthcare, due to lack of access or discrimination. So better preparing our communities for what was coming, and building trust and being more engaged and intentional with our partners earlier on, I think could have really helped us, by way of inequities”

—OHA Director Interviewee

All study participant groups noted the critical education and advocacy CBOs were engaged in to elevate community voice and priorities to OHA and other groups for decision-making. OHA Directors wished they had leveraged their CBO partnerships even earlier to support an equitable pandemic response.

A vast majority of OHA, LPHA, and CBO study participants considered the contributions made by CBOs to be invaluable, reflecting that no other entity in Oregon’s public health system had the reach, community trust, range of skills, and nimbleness to adapt to ever-changing needs that CBOs did.

“I think our greatest contribution was just the footprint that we left in the city in terms of our community building. We were able to really bridge places where people were not able to really express their concerns. We kept really lively conversations up, and many of them heated, but we gave our community a chance to express their concerns.”

—CBO Focus Group
Participant

“A big piece for us was around what happened with communities of color or disadvantaged communities. That learning about who they trust and making sure we are finding ways to keep those organizations engaged and including them in our funding paths, that was critical.”

— OHA Director Interviewee

“We need to have CBOs at the table when it comes to any kind of pandemic response, it can't just be run and led by local public health agencies and OHA without the actual voices of the communities that are being impacted, so there has to be funding available to those communities, because in the past we have been asked to do work for free.”

—CBO Interviewee

CBO roles

Synthesizing findings across CBO, LPHA, and OHA study participants, four primary CBO roles emerged:

1. Providing essential resources to community members (including food, housing assistance, PPE, and other basic needs) and helping community members navigate health and social services.
2. Educating community members about COVID-19 and pandemic control measures, including ensuring information was accessible and tailored to various communities and supporting compliance with pandemic control measures.
3. Implementing or partnering to support emergency response activities such as COVID-19 testing, contact tracing, and vaccination.
4. Elevating the needs of the communities they serve at local and state levels through education and advocacy, including in daily conversations with LPHAs, OHA, and elected officials, as well as through formal participation on advisory groups.

“This is because the OHA started distributing supplies and tasks to CBOs, who community members trusted more than a big government entity like the OHA. It was more comfortable for people with historical trauma to get COVID info or vaccines from the people they trusted at CBOs.”

—OHA Staff Interviewee

“We started advocating pretty early, especially once we found out that the stimulus was going to exclude even families with citizen children, it was bad enough that they weren't including all families, but the fact that they were excluding citizens who happened to have parents who weren't documented or

even one parent that wasn't documented, that is criminal. Our state representative, city counselors, leaders in the community who run organizations, they were as shocked as were we. We were able to raise funds to help families really early. And then our team was able to jump in.”

—CBO Interviewee

CBO study participants noted how they rapidly adapted their roles in order to fill gaps in the public health pandemic response. They particularly noted gaps in Oregon’s public health pandemic response related to education, engagement, communication, and enforcement that they jumped in to fill. Some CBO study participants noted that the communities they serve were systematically ignored or deprioritized throughout the state’s pandemic response, and some perceived that CBO efforts to address gaps and meet needs of historically marginalized communities were under-resourced and under-appreciated by local and state public health partners. Sometimes, CBOs felt isolated in their work within the public health system response. Other CBO study participants reported that they were invited to collaborate meaningfully and effectively with local and state public health agencies and that these partnerships were characterized by mutual respect and appreciation for the unique roles of all partners.

“We've heard from a lot of our trans community folks that they felt totally invisible throughout the whole thing so there you go.”

—CBO Survey Respondent

“We were familiar with our role, our LPHA’s role and what to expect from our separate lanes.”

—CBO Survey Respondent

“And there's an entire structure that's supposed to be set up for response. And that structure actually doesn't lend itself to equity, so we're working on some of those pieces. But it's why equity doesn't happen, because the status quo isn't equity. And so, when people are making decisions, they're making decisions the way

that they've always made decisions. And so, the people that are going to be most impacted aren't often the ones that we think about first, because we're making statewide decisions, not decisions for priority groups.”

—OHA Director Interviewee

CBO roles also shifted and expanded as OHA and LPHAs built their own capacity to partner meaningfully with CBOs. Beyond getting rapid funding to CBOs out the door, OHA and LPHAs needed time to stand up new mechanisms for community partnerships and communication. For example, OHA took several months to engage community partners in various pandemic advisory committees and workgroups.

Evolving CBO roles throughout the pandemic stages

Another major determinant of how CBOs changed their roles was the evolution of the COVID-19 pandemic itself. Each stage of the pandemic presented its own unique challenges and opportunities. During each stage, CBOs found themselves juggling, adapting, and shifting priorities to ensure community needs were met. CBO interviewees and focus group participants described how their roles evolved throughout each stage of the pandemic, detailed and depicted in Figure 46 on the following page.

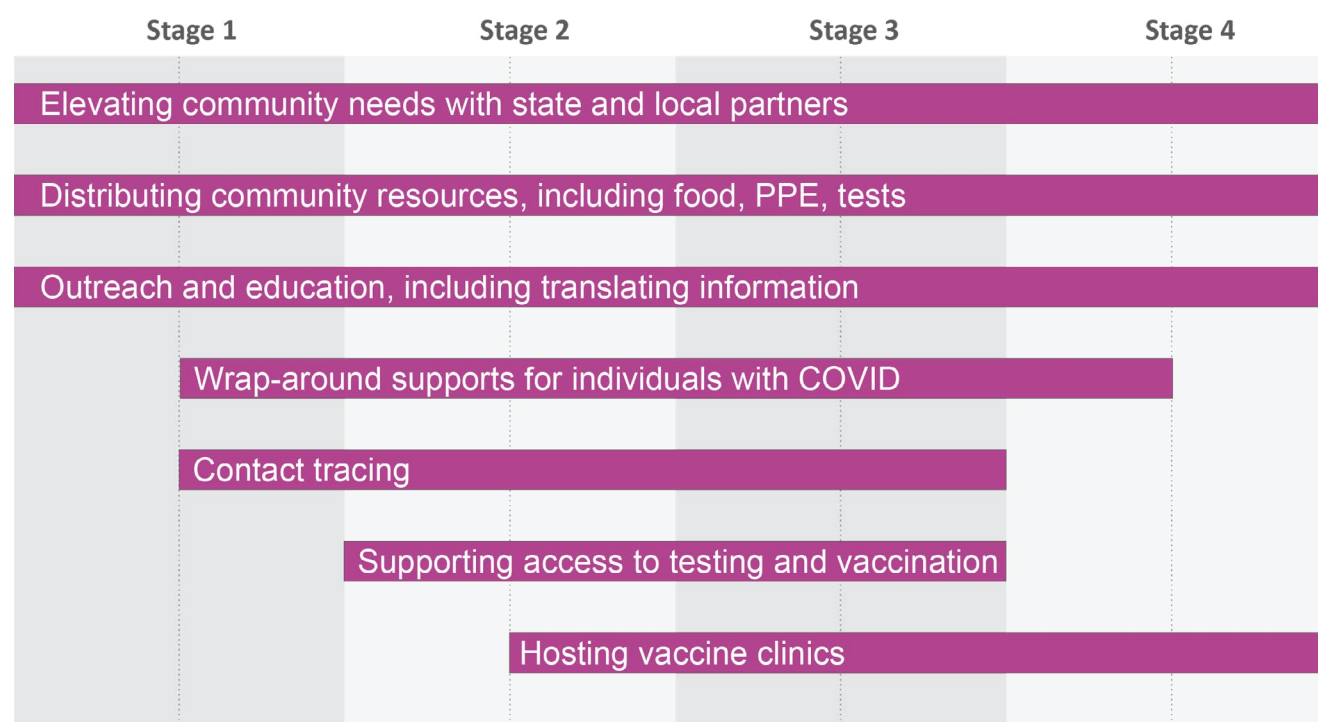
Stage 1

According to CBO interviewees and focus group participants, early in the pandemic CBOs had to substantially change their ways of working to meet the needs of their communities. The majority of CBOs moved services online, focusing on trying to keep people connected given the importance of social connection and support. Other CBOs continued providing crucial in-person services (such as homeless shelters) while making necessary adaptations to protocols for health and safety.

“So I think just in the early vaccine rollout, there were some things that did not go well that should have gone better. I think that the state had a strong focus on planning and a really strong emphasis on equity in their planning, but we did not have a strong set of concrete steps and actions that we could actually implement. I think that we saw that as we had a real desire to plan with the community, and it was very difficult to get that equity work group that assisted with vaccine planning off the ground in a timely fashion.”

—OHA Staff Interviewee

Figure 46: CBO's pandemic roles and responsibilities over time



CBOs educated themselves about COVID-19 and sought opportunities to support the public health pandemic response. CBOs worked to balance current programming with expanding services, including increasing community engagement, providing wraparound services for clients impacted by COVID-19. CBOs also helped communities access the internet and get connected to needed health care services, sometimes developing brand new tools and networks to facilitate referrals and improve access. The majority of CBOs interviewed reported they distributed goods like PPE, food boxes, and gift cards while increasing community access to COVID-19 testing. They also hired new staff and pursued new training opportunities to support their pandemic response efforts.

Some CBOs began contracting with OHA and LPHAs to support community education and contact tracing. Whether or not they were contracted to do so, all interviewees noted that their CBOs played a role in providing outreach and education to the communities they served about the COVID-19 pandemic, including public health guidelines. They developed videos, webinars, flyers, newsletters, made phone calls, and posted on social media, often translating or interpreting information and working to disseminate information in a culturally appropriate manner.

Stage 2

CBOs supported vaccination efforts throughout Oregon in many ways during this stage. A major role was educating communities they served about the benefits and risks associated with COVID-19 vaccines. They also reported communicating vaccine roll-out and eligibility information as determined by OHA. Prioritization and eligibility for vaccine roll-out was a particularly confusing topic for the public and the majority of CBOs noted that equity was not prioritized in the vaccine roll-out. Some CBOs had to take on an education and advocacy role with OHA and Governor Brown to bring those inequities to light.

Many CBOs noted that vaccine education often needed to happen in one-on-one conversation to ensure individuals understood when they would be eligible to receive the vaccine and have meaningful conversations around vaccines. CBOs also helped community members schedule vaccine appointments and coordinated transportation to and from vaccine appointments. Many CBOs also reported giving input to LPHAs and health system partners on ways to make vaccine clinics accessible,

“I would just have to say more accessibility to the resources and the information in other languages for the different cultures in the community. I thought there was a really lack of equity. With all the information that was presented, the underrepresented communities did not get that same information, and that could have been handled a lot better.”

—CBO Focus Group Participant

“The [only] way that you could get an appointment was all online. And if people don't speak English or read English or they don't have a cell phone, a smartphone or a computer, it was very difficult to get them scheduled for an appointment.”

—CBO Focus Group Participant

helped staff vaccine clinics, and several CBOs hosted their own clinics. As part of their role in vaccination efforts, CBOs advocated with health care providers to reduce barriers to vaccination for community members who were eligible. CBOs also took on the challenging task of addressing vaccine misinformation in their communities, which felt like an uphill battle to most CBOs.

CBOs also helped community members get access to COVID-19 testing. As part of this effort, CBOs hosted COVID-19 testing clinics on-site. Some CBOs reported conducting contact tracing alongside wraparound supports for individuals and families in quarantine or isolation. Simultaneously, CBOs continued providing crucial financial support and tangible resources for families, including PPE, food, rent and utility assistance, etc. For CBOs who continued to provide in-person services, they encouraged, modeled, and enforced social distancing and masking on-site.

During this stage, CBOs noted an influx of funding to support the pandemic response via contracts and grants, which was both an opportunity for better supporting community needs but also a challenge to get processes and programming in place.

Stage 3

In this stage, CBOs continued to host and support vaccine clinics and reported they often focused on undervaccinated areas of the state.

“And I think that really shifting from these giant sites where early on, it was like getting that vaccine at the Oregon Convention Center. And it was just this huge event and it was really hard for a lot of our community members who have mobility issues. And I think shifting away to smaller sites has just made all the difference. Being able to just have a community event. And there is a vaccine clinic and it's at a location that people know, and it's much smaller and they've got their appointment, they can come in and out, that just really improved the experience, and I think improved those numbers.”

—CBO Interviewee

They also continued to address COVID-19 misinformation and community distrust and continued to provide wraparound support for individuals with COVID-19 and for the broader community. Supports provided by CBOs during this stage included rent assistance, food, help enrolling in public benefits, and job application help, among other support.

As many businesses and employers were re-opening during this stage, CBOs helped community members navigate the complexities surrounding re-opening. For some CBOs, this looked like educating individuals on their rights as they went back to work in person and navigated those risks.

Many CBOs noted they started to gather people in person again to provide services and host community activities, with COVID-19 precautions. CBOs reported they hosted resource fairs alongside vaccine clinics, which presented more opportunities for education about vaccines, connections to resources, and a sense of community and social cohesion. CBOs also had to adapt programming to emergent needs (for example, developing mental health programming for youth and adults). For some CBOs, pandemic response activities scaled back in Stage 3 as more individuals were vaccinated, at-home testing became more widely available, and as the state was doing a better job getting information to the public in multiple languages in a timely manner.

Stage 4

In this stage CBOs supported rolling out vaccine boosters and pediatric vaccines, continuing to educate the communities they serve about the importance of these protections.

“So we had a lot of hotels who were shut down, who then were reopening, who employ a lot of Latinx community members. And so helping those community members know what their rights were, what they should be doing, what guidelines were in place for them to continue to protect themselves and stay healthy.”

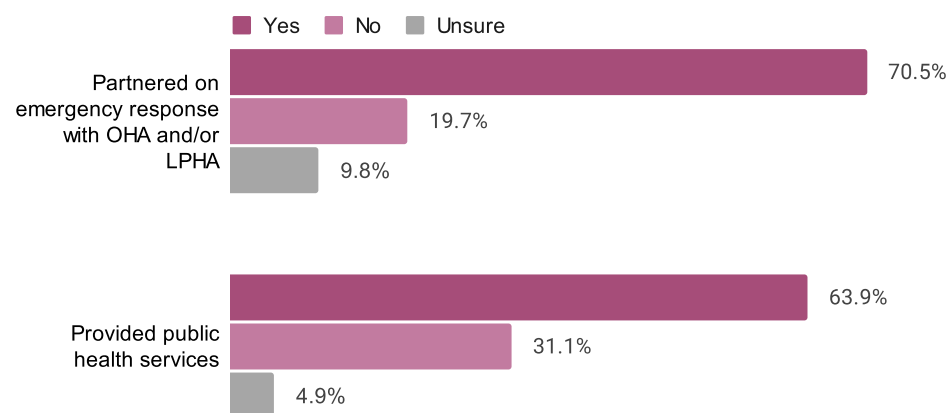
—CBO Interviewee

Many CBOs continued to shift to in-person programming during this stage. CBOs reported they had to scale back some of the wraparound supports as financial resources dwindled, and turned their attention back to other public health work and to planning for organizational sustainability in a post-pandemic world. For a few CBOs interviewed, these shifts have created some anxiety as there were still surges of COVID-19 cases in their communities.

CBO capacity for engaging in the pandemic response

Many CBOs came into the pandemic with previous experience in emergency response and public health activities. Approximately 70.5%, (n=43) of CBO survey respondents reported having previously partnered with OHA and/or LPHAs on emergency response activities and 63.9% (n=39) reported having experience providing public health services (Figure 47). Eighteen percent (n=11) of CBO respondents reported they had experience both partnering on emergency response and providing public health services.

Figure 47: Previous experience with emergency response and public health activities (CBO respondents, N=61)

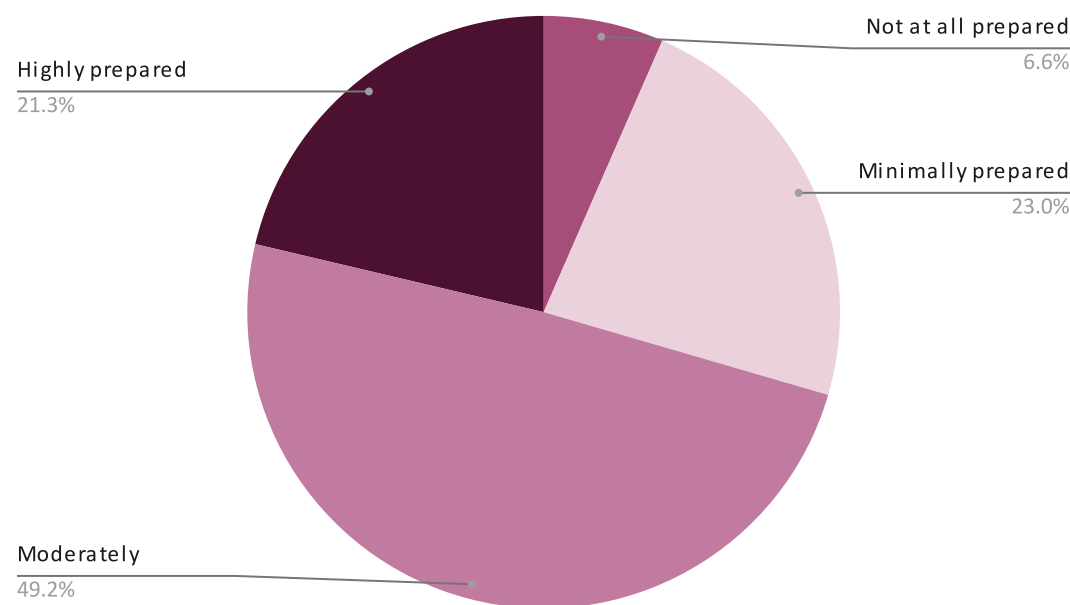


“So at Stage 4, to be honest, we've done less with COVID. We've done far less with COVID since, I would say, maybe January, February. We've not had many wraparound services. We've not had many vaccine campaigns or clinics, we've continued with education, but we've had less to do with COVID. We're thinking, how do we transition our community health workers from COVID response into more broader work to address broader health disparities and social determinants of health?”

—CBO Interviewee

When CBO survey respondents were asked how prepared they were for the public health emergency, most respondents (70.5%, n=43) felt that their CBO was either highly or moderately prepared for the COVID-19 pandemic (Figure 48), citing trust with the community, experience supporting community members to navigate health and social services, strong communications channels, extensive partner networks, and experience operating with flexibility and agility to address community needs.

Figure 48: CBO preparedness (CBO respondents, N=61)



“Two of the most important factors in our ability to respond to the COVID-19 pandemic were established relationships with communities most impacted and community trust. We had both going in, and were able to respond quickly to connect folks to information and resources.”

—CBO Survey Respondent

“Being a trans and queer focused organization, we had a lot of practice working with people who were actively in crisis. We were skilled in wraparound supports, providing health education, harm reduction, disability justice, and prevention. All of these skill sets were applied to our work during the pandemic.”

—CBO Survey Respondent

Regardless of their experience and capacity at the start of the pandemic, an overwhelming majority of CBO study participants reflected on having significantly grown their capacity throughout the pandemic. They expanded community engagement and outreach to new populations, built new programs, strengthened and expanded partnerships, grew their budgets and teams, and learned new public health skills.

Gaps in CBO capacity

The most common limitations noted by CBO informants were related to financial and staff capacity. There was great demand and urgency for CBOs to grow their work and respond to community needs but it was difficult to expand and sustain staffing, build administrative and finance capacity, and acquire adequate resources for growing work. This was especially true for smaller and more developing CBOs.

CBO survey respondents pointed to workforce capacity as their most significant challenge during the pandemic. Among CBO survey respondents, 54.2% (n=32) reported that insufficient staff numbers hindered the effectiveness, scale, or quality of their COVID-19 response.

In interviews, CBOs discussed hiring barriers that hindered their COVID-19 response. A few interviewees noted that the temporary nature of COVID-19 funding for CBOs made it difficult to recruit and hire, especially for permanent positions. One CBO echoed a theme from LPHA and OHA study participants-- an overall workforce shortage. In this regard, smaller CBOs noted they had difficulty competing for employees alongside larger, more established CBOs. One CBO interviewee shared concerns about the timing

“We had the infrastructure in place to reach our community, but we lacked the resources to do so.”

—CBO Survey Respondent

“So even when we think we're getting a handle on it, we're experiencing new challenges. And I'm sure that you've heard this a hundred times already, but staffing, recruiting new staff, retaining staff, has been certainly the biggest challenge for us.”

—CBO Interviewee

of reimbursement and confusion around funding requirements presented challenges in maintaining workforce capacity. Another CBO interviewee described difficulty in finding individuals with language or cultural skills needed to perform the work. Some CBOs hired community health workers with language capacity and cultural competency to fill staffing gaps.

Support to CBOs

CBOs received a great deal of support from OHA and from LPHAs to bolster their contributions to the public health pandemic response. The support they received falls into four primary categories:

1. **Funding:** CBOs received funding via grants and contracts from various OHA funding programs and from LPHAs. Funding sources include a wide array of federal, state, and local funding streams and pandemic-specific allocations. All CBO participants for this study reported receiving funding from OHA and many received funding from their LPHA.
2. **Resource allocation:** OHA and LPHAs provided PPE, COVID-19 tests, and COVID-19 vaccines to CBOs as crucial resources that supported CBOs in their pandemic response work.
3. **Training and TA:** CBOs accessed an array of training and TA facilitated by OHA and LPHAs in order to build capacity for pandemic-response activities (e.g., contact tracing).
4. **Information and data-sharing:** Throughout the pandemic, CBOs needed timely access to information and data to inform their work in communities across the state, and they reported receiving it from OHA and LPHAs.

“FEMA [Federal Emergency Management Agency] was far worse than OHA but the speed meant that retro rules hit efforts and the folks OHA employed kept coming back again and again for more info and changing rules. It was very stressful and contributed to board decision to lay off staff as we could not assure cash flow timelines we needed.”

—CBO Interviewee

Funding

Most CBO interviewees reported that funding was the most critical resource in their pandemic response work because it allowed them to sustain and grow their organization in order to address rapidly evolving pandemic-related community needs. CBOs study participants reported spending their funding on a multitude of pandemic response activities:

- staffing, including retaining existing staff, hiring new staff, and bringing on subcontractors for specific pandemic response projects;
- operations, including PPE purchasing and distribution for staff and equipment for staff to transition to remote work (e.g., sit-stand desks, upgrading internet);
- community engagement and outreach, including purchasing laptops, Zoom accounts, and cell phones to stay connected to community members and developing and disseminating educational materials in multiple languages;
- COVID-19 contact tracing;
- quarantine and isolation support for individuals with COVID-19;
- other wraparound supports and services for broader community needs; and
- COVID-19 vaccination support, including staffing and hosting COVID-19 vaccine clinics.

Funding allowed CBOs to strengthen existing programming and to move into new work areas, such as outreach to new communities, providing culturally appropriate programming, and hiring staff representative of the community and with new skill sets. Funding also supported CBOs to partner with health systems, and providing testing and vaccination services.

“Just having the FTE available to really be responsive quickly was really helpful. Them allowing us to have funding that was very flexible, and I felt like they trusted us with knowing the families that we serve, knowing our population, and being able to quickly change how we were serving those families was like number one for us.”

—CBO Focus Group Participant

“We were providing a pretty significant amount of wraparound services and kind of utilizing that, where it was that time when it was almost like an open pot of money with public health. So we were paying utilities and rent and lots of grocery gift cards and just a lot of different stuff.”

—CBO Interviewee

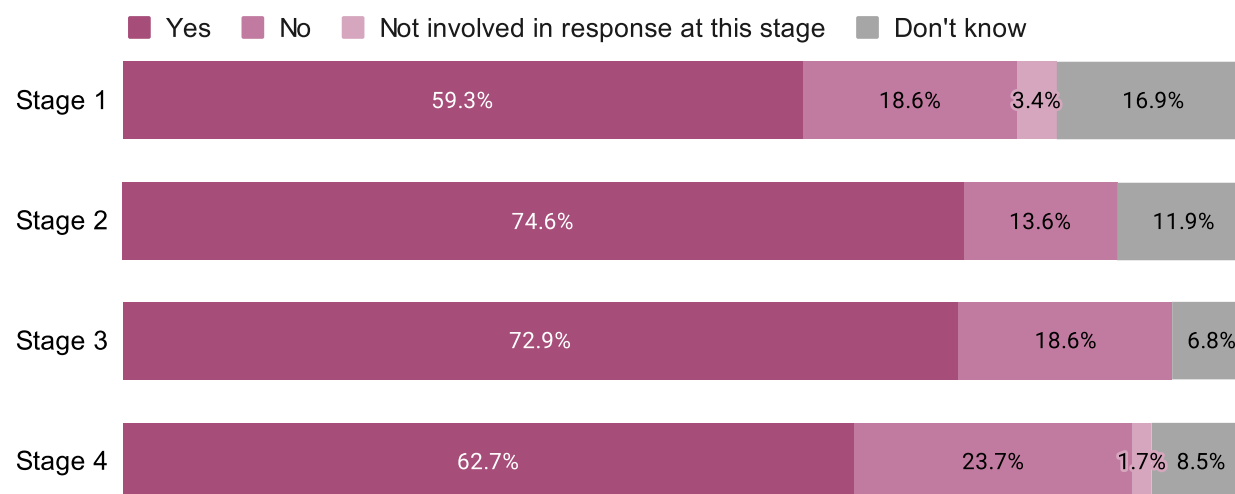
Resource allocation

OHA and LPHAs collaborated to develop streamlined processes for getting state supplies of PPE, tests, and vaccines to CBOs and, subsequently, out into communities. CBO interviewees and focus group participants reported accessing these resources from the very early stages of the pandemic.

Training + technical assistance

CBO survey respondents were asked if they received TA for their COVID-19 response activities during each pandemic stage. About 81% (n=48) of CBO survey respondents reported receiving TA at any stage (Figure 49). CBO survey respondents reported that TA ramped up in Stages 2 and 3 of the pandemic.

Figure 49: Technical assistance received from any organization (CBO respondents, N=59)

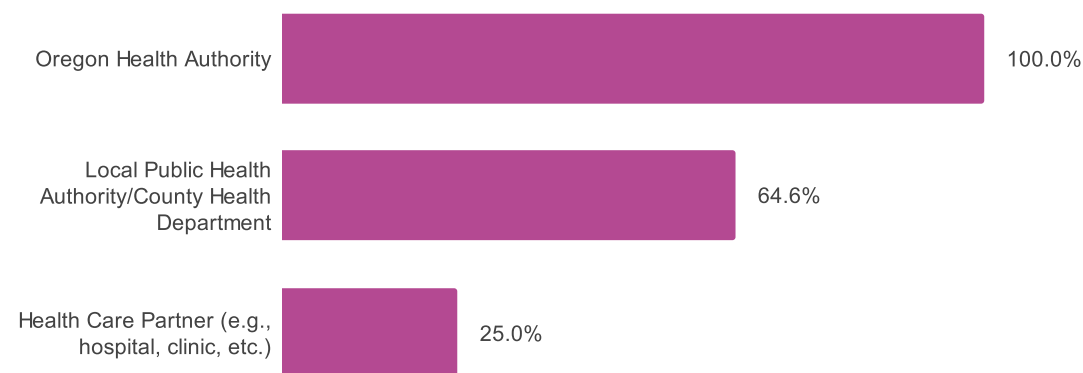


Of CBOs who reported receiving TA, 100.0% (n=48) reported receiving TA from OHA, 64.6% (n=31) reported receiving TA from LPHAs, and 25.0% (n=12) reported receiving TA from health care partners (Figure 50).

Information + data-sharing

CBOs relied heavily on OHA and LPHAs to provide timely, accurate, and clear information. CBOs reported they wanted to communicate transparently and responsively with their communities. Timely information from OHA and LPHAs was necessary for CBOs. OHA and LPHAs were viewed by CBOs as being experts in research, epidemiology data and interpretation, and emergency preparedness and response.

Figure 50: Agencies CBOs received TA from (CBO respondents, N=48)



“From a CBO perspective, I believe that we look to our leaders for guidance in situations like these. We look for protocol. That's something very important to us as an organization. We want to be told what are the best practices. We don't have the time, capacity, and resources to do what the government does, which is the research and the implementation. As a CBO, that's what I look to for our public health officials, to guide us and to help us understand what is going on so that we could best serve our communities.”

—CBO Interviewee

Partnership with + support from OHA

CBO study participants reported relying heavily on funding from OHA, specifically, to support their pandemic response efforts and found that OHA funding was flexible to meet their needs. Throughout the pandemic OHA allocated \$145 million in funding to CBOs for a wide range of pandemic response activities, ranging from vaccination and testing events to providing resources and wraparound support to individuals in isolation or quarantine.

The majority of CBO study participants said they found the application processes to be straightforward for OHA grants. They acknowledged and appreciated that OHA intentionally tried to streamline application processes to get funding into the CBOs and ultimately, into Oregon communities quickly. CBOs especially appreciated when they received grant funding upfront. As opposed to invoicing and waiting for reimbursements, which took a lengthy amount of time and created added burden and stress, up-front funding was easier to use for COVID-19 pandemic response activities.

Although some CBOs reported OHA funds were largely streamlined, others reported accessing OHA funding posed a significant challenge for a couple of reasons. First, some CBOs reported not learning about funding opportunities in a timely manner. Other CBOs reported they lacked administrative and development capacity to respond to funding opportunities. A few CBO interviewees and focus group participants believed gatekeeping occurred with funding, noting that if you did not have a previous relationship with OHA, that it was difficult to access COVID-19 specific funding from the agency. It is important to note that the experiences of CBOs who do not have connections to OHA and who may

“It's been very easy as a CBO to navigate this funding through OHA. That's not something I was super experienced with before. Since then, I've taken on several different grant projects, and I would say that this project was actually really easy to navigate with the funding.”

—CBO Interviewee

“It was a bit aggravating waiting for the money to settle in our account, but we spent money we didn't have in anticipation that it would come and it worked out. It was harrowing there for a minute. That happened to the other CBO in town too, where they had a cash flow problem as well.”

—CBO Interviewee

have faced the greatest barriers to accessing public funding, but who still served their communities with important resources and support throughout the pandemic, are likely underrepresented due to this study's sampling methodology.

CBO study participants also reported that OHA worked closely with CBOs to support them by providing training and technical assistance, though they did not share specifics about what training and TA they received or how it specifically supported them in their pandemic response activities.

In interviews and focus groups CBO participants discussed how OHA's communication and information-sharing was helpful. Several CBO interviewees noted that they participated in weekly check-ins with OHA, which were opportunities to obtain information and stay up to date, offer feedback, and share concerns that were emerging in their communities. CBOs also appreciated the frequent data sharing from OHA, such as OHA's daily emails with case counts by county. Several CBOs mentioned that OHA's communications capacity and priorities, including having culturally responsive information available in a wide range of languages, improved drastically throughout the pandemic and were grateful for that, though the initial communications gaps were difficult to navigate.

OHA Directors interviewed for this study noted that establishing a community engagement team in the Public Health Division at OHA facilitated the extensive work to build relationships and partner with culturally-specific and other community-based organizations. They also noted utilizing existing meetings and networks to disseminate information rapidly to a wide array of partners, including CBOs.

“OHA, yes, they provided cash support. They provided a lot of technical assistance. They have been incredible partners and super responsive. They have really, I feel like the CBOs that they worked with, they really got us to be the experts that they needed us to be. And they provided a ton of training. They were just really available.”

—CBO Interviewee

Although many CBO study participants mentioned appreciating OHA’s responsiveness and desire to listen to community feedback, other CBOs reported they were frustrated by the bureaucracy, staff turnover, and inconsistent communications and messaging received from OHA. A few OHA Staff and Managers echoed the challenge of maintaining consistent and clear messaging, especially as national COVID-19 information and public health guidelines were evolving. CBO interviewees discussed that they often relied on OHA data to determine where to focus their response efforts. Several CBOs were frustrated with the complex and hard-to-navigate OHA websites for tracking pandemic data and the lack of disaggregated data for subpopulations.

“When I build the relationship and then the person splits, I got to start over again. I would have a hard time telling you if I needed a specific thing right now. I don't know. There was a couple of times I got stuck in the bureaucracy, where I felt like I was chasing my tail because I didn't have a clear avenue of where I needed to be, who I needed to be talking to.”

—CBO Interviewee

“In the beginning, we weren’t sure where to get the most reliable information and how to address the lack of access to information and data. The OHA pages were just a lot to navigate.”

—CBO Survey Respondent

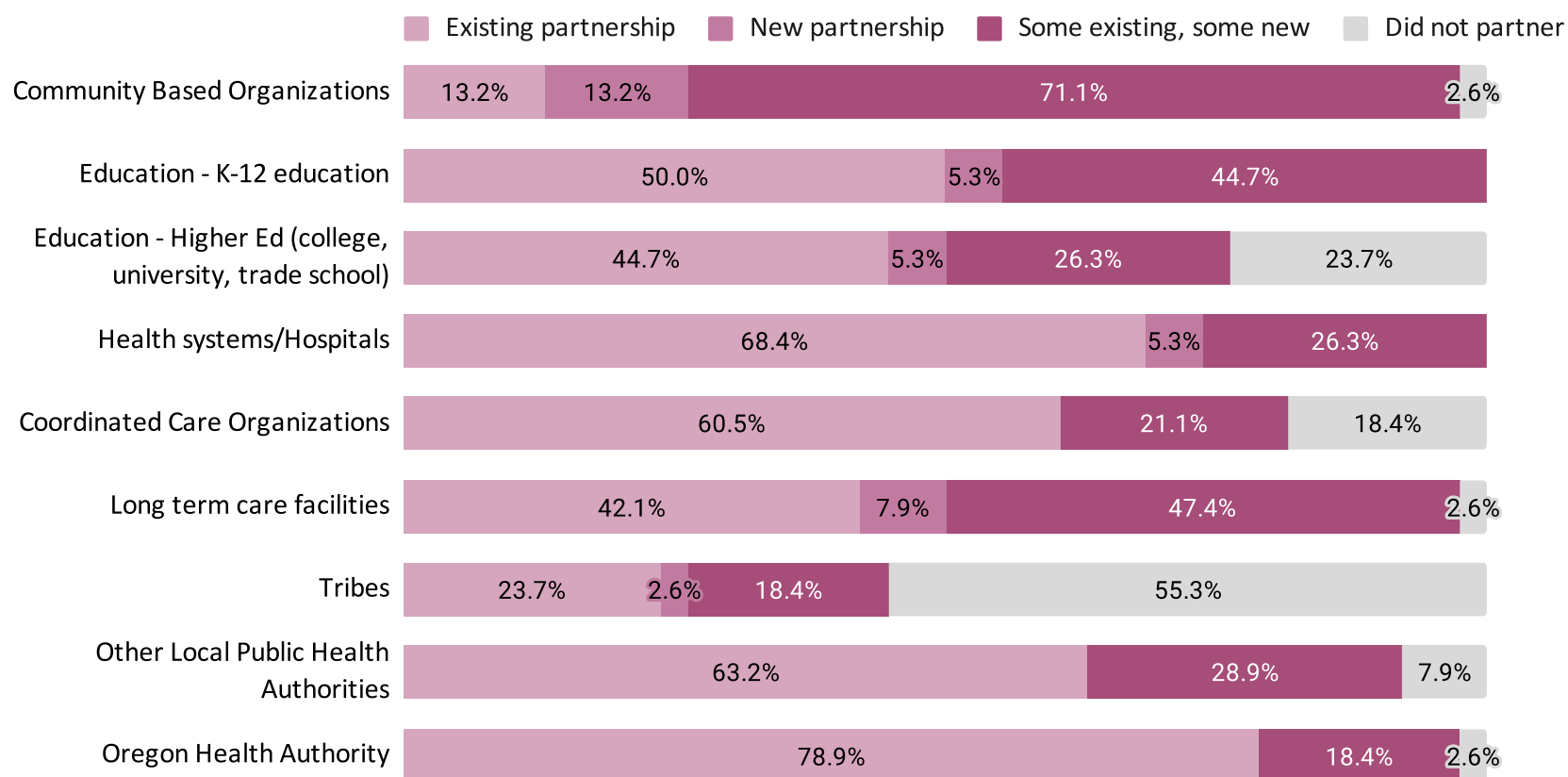
“Through the pandemic, we never asked how many agricultural workers died. We never asked those questions. We don't know. We probably have huge numbers of them, living in the conditions they did. You know what I mean? It was just like a complete lack of... a systemic failure.”

—CBO Survey Respondent

Partnership with + support from LPHAs

LPHA survey respondents shared about their relationships with CBOs. A majority (71.1%, n=27) of LPHA survey respondents had a mix of existing and new partnerships with CBOs on COVID-19 response activities (Figure 51).

Figure 51: Types of partnerships for COVID-19 Response (LPHA respondents, N=38)



OHA Directors, Staff, and Managers perceived that the relationships between CBOs and LPHAs grew significantly, including deepened partnership capacity.

Some LPHA informants reflected that they wished they had more formalized relationships with CBOs prior to the pandemic. When discussing this, LPHAs reported they wished there had been mechanisms to set up contracts and get funding to CBO partners quickly to better support CBOs in their pandemic response roles. A few LPHAs reported that OHA sometimes posed a barrier to forming partnerships between LPHAs and CBOs due to the fact that OHA tried to dictate to LPHAs which CBOs to partner with. Further, a few LPHA informants reported the additional barrier of OHA changing guidance for CBO funding, as noted by one LPHA group interviewee stating "We would make an agreement and we're on the verge of making a contract and then the state would announce something different in terms of contractual opportunities, how much they were going to pay for X, Y, Z." Additionally, according to a few LPHAs, some CBOs were funded by OHA to provide outreach and services statewide but in reality did not reach some regions of the state, creating gaps in pandemic response services at a local level.

CBO study participants reported mixed experiences partnering with LPHAs. For some, a strong existing relationship with their LPHA served as a strong foundation and facilitated successful COVID-19 pandemic response work together. For other CBOs, partnering with their LPHA was new territory. Some CBOs reported success receiving funding from their LPHAs and working together on contact tracing, disease investigation, and vaccinations.

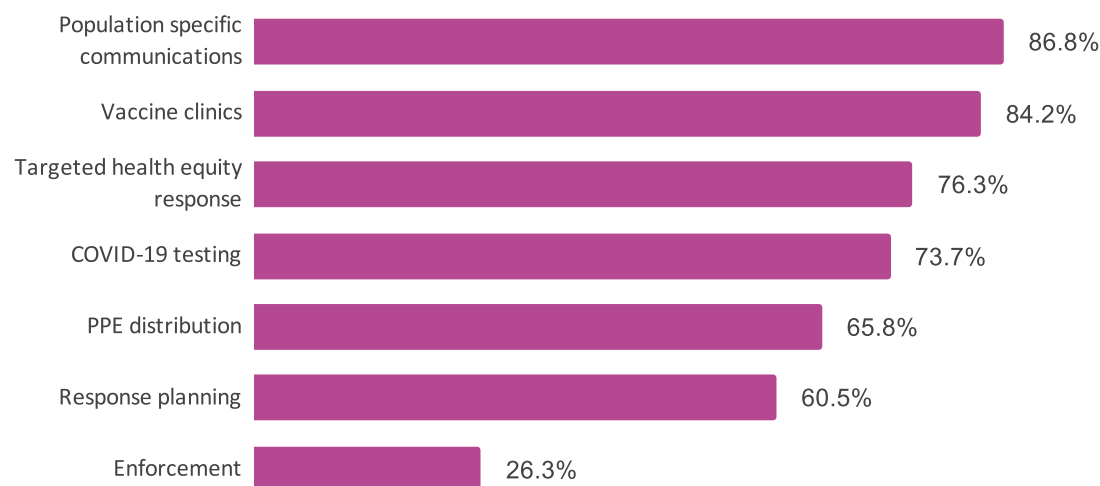
“There were just meetings after meetings after meetings that the state was leading, trying to recruit CBOs on our behalf that were already connected to us through a number of different contracts through the health and human services spectrum. The state was trying to reach out directly to the CBOs, superseding whatever relationships we had already, and kind of competing. We were giving money to work with the CBOs, but also the state had money to work with the CBOs. So it was just kind of a nightmare actually for us in that respect.”

—LPHA Group Interview
Participant

Other CBOs attempted to partner with LPHAs, but reported their LPHA was inflexible, unwelcoming, or lacked timely communication.

LPHA survey respondents also noted the types of activities they partnered on with CBOs. The most frequently indicated partnership activities included population-specific communications (86.8%, n=33), vaccine clinics (84.2%, n=32), targeted health equity response (76.3%, n=29), and COVID-19 testing (73.7%, n=28) (Figure 52).

Figure 52: Types of activities LPHAs partnered on with community based organizations (LPHA respondents, N=38)



“We started supporting mostly our local public health mass vaccination events, which went really well. We were kind of lucky that the public health director was on our board. So we already had a close relationship with her. And so we were able to coordinate with them really easily.”

—CBO Interviewee

“The county definitely had a way that they did things and there wasn't necessarily a lot of flexibility. And so me knowing, I think, going into a future partnership, knowing that for that to be successful, I'm going to need to conform to what they already have established and not try to use a lot of my time to shift the way that they do things.”

—CBO Interviewee

In interviews, LPHAs shared the types of support they provided to CBOs and reaffirmed that funding to support COVID-19 response was a primary support. Additionally, LPHAs stated they helped CBOs access and manage funding by providing technical and administrative assistance to CBOs for state and local funding opportunities. The funding that CBOs received from LPHAs was most often via contracts for specific work like contact tracing, vaccination, and emergency child care.

LPHAs also provided information on COVID-19 epidemiological data (e.g., case rates, spread, variants) as well as updates about COVID-19 public health mandates to CBOs on a regular basis. In Oregon, each LPHA determines what information to share and how to present it to the public. During the COVID-19 pandemic, this meant that although OHA shared information with LPHAs, there was sometimes a lag between when LPHAs shared information with CBOs.

CBO, LPHA, and OHA study participant groups also shared that LPHAs played a critical role in supporting CBOs to access pandemic response resources, such as PPE and COVID-19 tests. OHA Directors, Staff, and Managers felt it was helpful to have LPHAs serve as liaisons to identify community resource needs and make requests to OHA, then support allocating resources to CBOs once LPHAs received them from OHA. A few CBOs affirmed that this was a successful method for allocating PPE, test kits, and vaccines.

“I think my health department, in particular, we made ourselves available to media, to community groups... just the willingness to talk through the hard questions with honest answers, I feel like I and my colleagues, I feel like that's where we really showed up.”

—LPHA Interviewee

“Our leadership team is working directly with LPHAs and OHA in getting vaccines and testing to our local communities. We are also able to provide PPE and test kits during our day-to-day work without any hesitation.”

—CBO Survey Respondent

Gaps in support to CBOs

Funding gaps

Some CBOs reported they appreciated the access to OHA or LPHA staff during grant application processes. Other CBOs, however, had differing experiences, finding it difficult to communicate with OHA and LPHA staff about funding opportunities, unable to communicate with the same staff at the agencies, and in other cases, having no point-of-contact at all.

According to CBO interviewees and focus group participants, communication from OHA and LPHAs about funding opportunities could be improved, especially for smaller and emerging CBOs, CBOs that don't have existing relationships with OHA or their LPHA, and those CBOs without a history of partnering with state and local governments. Many CBO participants reported that, in the future, they would like for OHA to provide more administrative support to CBOs when aiding in public health response.

Many CBO informants identified a few other areas for improvement that would have made OHA funding even easier to navigate and more supportive of their work including:

- shortening the time it took for OHA to reimburse CBOs for invoices;
- making more funding unrestricted, or adding flexibility within and between the categories of restricted funding when possible; and
- improving grant reporting by clearly communicating reporting requirements and ensuring supports are in place for tracking data and submitting reports.

“It was very bureaucratic, they had very specific areas of like, 'You can use this much for COVID contact tracing, this much for wraparound support.' They were all very set amounts and very evenly distributed, there was no wiggle room. And for me, that is unreasonable. They kept saying, 'We've never been under a pandemic before.' How do you know that we're only going to need to spend [\$38,000-\$42,000] for COVID contact tracing, and [\$38,000- \$42,000] for wraparound support? That doesn't account for outbreaks, where we had much higher needs for wraparound support. There was no flexibility.”

—CBO Interviewee

Streamlining grant and contract requirements and parameters was another area for improvement noted by the vast majority of CBO interviewees.

Several CBOs stated they would have also appreciated support with planning for sustainability as COVID-19 funding diminishes. While CBOs have grown their teams and expanded their work significantly in recent years, they are now worried about how to financially sustain their size and operations. CBO study participants reported that capacity-building from funders, specifically OHA, would be appreciated as part of their work.

Other gaps

CBO survey respondents were asked to reflect on what supports would have supported their CBO when beginning their COVID-19 response. About half of respondents reported a dedicated staff contact at governmental partner organizations would have been helpful (52.5%, n=31) and almost half (49.2%, n=29) also reported that communication about and support applying for funding opportunities would have been helpful. Other responses from CBOs included more buy-in from local leaders for pandemic control measures, earlier efforts to prioritize vulnerable populations in the pandemic response, and a deeper understanding of equity as a public health practice. In particular, a few CBOs requested that OHA provide diversity, equity, and inclusion training and capacity building for nonprofits to support their new partnerships in communities.

LPHA group interviewees also noted a few partnership challenges, including some confusion when CBOs were first funded about what their roles should be as well as some hesitancy about engaging CBOs in response activities like contact tracing that dealt with personal information of residents.

“OHA can be and is very bureaucratic. And so it was very easy for them to erase the bureaucracy when it was convenient for them, right? So like, 'Here's a bunch of money. Can you do this work?' 'Cool. Yeah, we can.' But then it was also getting bombarded on a daily basis by emails, by changes, by asking us for different reports, then changing their reports continuously. And so that is all part of bureaucracy, and they were very much inflexible when it came from that. Knowing that we're an organization that they do need to work with, but that may not have all the resources, staff capacity, time, all of that to do that on their timeline.”

—CBO Interviewee

Tribal Nations + Tribal Organizations

Background

The study team collected data from Oregon’s Federally Recognized Tribes (Tribal Nations), as well as community-based organizations that serve American Indian/Alaska Native communities (Tribal Organizations). Seven Tribal Nation interviews were performed with a total of 12 interviewees (one interview included five actively participating interviewees). One focus group was conducted with six Tribal Organizations, and individual interviews were held with three Tribal Organizations. For purposes of this report, participants in the Tribal Organization interviews and Tribal Organization focus group are referred to as Tribal Organization interviewees, and participants in the Tribal Nation interviews are referred to as Tribal Nation interviewees.

As of February 2023, the Northwest Portland Area Indian Health Board (NPAIHB) was in the process of conducting after-action report studies with all nine Oregon Tribes. These reports will be provided back to the Tribes, and an aggregated report will be submitted to OHA. These reports will contain detailed data about the role of Tribes in responding to the COVID-19 pandemic, and recommendations for future emergency planning.

Tribal nations had a unique role in responding to the COVID-19 pandemic in Oregon as sovereign nations. When asked how being

“I think it was especially beneficial in the vaccine push-out, roll out, because as a sovereign nation they can set their own priority list. We didn’t have to follow OHA’s, which enabled us to get vaccines out to the general population a little sooner than other agencies could, a lot sooner actually.”

—Tribal Nation Interviewee

“The state [stepped up] and [met] their commitment to have the vaccines available to Tribes early and at a higher level than were available to other parts of the counties in order to address those disparities and advance equity.”

—Tribal Nation Interviewee

a sovereign nation impacted public health requirements and the pandemic response, the vast majority of interviewees shared that sovereignty had a positive impact on their responses. Although some resources were limited, such as staffing/staff capacity, access to PPE, and at times, COVID-19 tests, the ability to lead their own response was ultimately positive for Tribes. Some interviewees mentioned that the state prioritized Tribes when it came to allocating resources, and that setting their own vaccine prioritization process allowed Tribes to vaccinate their communities quickly and efficiently.

Some Tribal Organization interviewees reflected on Tribal relationships with the government. Historical relationships between federal, state, and local governments and Tribal organizations impacted their ability to form a solid relationship during the pandemic. Some Tribal Organizations noted that it was frustrating that their organizations had been historically underfunded, and that it took a pandemic for government agencies to finally provide needed funding to support their communities.

“COVID is... or at least the negative aspects of it, are highlighted by capitalism and colonialism... what we have is people fighting for dollars and fighting for land and space, and health, as a direct result.”

—Tribal Organization Interviewee

Tribal health in Oregon

Most Tribal nations in Oregon operate their own, independent health clinics with Indian Health Services (IHS) funding, although one Tribe does have an IHS operated and staffed clinic. Each Tribal nation provides different services based on the needs of their Tribal members and funding. Tribal Nations remained committed throughout the pandemic to protecting the health of their Tribal members and non-Tribal members in their communities in the face of many challenges, both historical and pandemic related. The COVID-19 pandemic elevated and exacerbated the existing health inequities that Native American/Alaska Native people face.

Tribal Nations + Tribal Organizations contributions

The roles of Tribal Nations and Tribal Organizations in responding to the COVID-19 pandemic were somewhat different due to their different levels of authority. Tribal Nation interviewees reported having a primary responsibility for COVID-19 response activities for their Tribal members, while Tribal Organization interviewees reported having more of a supportive role for community members, and some Tribal Organization interviewees mentioned having an advisory role with OHA in their Tribal response activities. Tribal Nation interviewees noted that they were not just supporting their own Tribal members, they were also providing services to non-Tribal members in their communities, especially related to providing vaccinations.

“Although we are a community that’s resilient, we have a lot of strengths, we still have a lot of health disparities compared to other communities of color and other races and ethnicities. Because of that, we experienced a lot of morbidity. Our morbidity rates were really high. However, I do also want to cap that and flip that and say we also had really, really one of the highest rates of vaccinations for other communities of color... although we have that, because of systemic racism, because of historical trauma, we do have disproportionate rates of chronic disease, illness, and other things.”

—Tribal Organization Interviewee

Tribal Nation interviewees described the types of pandemic response activities they engaged in with their COVID-19 funding, including:

- providing quarantine support for community members; including temporary housing, economic support, grocery delivery, and cleaning supplies;
- hiring temporary or permanent staff to assist with COVID-19 response;
- increasing capacity for testing and contact tracing;
- purchasing supplies to allow for social distancing in clinical settings;
- providing community members with incentives for getting vaccinated; and
- offering financial support for childcare/creating Tribal childcare services.

Tribal Organizations provided many similar services, but as discussed above, their activities reflected a more supportive role and included:

- food and medicine distribution- including food boxes, food deliveries, online cooking classes, and distribution of traditional medicine;
- providing other services to meet the needs of Tribal communities during the pandemic like online virtual support circles, rental assistance, and outdoor fitness opportunities;
- emergency management support like COVID-19 testing kits, vaccine clinics, and PPE distribution;
- information dissemination to the community;
- collaborating with other Tribal representatives, working with OHA to inform Tribal response; and
- expanding community health work.

“It was the vaccine work, not just in the ability to deliver the actual vaccines to the community, but also for the collaboration with our community partners, and the team building aspect, and the ability for the Tribe to do something really good within the community and share those resources.”

—Tribal Nation Interviewee

Implementation of public health mandates

As sovereign nations, Tribal nations had the authority to adopt their own public health mandates and were not required to implement state and federal mandates. Most interviewees shared that their Tribe implemented public health measures that were recommended at the state and local levels. This included stay-at-home orders, remote work, requiring masks, and requiring health care workers to be vaccinated (required for Medicare- and Medicaid-certified providers and suppliers). It seemed that compliance went well for the most part, although it was difficult to maintain community compliance with social distancing mandates for cultural events such as traditional burials.

Interviewees shared some ways that they enforced public health measures, including having COVID-19 screeners at the front door of buildings to take temperatures, reminding people of masking requirements, or citing people for violations. A few interviewees mentioned that it would have been helpful to have someone at the state level available to interpret guidance as public health measure recommendations were made.

Evolving role during pandemic stages

Tribal Nation interviewees were asked to reflect on their role in each stage of the pandemic.

Stage 1

During Stage 1, Tribal Nation interviewees reported moving quickly to stand up an emergency preparedness plan and assess their resources. They took numerous actions, such as closing Tribal services, organizing the distribution of food to Tribal members, and implementing public health protections like masking. When asked what went well during Stage 1, Tribal Nation interviewees said that their Tribe responded quickly and communicated

“Well, for the vaccine requirement, there were some staff who had to be let go, because they didn’t want to comply with that requirement. The masking doesn’t really seem to be a problem.”

—Tribal Nation Interviewee

“We had no public health department. We stood up quickly. We started addressing the most important things first... getting policies together, training staff, letting the community know how we could help them.”

—Tribal Nation Interviewee

public health protections clearly with Tribal members. Although some Tribes mentioned communication to the Tribe as something that went well in Stage 1, others noted internal communication as a deficiency. Another challenge in Stage 1 was the procurement of PPE and sharing limited resources with other Tribal nations. Interviewees shared that it was difficult to enforce social distancing and quarantining in communities with cultural values of interconnectedness.

Stage 2

During Stage 2, Tribes were particularly focused on COVID-19 testing and vaccination. Tribal Nation interviewees shared that they were able to acquire vaccines quickly and that their clinics were successful. Disease investigation was difficult for Tribes with limited capacity.

Stage 3

Testing and vaccination remained at the forefront of Tribes' priorities during Stage 3. Tribal Nations worked to push out boosters and educate their communities on the importance of getting a booster shot. Tribal Nation interviewees shared some challenges during Stage 3; including being hit hard by COVID-19 variants, experiencing staff burnout, and funding guidelines becoming more stringent.

Stage 4

During Stage 4, Tribal Nation interviewees discussed reopening and changes in guidance. They continued making resources available to Tribal members like PPE and water. A few interviewees shared that they kept strict protective measures through Stage 4, which was not always well received.

“Keeping up on the disease investigation became harder as case numbers went up, just due to the number of staff we had who could do that. So we did turn contact tracing back over to the county... that process, though with the county and getting our patients back to us, could definitely use some improvement on how the LPHA and the Tribe are going to work together in response, that communication back and forth and how it works in the different software systems.”

—Tribal Nation Interviewee

Tribal Nation + Tribal Organization funding

Funding sources differed slightly for Tribal Nations versus Tribal Organizations, although there was overlap. Tribal Nations primarily received funding from the OHA and IHS. Tribal Organizations also received funding from the OHA, and mentioned additional sources such as CDC, FEMA, LPHAs, American Rescue Plan Act (ARPA), The Coronavirus Aid, Relief and Economic Security (CARES) Act funding, and an educational foundation.

Tribal Nation interviewees shared that the amount of funding their Tribe received from the state allowed them to respond to their community's needs more effectively. When asked about the processes for receiving funding, interviewees shared a few main areas for improvement:

- Lack of flexibility in funding streams: Although the amount of funding Tribes received met their needs, there was not always sufficient flexibility in how the funding could be used. Tribal Nation interviewees were concerned that funding would go to waste because the required activities were not the biggest need for their Tribe.
- Unclear guidelines: Tribal Nation interviewees shared that there were not always clear guidelines on how the money could be spent, which led to confusion.
- Time-consuming reporting requirements: the administrative burden for reporting back to funders was a barrier.

“Since we’re federally funded, we couldn’t go out of that scope. And so once we got OHA and CDC funding, it made it easier for us to be able to go above and beyond.”

—Tribal Organization Interviewee

“Funding is a blessing, but it’s also a lot of work. And so it doubles or triples my workload, honestly, administratively.”

—Tribal Nation Interviewee

“It was difficult when the money was specifically earmarked for testing only, or for quarantine, or something like that.”

—Tribal Nation Interviewee

Tribal Nation + Tribal Organization partnerships

Tribal Nation interviewees reported having a wide range of partnerships to support their response to the COVID-19 pandemic. The most frequently mentioned partnerships were with other Tribes, local CBOs, their LPHAs, OHA, IHS, long-term care facilities, and schools. Other partnerships that were mentioned were with local public safety, community workers, local hospitals, Oregon DHS, correctional facilities, NPAIHB, the National Guard, the Governor's office, and the CDC. These partnerships served a variety of functions, including:

- coordinating COVID-19 testing and vaccination;
- regular information sharing meetings;
- acquisition of PPE, testing supplies, and vaccination supplies;
- discussing funding processes; and
- coordinating care for community members.

The partner that Tribal Organizations most commonly mentioned was OHA. This relationship was important for Tribal Organizations to receive supplies such as PPE and culturally appropriate food box supplies. Tribal Organizations also partnered with the NPAIHB and other Tribal organizations for the coordination of communications and resource distribution. Community health or medical centers served as crucial partners for testing events. Other partners that Tribal Organization interviewees mentioned included CBOs, the CDC, local colleges, food banks, LPHAs, and philanthropy organizations.

“They were able to, Oregon Health Authority, really keep us abreast and current on things, to provide us testing kits, to get to [community health organization] to provide vaccines when it became vaccines, to be a part of that.”

—Tribal Organization Interviewee

“I think that there's opportunity for improvement in terms of community partnerships and really identifying where the gaps are and filling them. That's not a Tribe's role, at least for the general community...”

—Tribal Nation Interviewee

Tribal Nation interviewees highlighted both what went well in partnerships and areas for improvement. Effective communication was noted as a characteristic of strong partnerships, and Tribal Nation interviewees shared that they made connections through the COVID-19 pandemic that will be beneficial in the future. When asked about what improvements could be made for their partnerships, Tribal Nation interviewees mentioned communications getting lost or a lack of follow-up on requests made to OHA.

One Tribal Organization interviewee highlighted the importance of the partnerships that were built during the pandemic and noted that it was important to continue those relationships in the future to communicate Tribal needs and work collaboratively towards supporting them.

Tribal Nations' epidemiological capacity

The ability to access, understand, and utilize epidemiological data was a crucial capability for responding to the COVID-19 pandemic. Tribal Nation interviewees reported that partnerships with LPHAs and local health clinics were beneficial when reporting COVID-19 epidemiological data using their Electronic Health Record (EHR). One interviewee mentioned utilizing a third-party vendor to conduct contract tracing, while another said they were able to provide support to the county to increase their contact tracing capacity.

"I don't feel like we were ever left in the dark."

—Tribal Nation Interviewee

"As our local county public health department became overwhelmed, we realized we needed to do more on our end. So we stepped up our own disease investigation, got access to the state systems to enter data directly. We stood up contact tracers, case investigators, wraparound response. Because they were overwhelmed, we saw the need and tried to fill in for our Tribal members."

—Tribal Nation Interviewee

Tribal Nations access to data

Tribal Nation interviewees reported a lack of accurate COVID-19 data specific to American Indians and Alaska Natives; interviewees attributed the lack of data to many Tribal members not reporting their race/ethnicity during interactions with clinical systems. Additionally, because of the geographical dispersion of some Tribal members, it was difficult or impossible to get clear, accurate data for a specific Tribe's members. When discussing this, one interviewee described that it was challenging to balance the desire to provide community-specific data with the risk of violating confidentiality within a small jurisdiction.

Although Tribal Nation interviewees recalled that EHRs were a resource for identifying and reporting Tribal epidemiological data, it was a challenge to actually extract the data and configure it into usable formats. One interviewee shared the need for a functional database incorporating the EHR in order to more easily manage data.

Another issue that made it difficult for Tribal Nations to use data that were collected was that it was not always reported back to the Tribal Nation by the county health department or local hospital, inhibiting their ability to follow through with support and contact tracing for their Tribal members. Similarly, interviewees told us that race, ethnicity, language, and disability (REALD) data were gathered by the state but not shared back to the Tribe in a useful way.

“I think that we need a population health tool here at the [Oregon Tribe] that is all-encompassing with our electronic medical record. And we're able to put all of the records into one area, including public health. So if I'm not eligible to receive care, but I get a COVID vaccine here, I can have my data in this public health database within my electronic medical records. So it's all in one location and we're able to manage that data, extract the data, all of that.”

—Tribal Nation Interviewee

Tribal Nation interviewees also noted that reporting data to the state and NPAIHB was burdensome and at times overwhelming. One interviewee said that they did not have the capacity to use data to support their COVID-19 response, as they had to use their limited staff to perform basic services.

Tribal Nations' experiences with state + county epidemiology support

Some Tribal Nation interviewees reported that their Tribe relied on county and state epidemiologists to answer questions and provide expertise that was not available internally within the Tribe. However, another Tribal Nation interviewee identified an absence of support from the state to address data and capacity issues.

“We have to report every positive and negative in the state system. We have to send every positive into Opera, and then Northwest Area Indian Health Board wanted a daily test report that's this crazy-long Excel spreadsheet. It's just the reporting became overwhelming. It really interfered with day-to-day operations.”

—Tribal Nation Interviewee

“We work a lot with [county in Oregon]. We've been able to utilize their epidemiologist on cases where there were some questions that maybe were just outliers for people that had infection issues. Their [leadership] has been great about taking our phone calls throughout the pandemic, when we've had questions or concerns. They're really a COVID-focused

[medical professional] being in that role, and so there have been times where we've called to ask specific information. If it was something we felt our providers were less versed in or something that [they] may have some expertise.”

—Tribal Nation Interviewee

Tribal Nations + Tribal Organizations staffing

Tribal Nation interviewees reported difficulties with staff capacity during the pandemic. Respondents identified staff shortages due to burnout-associated resignations within the Tribe and difficulty hiring, especially in rural areas of the state.

Some Tribal Organizations shared that, to respond to COVID-19, they were able to bring on more staff and meet the needs of their communities. However, many Tribal Organizations also mentioned challenges with staff. Some interviewees also mentioned challenges with staffing. Some interviewees mentioned that while they appreciated the COVID-19 funding their organization received, the funding did not come with additional FTE to support the additional work. This, along with high staff burnout at nonprofits and difficulties hiring, Tribal Organizations had difficulties pushing out funding to the community efficiently.

Tribal Nations + Tribal Organizations lessons learned

Tribal Organization interviewees shared the importance of community for American Indian/Alaska Natives, which worked to their advantage during the pandemic. Due to a focus on community and not the individual, Tribal Organization interviews shared they felt cared for by each other.

“We were given a lot of money to meet critical needs, but none of that came with FTE. So it was great being able to get money out and get people’s rent paid, but it was a huge burden on our staff.”

—Tribal Organization Interviewee

“My non-native friends struggled a lot more than my native friends. They were, on the whole, very isolated. I did not feel isolated during COVID. I felt very held by our community.”

—Tribal Organization Interviewee

“The fact is the reason why we're still here - we approach it as a community instead of an individual.”

—Tribal Organization Interviewee

The greatest lesson learned, as shared by Tribal Nation interviewees, was having a standard practice in place before a public health emergency, and that responses should be quick. One Tribal Nation interviewee shared that, while there should be a plan in place, it is important that the response can be agile. The emergency response needs to be tailored for unique communities. Tribal Nation interviewees also shared that they have learned that sometimes you need to do the best with the information you have, and that Oregon's communities are incredibly resilient.

“The biggest lesson learned is that there has to be a public health emergency response that is responsive, immediately responsive, there has to be investments in capacity, there has to be investments in infrastructure before that work happens.”

—Tribal Nation Interviewee

Local epidemiological capacity + data

Epidemiology practice

As described in Oregon’s Public Health Modernization Framework, using “epidemiologic practices and theory to explain the population distribution of disease and death and their biological, environmental and social determinants and deterrents, across time and space,” (OHA, 2017) is a foundational capability and a public health core system function. For the purpose of this report, epidemiological data were operationally defined as data gathered, interpreted, and used to make decisions about pandemic response policies and activities.

Local epidemiological data for COVID-19 response

Throughout the pandemic, epidemiological data flowed in many ways among medical clinics/health care providers, hospitals, laboratories, Tribal nations, local and state governments, the federal government (CDC), and the public. Because COVID-19 was a new disease, case surveillance was especially important. Case surveillance systems, such as those used during COVID-19, follow well-established standards and regulations. Within the overall epidemiological surveillance system, a viable data supply chain ensures that communities and individuals have access to timely, accurate information. This section of the report will focus on LPHA’s local epidemiological capacity and data. Information about Tribal epidemiological capacity and data is presented on pages 203-205.

Even though the COVID-19 data supply chain starts with information provided through laboratory reports or clinical encounter data, LPHAs served critical functions in the COVID-19 data supply chain. They were required to collect and report local case data into the statewide electronic disease surveillance system, Oregon Public Health Epidemiology User System (Orpheus). This included case-level data such as (CDC, 2022):

- patient demographics such as age, race, and ethnicity;
- signs and symptoms of illness;
- underlying health conditions;

- characteristics of hospitalizations, such as ventilator use;
- clinical outcomes; and
- exposures.

Orpheus is connected with Oregon's immunization database, ALERT IIS. Vaccination information was pulled from ALERT IIS into Orpheus and the Oregon Pandemic Emergency Response Application (Opera), a case investigation tool, to be used by state, local, and some Tribal public health agencies.

Data collection + reporting infrastructure

In Oregon, LPHAs must operate Communicable Disease Programs in accordance with the requirements and standards for the control of communicable diseases set forth in Oregon law. These laws outline reporting and epidemiological investigation requirements for communicable diseases such as COVID-19. Orpheus is the "integrated electronic disease surveillance system intended for local and state public health epidemiologists and disease investigators to efficiently manage communicable disease reports. Orpheus is rooted in health information exchange (HIE), as most case investigations are initiated by the electronic laboratory reports (ELRs), which are automatically imported and accessible to both local and state users, who can work together on cases" (OHA, n.d). From March 2020- June 2020, all COVID-19 data were tracked and stored in the COVID-19 disease module of Orpheus. In the summer of 2020, a separate database known as the At Risk Identification Alerting System (ARIAS) was created to manage COVID-19 contact tracing data. During this time, Orpheus began to experience functional slowdowns due to overloads on processing power caused by increased inputs and exports. At the peak of this strain, some LPHAs reported needing to wait until the early hours of the morning (e.g., midnight or 1:00 AM) to input their data to avoid wasting time with system crashes or to meet their statutory obligations with timely reporting. In July of 2020 (Stage 1 of the pandemic), the Public Health Division at OHA stood up the Oregon Pandemic Emergency Response Application (Opera) and moved the COVID-19 disease module from Orpheus to this new database. Opera served as an integrated electronic disease surveillance system intended for local and state public health epidemiologists and disease investigators to efficiently manage COVID-19 disease

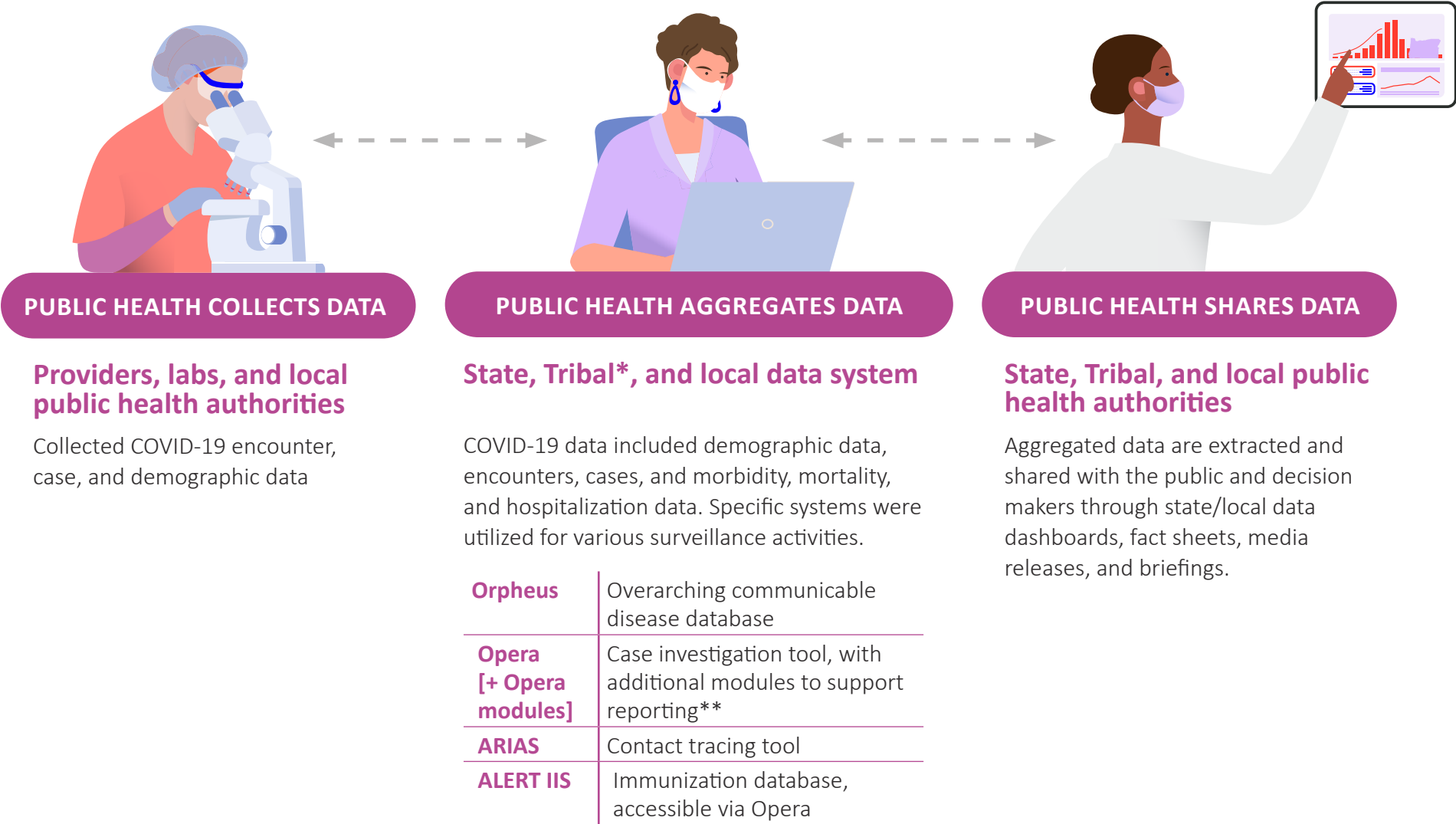
reports. Creating these additional databases were necessary to alleviate the burden of COVID-19 data on Orpheus and ensure that LPHAs could continue to investigate other communicable diseases in addition to COVID-19 (OHA, n.d.).

Information entered into Opera flowed bi-directionally between local, state, and some Tribal public health agencies and, combined with data from laboratories and health care providers, became the data source for statewide public COVID-19 data dissemination. Because these electronic reporting systems transferred information relatively easily, OHA was able to provide near real-time information to policy makers and the public about the spread of COVID-19 and use this information to make decisions about where to prioritize resources to respond to the pandemic. Figure 53 outlines a high-level overview of the COVID-19 data supply chain in Oregon.

Demographic data to identify potential health disparities

In 2020, Oregon developed policy (OAR 333-018-0011) requiring medical providers to collect and report data on race, ethnicity, language, and disability (REALD) to OHA for all “qualifying encounters”, such as tests, hospitalizations, and death. When Oregon’s pandemic response officially began in March 2020, OHA was in the process of putting plans in place to improve collection and reporting of REALD data and adding sexual orientation and gender identity (SOGI) as optional data, which meant that there were not strong practices in place or sufficient capacity to build and adapt standards across governmental public health entities and the array of partners engaged in pandemic response activities. These capacity challenges hindered the use of REALD and SOGI data to inform Oregon’s health equity work in response to the public health pandemic. In 2021, the legislature passed House Bill 3159 which added SOGI data to the REALD data collection and reporting requirements. In early 2023, OHA began planning for a new, robust REALD and SOGI data collection system. As this report is being written, those conversations are still ongoing, with plans to have the system active by 2024. Despite challenges with REALD and SOGI data, with the data they had available, OHA provided demographic data on publicly available dashboards, including age, sex, race, and ethnicity. Issues relating to the collection of REALD and SOGI information for COVID-19 cases and vaccinations will be discussed more in Report 3 in the presentation of COVID-19 health outcome data.

Figure 53: Oregon COVID-19 Data Supply Chain



*There was variation in Tribal access and use of these data systems that is not captured in this graphic

**Opera was separated out from Orpheus in July 2020 to improve usability

Local epidemiological capacity

Simply put, organizational epidemiological capacity means having an adequate number of workers with the necessary skills and knowledge to perform critical data collection, interpretation, and dissemination functions. In a modern public health system, local epidemiological capacity is often achieved through public-private partnerships, regionalized epidemiology services, or other shared services models. Not surprisingly, the COVID-19 pandemic stretched Oregon's epidemiological capacity.

LPHA epidemiology capacity

LPHA group interviewees reported meeting local epidemiological capacity needs by hiring an epidemiologist, or supporting an existing one, to lead data collection and interpretation and bring this information to decision-making. Others reported receiving support from epidemiologists at OHA or from neighboring counties.

LPHA survey respondents were asked to report changes in their LPHA's authority (i.e., increase in scope or legal responsibilities), roles, or responsibilities in COVID-19 between March 2020 and June 2022 by pandemic stage. Figure 54 shows a steep increase in LPHA epidemiological roles in surveillance during Stage 1 and Stage 2 of the pandemic. During Stage 3, LPHA survey respondents reported reducing their epidemiological roles and responsibilities and by Stage 4, over 50% (n=20) of respondents reported reduced epidemiological roles and responsibilities. LPHA survey respondents reported similar trends in their authority, roles, and responsibilities related to data presentations (i.e., formal or information delivery of COVID-19 statistical data) as seen in Figure 55.

Figure 54: Changes in **surveillance** authority, roles, and/or responsibilities during COVID-19 response, by stage (LPHA respondents, N=39)

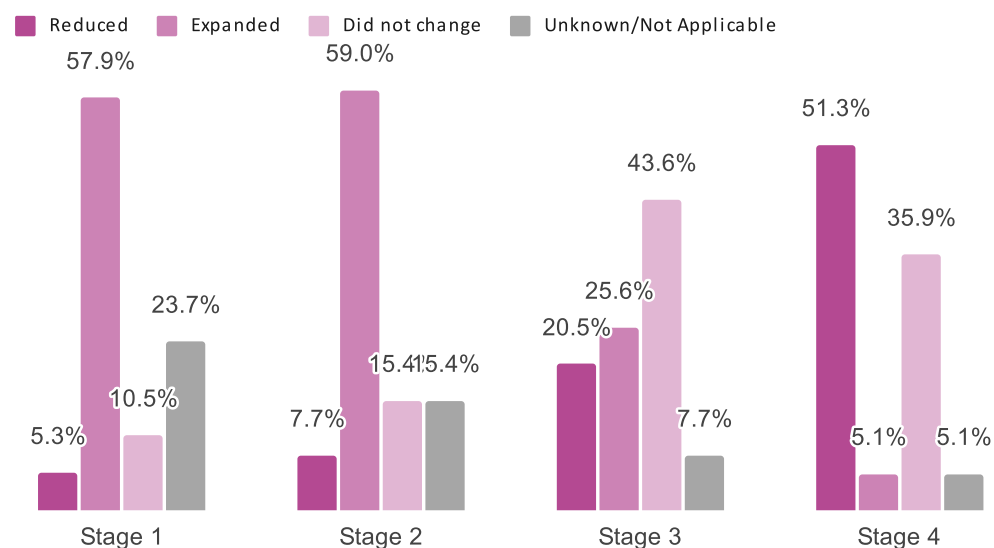
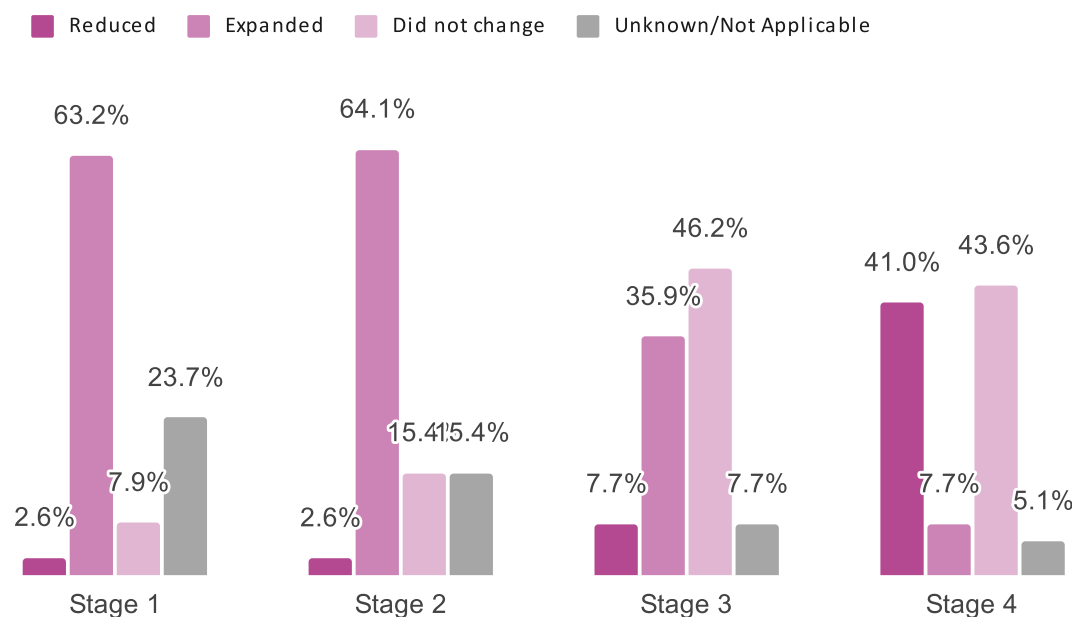


Figure 55: Changes in **data presentations** authority, roles, and/or responsibilities during COVID-19 response, by stage (LPHA respondents, N=39)



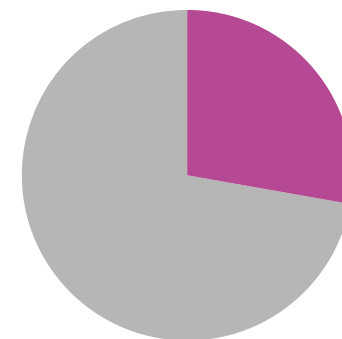
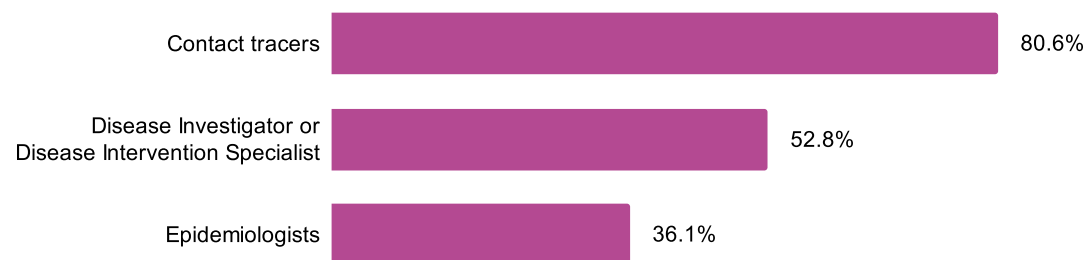
Meeting LPHA epidemiology capacity needs

Some LPHA group interviewees reported they were able to quickly ramp up epidemiological capacity; other LPHA group interviewees reported struggling with increasing epidemiological capacity. Many LPHAs reported that at some point during the pandemic, usually Stage 1 or 2, their response efforts were hampered by a lack of staff for epidemiological work. In the LPHA survey, the top skill reported as difficult to recruit for was public health sciences skills (27.8%, n=10), followed by data analytics and assessment skills (19.4%, n=7). In Regions 1 and 2, LPHAs reported more difficulty in hiring epidemiological staff than others.

A few LPHA group interviewees also said they had trouble coordinating with partners or felt a gap in capacity when partner teams were demobilized as the response lessened. Another LPHA group interviewee reported that increased funding for staff was ineffective because there were not enough people in the area with the necessary skills to hire.

Thirty-six percent (n=14) of LPHA survey respondents reported hiring epidemiologists to meet the needs of COVID-19 response. Figure 56 shows that 80.6% (n=29) of LPHA survey respondents hired contact tracers, and 52.8% (n=19) hired disease investigators.

Figure 56: Employee types hired to meet the needs of COVID-19 response (LPHA respondents, N=36)



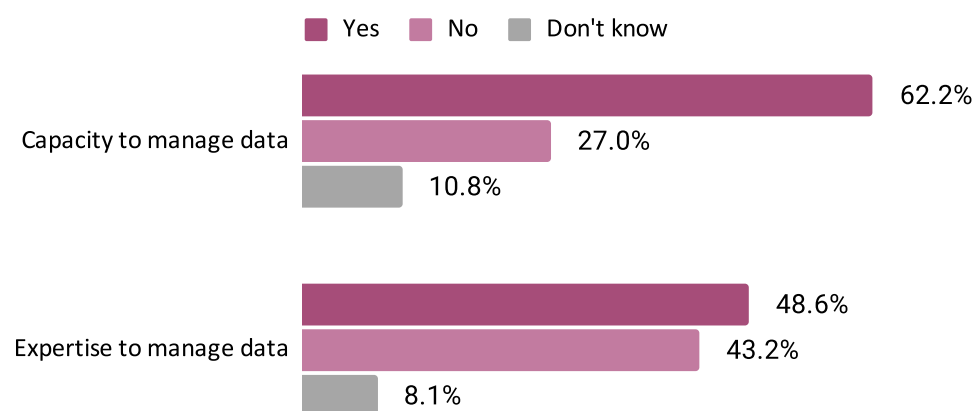
27.8%

In the LPHA survey, the top skill reported as difficult to recruit for was public health sciences skills (27.8%, n=10), followed by data analytics and assessment skills (19.4%, n=7)

Several LPHA group interviewees reported that although they did not have enough staff trained in disease investigation and other response activities to adequately support pandemic response, they were able to work with OHA, hospitals, and/or CBOs to fill critical gaps. For many LPHAs, increased funding was critical to local epidemiological capacity. Looking toward the future, one LPHA group interviewee described wanting to create long-term partnerships to increase capacity outside of an emergency response.

LPHA survey respondents were asked if they felt that they had the organizational capacity and expertise to manage COVID-19 epidemiological data locally. The majority of respondents (62.2%, n=23) reported they had capacity, but a little less than half (48.6%, n=18) reported that they had the organizational expertise (see Figure 57).

Figure 57: Capacity and expertise to manage COVID-19 data (LPHA respondents, N=37)



“Those contracts for the nursing capacity needs that we had, or being able to get epidemiologists and data analysts that live all over the nation, that we can't get locally; having those abilities. The contracts with our community partners. How do we continue to work with them, not just during an emergency, but to work towards our statewide goals of eliminating health inequities. They are valued partners. How do we sustain the relationships and the systems that have been beneficial to this response that still are, in a way that'll be mutually beneficial and meaningful to improve the overall system.”

—LPHA Interviewee

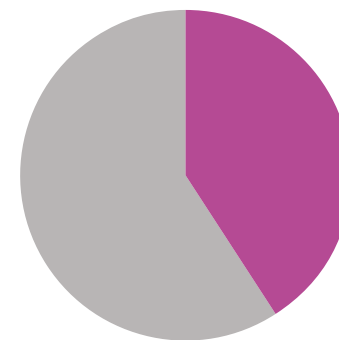
Accessing + using epidemiological data to respond to COVID-19

As noted earlier, public health epidemiologists are responsible for understanding the “population distribution of disease and death” (OHA, 2017). Tribal, local, state, and national decision-makers must have timely access to epidemiological data to aid in decision-making. Public health policy-makers need to know infection, vaccination, disease, hospitalization, and death rates and, importantly, they need to know if any sections of the population are experiencing greater rates than the general population. This information can lead to critical interventions such as those put in place during 2020- 2022.

LPHA access to data

LPHAs reported using epidemiological data to identify vulnerable populations and target response efforts. For instance, LPHAs, CBOs, and other partners came together to collectively increase their capacity to respond to COVID-19 in their communities by testing individuals, holding vaccination events, and distributing supplies, while also communicating about and rapidly adapting these strategies in accordance with changing infection rates.

At the county level, LPHA survey respondents were asked if their LPHA had access to the local epidemiological data necessary to guide decision-making in their COVID-19 response. During Stage 1, less than half of LPHA survey respondents reported they had adequate data, but reports of access to local data jumped up to three-quarters of respondents in Stages 2 through 4 (see Figure 58).

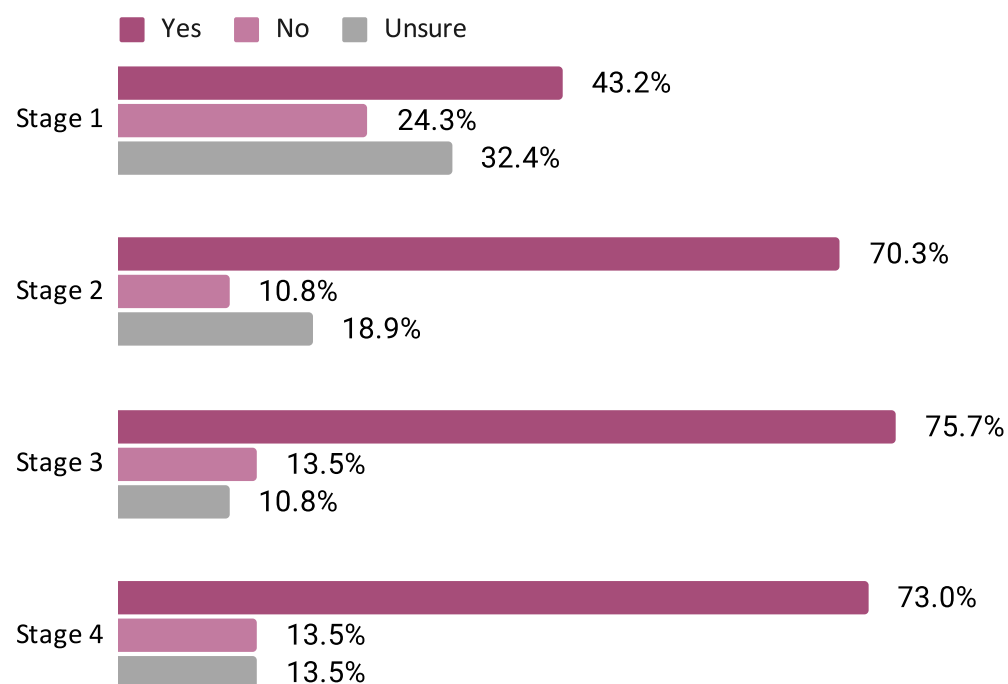


41%

Forty-one percent (n=16) of LPHA survey respondents reported inadequate data, especially sub-population data, as a challenge that negatively impacted their response to the pandemic.

A few LPHA group interviewees also mentioned that the existing data systems (Orpheus, Opera, and ARIAS) were slow and crashed frequently, making epidemiological data difficult to report.

Figure 58: Access to local epidemiological data to guide COVID-19 decision making by stage (LPHA respondents, N=37)

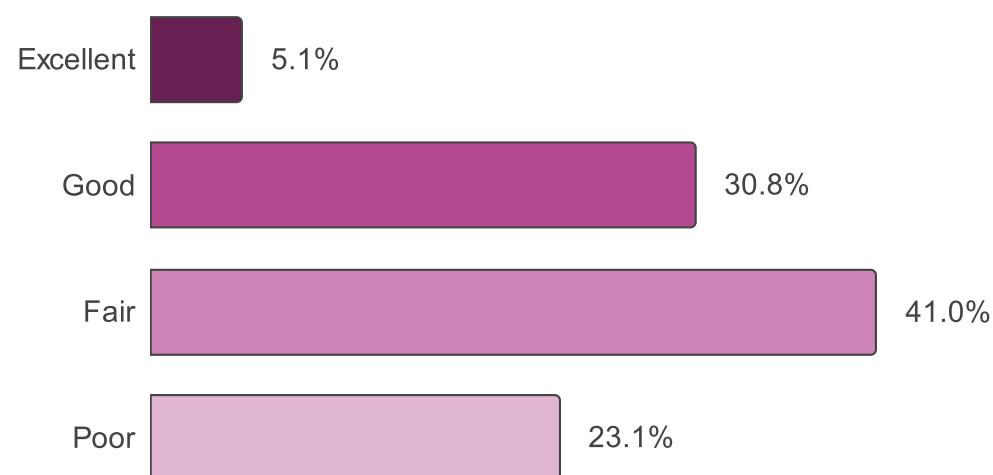


“So during that timeframe [Stage 2], one of the biggest issues we struggled with was data entry. There were so many cases that were coming at us. And I think around that time, we were seeing something like 50, 60 cases a day. And the case investigation, the contact tracing, the data input, and the collection of all that data, and the input into the systems, and the coordination of all of that took a toll. Combine that with a few vaccination events that we started doing in January on a weekly basis, and staff burnout was definitely running at an all time high.”

—LPHA Interviewee

When LPHA survey respondents were asked to rate Oregon's public health system's overall response to COVID-19 across a range of activities, data accessibility and availability was rated as fair or poor by 64.1% (n=25) of LPHA survey respondents as shown in Figure 59.

Figure 59: Rating of Oregon's public health system's data accessibility and availability (LPHA respondents, N=39)



"Oh and the data system. They did their best to try and uplift a separate system, but that's national disinvestment. We had to do a lot of our own data analyses before the state could ever do it, to understand what was happening in our community. Our epidemiologist identified the disparities in our Hispanic/Latino/Latina/Latinx community before the state did. But we had to navigate discrepancies and race, ethnicity data, old way of collecting data versus REALD."

—LPHA Interviewee

According to some LPHA group interviewees, community burnout from hearing repeatedly about increasing COVID-19 cases was another barrier to effectively using COVID-19 epidemiological data for the response. By the later stages of the pandemic, LPHAs' ability to use COVID-19 data (e.g. case counts, infection rates) for pandemic response activities may have been negatively impacted by a general sense of fatigue in the community surrounding COVID-19. One LPHA expressed that their surveillance was good, but they felt that their ability to continuously engage populations for vaccines was poor.

State supports for epidemiological activities

LPHA experiences with state supports

LPHA survey respondents were asked if they received any technical assistance from OHA to access, understand, or utilize COVID-19 data. About a quarter of respondents (n=9) did not receive any technical assistance from OHA, and another quarter did not know. Forty percent of respondents (n=15) indicated that they received support from OHA during all four stages (Figure 60). Four LPHA respondents who reported that they did not have the capacity to manage COVID-19 epidemiological data also reported that OHA did not provide any TA, and one respondent who reported not having the expertise to manage COVID-19 epidemiological data also reported that OHA did not provide any TA.

In addition to technical assistance, LPHA group interviewees noted other ways that OHA supported local epidemiological activities, including:

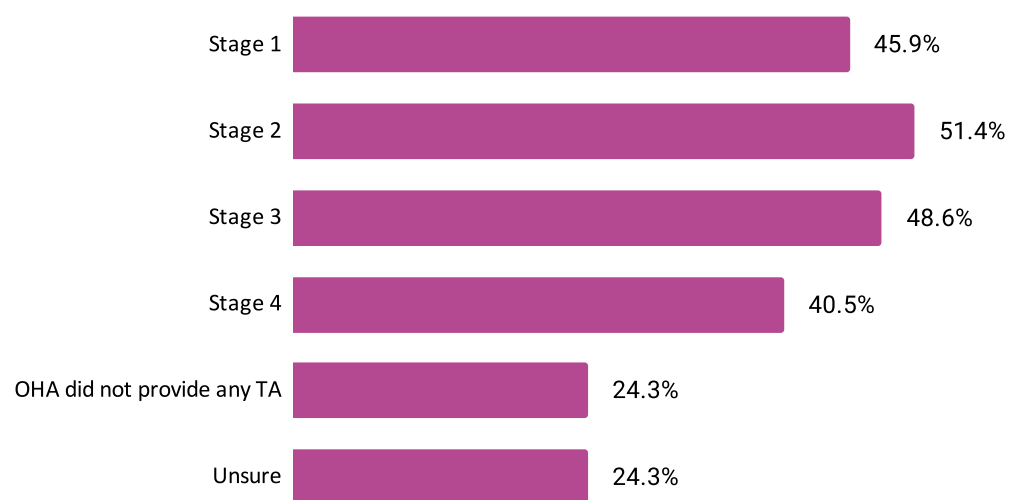
- conducting statewide and regional meetings that provided an opportunity to share epidemiological data and get technical assistance;

“We're hearing rumblings from our schools, our long-term care facilities, and businesses. I'll go do some radio interviews like 'Hey, our numbers are up right now,' and people are like, 'Okay, I guess you got to say that, but can we talk about something other than COVID?' The fact is, COVID is still putting people in the hospitals. COVID is still killing people. I get it, you don't want to hear about it, but it's our job, as long as it is having that kind of an impact.”

—LPHA Interviewee

- routing funding to LPHAs to increase staffing for local epidemiological capacity;
- sharing epidemiological data communication and messaging resources that aided LPHAs in addressing misinformation efforts in their communities; and
- setting up and streamlining systems for LPHAs to order and receive tests, vaccines, and other supplies.

Figure 60: Stages during which OHA provided TA to LPHAs to access, understand, or use epidemiological data (LPHA respondents, N=37)



"Disease investigation started to improve because we leveraged the support of OHA. We didn't have enough staff trained to do that."

—LPHA Interviewee

"I would say our budget increases really helped us do more vaccine events. We did do some gift cards and things with vaccines. We did all of the testing for our community. Our hospital actually wasn't doing any testing outside of the emergency room, and none of the clinics were testing, so that took a lot of extra people and time. We did also, kind of towards the end, buy a mobile clinic. And so, we've been able to use that for more events as well."

—LPHA Interviewee

Response coordination: LPHAs, hospitals, + long-term care facilities

Local public health authorities, hospitals, and long-term care facilities (LTCFs) worked together throughout the pandemic to coordinate a number of response functions, such as implementing, communicating, and enforcing public health protections, testing, and vaccinations. LPHAs, Health Care Associations, State Agencies, and OHA Staff and Managers provided insight into the successes and challenges of this collaboration. Report 1 expands on the role of LPHAs and OHA in the COVID-19 response.

Efficiencies + effective elements of response coordination

Establishing lines of communication

Establishing lines of communication was essential for successful role coordination between hospitals, LTCFs, and local public health partners. Many LPHAs shared that they had regularly-occurring meetings between organizations or that they established regular communication during Stage 1 of the COVID-19 outbreak. Regular communication helped determine organizational capacity to take on aspects of the COVID-19 response and prevented role duplication.

Some entities reported dedicating a point person for communication with counterparts in partnering organizations and noted that this strategy was effective. In some cases, Health Care Associations, State Agencies, or OHA Staff and Manager interviewees stepped in to help facilitate coordination between hospitals, LTCFs, or LPHAs within a county.

“We had a lot of communication with long-term care facilities early on, not only in response to outbreaks, but a lot of prevention materials, guidance sharing, and coordination around vaccination...it’s been really fantastic. The long-term care facilities in our area are really receptive to coordinating vaccination.”

—LPHA Interviewee

“I think that we had a great relationship with our local hospital before. We have an excellent relationship now.”

—LPHA Group Interview
Participant

Strengthening relationships

Working together throughout the pandemic also strengthened previous relationships between LPHAs, hospitals, and LTCFs- for example, one State Agency interviewee shared that because of strengthened relationships between entities, data availability became much more robust. Through these strengthened relationships, organizations could more effectively promote health services and programs to better serve their communities.

Delineating roles based on organizational capacity and resources

Interviewees from all participant groups acknowledged that, in emergency response, there was no “one-size-fits-all” for task delegation. Respondents explained that customizing response roles based on assets and strengths of LPHAs, LTCFs, and hospitals created more agility in response coordination. For example, if the local hospital in one county was well-resourced, they could take on the bulk of a particular response role, such as vaccination. In other counties, the local hospital may have been working on other response roles, so a different organization led vaccination efforts.

Cross-agency collaboration

LPHAs, hospitals, and LTCFs were able to reach more community members with resources when they worked together. In some counties, hospitals, LTCFs, and the health department were able to share resources like PPE, vaccines, and testing supplies to support each other in individual response efforts. Ensuring each entity had the resources they needed made the response more efficient. This coordination was, where necessary, facilitated by OHA or health care organization employees.

“This pandemic has brought local public health and hospitals together.”

—State Agency Interviewee

“We all worked together. We shared the supply. We made sure that every corner of the county had access to vaccine when the supply was there.”

—LPHA Interviewee

“From our regional OHA meetings, we had our tentacles out into the community, into education and hospitals. We had someone directly working with the hospitals, making sure they had what they needed to do their work.”

—OHA Manager Interviewee

Inefficiencies in response coordination

Authority, jurisdiction, and role confusion

Role confusion occurred around enforcement of public health measures in LTCFs. Informants from health care associations and OHA staff and managers reported a lack of clarity around who had jurisdiction over LTCFs, which was a significant issue for public health protective measure enforcement. Several informants reported that guidance coming from OHA and ODHS was inconsistent. One Health Care Association interviewee also shared that there was a need for improved communications around providers' roles in LTCFs, stating a need for clarity around "what providers are responsible for and need to do in LTCFs, what they should do versus what they're required to do, versus what they will get penalized for." The interviewee also identified a need for interpretation of regulations specific to LTCFs and noted that regulations were changing frequently, which made clear communication challenging.

Due to complexities with licensing and response authority, jurisdiction over LTCFs was called into question, which, at times, created communication and compliance challenges. Some LTCFs felt unheard by OHA when providing input around masking and social distancing guidelines. A Health Care Association interviewee shared that LTCF providers should have the opportunity not to be regulated so heavily by OHA, as they were familiar with infection control and most knowledgeable about their community.

"Ultimately, when it comes to implementation of COVID-19 recommendations from [OHA], there's a lot of overlap between DHS requirements, and facilities want to know what they're required to do as well as what they're recommended to do"

—OHA Staff Interviewee

"The nursing homes, there were a lot of nursing homes. They were getting conflicting guidance from the state and the feds... We absolutely positively need to figure out who the nursing homes are going to answer to."

—LPHA Interviewee

“I don't think there was confusion on the roles and responsibilities. I think there was confusion on the nuance of the rules, not who should be doing them and where they come from. But I also think that there was some, I don't know if tension's the right word, but I'll just use that. It felt like there was tension between ODHS and Oregon Health Authority because ODHS and APD [Adults with Physical Disabilities] was ultimately responsible for enforcing rules that weren't created by them.”

—Health Care Association
Interviewee

“We're dealing with the American health care system and the mix of for-profit, nonprofit and the complexities of the workforce and a system that's not designed as a system, it's just the American health care system. And so you've got chains of health care systems, private entities owning multiple long-term care facilities, complex overlapping jurisdictions”

—OHA Manager Interviewee

“Facilities are getting information from CMS. They're getting information from whatever state regulatory authority or licensing body. They're also getting information from public health. They're also getting information from CDC. Are they talking to the DHS person? Are they talking to CDC? Are they talking to CMS? Are they talking to us? So I think there was just a ton of confusion on the part of healthcare facilities who just really, really needed a lot of handholding to be like, what's the most updated guidance?”

—OHA Staff Interviewee

Sharing state and local responsibility

Another area where role confusion occurred was sharing authority and response roles between local and state public health. LPHA and health care association interviewees felt it was important that the pandemic response could be tailored in each county based on organizational capacity and community needs, but scoping out these roles seemed sometimes to occur slowly, and the delineated roles may not have been communicated widely to different organizations.

Among participants, there were conflicting opinions on the role of LPHAs. LPHA interviewees expressed confusion about their role in enforcing public health mandates in LTCFs. If LPHAs were expected to take on a large role in emergency response, LPHA interviewees recommended building capacity and allocating funding to allow LPHAs to carry out the response.

“Local versus state public health role, and where do things fit, and how do we allow for local flexibility, were really highlighted during this COVID response of where the gaps are within the system, how fragmented and underfunded public health is, and how not nimble it can be in some of these regions to stand up.”

—Health Care Association
Interviewee

“I think the decision making authority was really a struggle throughout the response because it was in different hands at different times. I think it was really a struggle for the community to know where does this decision lie? Does our local health authority have the ability to do the mandates, to make them?”

—LPHA Interviewee

Barriers to response coordination

Communication challenges

Response coordination was at times delayed due to communication lags. OHA staff, OHA manager, LPHA, and health care association interviewees shared that response coordination would have been more effective had organizations without regularly occurring meetings set these up in a more timely manner. One OHA interviewee stated that local public health authorities were siloed in nature, and it took time to break down those silos in order to coordinate the response. Furthermore, once these meetings were set up, necessary partners were not always at the table. For instance, OHA interviewees shared that LPHAs may not have been adequately engaged in conversations when vaccines were rolled out. A health care association interviewee felt that involving LTCFs in coordination conversations may have improved understanding of response roles and requirements.

Other challenges to communication needed to be improved upon as well. According to some OHA interviewees, some LTCFs were more difficult to coordinate with due to lack of communication and pushback on protective measures and reporting requirements. On the other hand, a Health Care Association interviewee shared that LTCFs felt frustrated that they were not given authority to make decisions that they felt were best for their clients.

Several interviewees mentioned that interpersonal dynamics and relationships between LPHAs, LTCFs, and hospitals varied based on individual personalities, which impacted the system's ability to coordinate response roles.

“Those times when facilities were either too scared to report cases or didn't know that they had to report cases, and then we didn't know to help them. When communication fails, there's a cascade of direct impacts on outbreaks.”

—OHA Staff Interviewee

“It really felt to us locally that we did not have a hospital system that was supporting our efforts.”

—LPHA Interviewee

“In some regions, the relationship was really good; and in others, it depends on personalities.”

—Health Care Association Interviewee

Staffing and capacity

Another barrier to successful role coordination between LPHAs, hospitals, and LTCFs was capacity. Some LPHAs felt that the majority of response roles fell on them, and had hoped that health systems and CCOs would take on more active response roles. According to one OHA employee, “The expectation from OHA’s side was that the counties would be able to support in ways that they were just not equipped to. And the expectation from the county side was that OHA would be there to support in ways that maybe OHA just had no understanding that they would need support in.”

Across informant groups, staffing was noted as a barrier that made role coordination difficult- as there weren’t always staff available at any of these entities to take on response roles. Staffing turnover hindered communication, which in turn impacted the coordination of the local pandemic response.

“That’s the fear going forward that we don’t have the resources for mass vaccination clinics anymore, our pharmacies are already struggling, our provider groups are struggling with staffing, I don’t know who’s going to give these vaccines or how long-term care facilities are going to get them.”

—LPHA Interviewee

“With staffing turnover and transitions, it became really difficult to figure out who I was supposed to contact and for what. It became challenging to navigate that.”

—Health Care Association
Interviewee

COVID-19 outcomes + enforcement of public health mandates

Senate Bill 1554 calls for an analysis comparing health and health system data, including COVID-19 positivity rates, rates of COVID-19 infection, hospital capacity, and other core metrics with the efficacy of statewide public health mandate enforcement. There is no way to objectively determine the effectiveness of statewide public health mandate enforcement in Oregon. As discussed in Report 1, enforcement of statewide public health mandates in Oregon had many challenges, including being a complaint-driven system, multiple agencies working to support enforcement, inconsistent enforcement across the state, a lack of staff and capacity to conduct enforcement activities, lag times between complaints being made and follow-up, issues in statutory authority to enforce laws and regulations, and rapidly changing mandates. Thus an analysis of the effectiveness of enforcement, including a comparison of regions within Oregon, is not possible.

In lieu of that, the study team conducted a literature review (see Appendix J) to inform the topic of the comparative effect of public health restrictions (such as mask mandates, stay-at-home orders, and business and government closures) on COVID-19 outcomes. The study team identified two study questions for the literature review: Did COVID-19 public health restrictions work to reduce COVID-19 case counts and mortality?; and What effect did public health restrictions that were more consistently enforced have on COVID-19 case counts and mortality?

The literature review was limited to 2020- 2023 and primarily included only US studies. Researchers utilized PubMed with search terms that included COVID, mandates, enforcement, cases, deaths, morbidity, mortality, stay-at-home, masking mandates, and non-pharmaceutical interventions. The study team also utilized citation lists from meta-analysis articles to identify articles to include. Additionally, LitCovid, a repository of COVID-19 related literature hosted by the National Library of Medicine, National Center for Biotechnology Information, was searched for articles for inclusion. Nineteen articles were identified for inclusion in this literature review; some articles included an analysis of multiple public health measures.

Articles included analysis of a variety of non-pharmaceutical interventions (NPIs) to try to reduce COVID-19 transmission. NPIs are mitigation measures, not including vaccinations and individual health care, that are implemented to slow the spread of disease in communities. This literature review included many different NPIs: stay-at-home, mask mandates, indoor gathering bans, restaurant and bar closures, business closures, in-person school closures, and entertainment-related closures. Some studies grouped public health measures to look at the impact of NPIs as a whole. The most common individual NPIs researched in the included studies were mask mandates, stay-at-home orders, school closures, and business closures.

Public health measure	Number of studies reviewed	Number of studies that found an association with reducing COVID-19 cases	Number of studies that found an association with reducing COVID-19 mortality
Mask mandates	7	5	1
Stay-at-home orders	6	6	3
School closures	3	2	1
Business closures	3	3	0
Ban on public gatherings	3	0	0
Multiple NPIs	5	4	2

In conducting the literature review, the study team did not find articles that analyzed the impact of the enforcement of public health mandates on COVID-19 case counts or mortality. Studies instead focused on the association between the implementation of public health measures and COVID-19 case counts and/or mortality.

Mask mandates

Mask mandates were policies that required wearing of masks when in public spaces. Seven studies were included in this literature review related to mask mandates.

Case counts

All seven of the studies looked at the impact of mask mandates on COVID-19 case counts. Five of the seven studies reported a decrease in COVID-19 cases associated with mask mandates, and two of the studies reported there was no association between mask mandates and cases. Ahlers et al. found that public mask mandates were associated with over twice the likelihood of reduced COVID-19 transmission, even after adjusting for other NPIs that may have been adopted concurrently (Ahlers et al., 2021). In their study, Chu et al. found that face mask use could result in a great reduction in risk of infection, with stronger associations with N95 (respirator masks) or similar respirators compared with disposable surgical masks or similar (Chu et al., 2020). Yet another study found that statewide mask mandates reduced new weekly COVID-19 cases by 54.95 cases per 100,000 inhabitants, but also found that the reductions in COVID-19 cases varied depending on political leaning, with higher reductions in COVID-19 cases in democratic-leaning counties (Hansen & Mano, 2023). One limitation of all of these studies is that they did not examine compliance with the mask mandates, just the association of the implementation of the mandate and COVID-19 case counts.

Of the two studies that did not find an association between mask mandates and reduced case counts, one study did find a reduction in cases among those wearing masks, but it was not statistically significant (Bundgaard et al., 2021). This study was conducted in Denmark where mask wearing was very low in the population as a whole, and only looked at how mask wearing impacted non-infected individuals; research shows that masks are much more likely to prevent transmission if the infected individual wears one. The second study did not find a reduction in case counts with mask mandates compared to 35 western and eastern European countries; researchers found that countries with high levels of mask compliance did not perform better than those with low mask usage in the six-month period that encompassed the second European wave of COVID-19 (Spira, 2022).

Mortality

Three of the seven studies examined the impact of masking mandates on COVID-19 mortality. One of three studies found an association between mask mandates and a reduction in mortality from COVID-19 (Hansen & Mano, 2023), one found a correlation between mask mandates and an increase in mortality (Spira, 2020),

and one found no association (Ahlers et al., 2021). Hansen and Mano (2023) found that mask mandates reduced mortality and estimated that statewide mask mandates prevented 87,000 COVID-19 deaths in the US between January 2020 and December 2020. This indicates a need for further research before drawing any conclusions about the connection between mask mandates and COVID-19 mortality.

Stay-at-home orders

Stay-at-home orders, also called shelter-in-place orders, lockdowns, and restrictions on internal movement, were public health mandates that required people to stay at home except for essential services, such as food, employment, and health care. Six studies that looked at stay-at-home orders are included in this literature review.

Case counts

All six studies examining stay-at-home orders found a positive relationship between stay-at-home orders and a reduction in COVID-19 case counts. One study found that stay-at-home orders were more effective at reducing COVID-19 case transmission than quarantining people who had come into contact with others who were COVID-19 positive (Zhang et al., 2022). Another study found that stay-at-home orders might have reduced confirmed cases by 390,000 within the first three weeks in localities that implemented them (Fowler et al., 2021).

Mortality

Four of the six studies looking at the impact of stay-at-home orders examined the impact of orders on COVID-19 mortality. Three of the four studies found that stay-at-home orders reduced COVID-19 mortality, while one did not find that association. One study found that stay-at-home orders were the only NPI that reduced mortality (Ahlers et al., 2021), and another found that stay-at-home orders and business closures were the NPIs that reduced mortality (Courtemanche et al., 2020). The one study that did not find any association between stay-at-home orders and mortality did not find significant evidence that any NPI reduced mortality in the early stages of the pandemic (Dreher et al., 2021).

School closures

One of the public health measures implemented to try and reduce COVID-19 case counts was the closure of in-person instruction at school, since schools are places where many people gather. Three studies that looked at the impact of school closures on COVID-19 cases and/or mortality were included.

Cases

Two of the three studies that look at the impact of school closures found that this action did reduce COVID-19 cases. One of these studies found that school closures were associated with a -62% relative change per week in COVID-19 cases, and that states that closed schools earlier had a greater reduction per week compared to states that closed schools later (Auger et al., 2020). One study did not find evidence that the closure of schools reduced COVID-19 cases, although the author acknowledged that confidence intervals could not rule out moderate-size effects (Courtemanche, 2020).

Mortality

Two of the studies looking at the school closures examined the impact on COVID-19 mortality. One study found that closing schools reduced COVID-19 deaths, and one did not. The study that found an association, found that school closures were associated with a -58% relative change per week in COVID-19 mortality, and states that closed schools earlier had fewer estimated total deaths, but schools that closed later had the largest absolute reduction in deaths (Auger et al., 2020). The researchers that did not find evidence of school closures reducing mortality reported that their modeling approach was unable to detect significant associations with mortality (Ahlers et al., 2021).

Business closures

The closure of non-essential businesses, including bars and restaurants, was another strategy implemented by jurisdictions to reduce the number of people gathering in a given space. Three articles included in the literature review looked at the impact of business closures.

Cases

All three studies that examined the impact of business closures on COVID-19 cases found a positive association with reducing cases. One study found that closures of restaurants, bars, and entertainment-related businesses substantially slowed the spread of COVID-19 during the first wave of the pandemic (Courtemanche et al, 2020). Another study found that the closure of non-essential businesses was significantly associated with slowing the spread of COVID-19 (Dreher et al, 2021). And the third study found that indoor restaurant dining bans were associated with decreased case velocity (Ahlers et al., 2020).

Mortality

Two of the three studies also researched the impact of business closures on COVID-19 deaths. Neither of them found an association between closing non-essential businesses and a reduction in COVID-19 mortality (Ahlers et al., 2021; Dreher et al, 2021).

Ban on public gatherings

Many states implemented a ban on public gatherings, limited mass gatherings, or banned large social gatherings. Three studies looking at the impact of these gathering bans were included in the literature review.

Cases

None of the studies included in this review found evidence that banning large gatherings reduced COVID-19 cases. One study reported that gathering bans that allowed more than 10 people to gather were insufficient or exacerbated COVID-19 spread (Ahlers et al., 2021). Another study did not find a statistically significant impact, but acknowledged that the confidence intervals could not rule out moderate-size effects (Courtemanche, 2020).

Mortality

Two of the three studies that looked at banning large gatherings examined the impact on mortality, and neither of them found that a ban on public gatherings reduced COVID-19 deaths.

Combined NPIs

Five of the included studies looked at the effect of NPIs grouped together on COVID-19 cases and/or mortality. Each study grouped slightly different numbers and types of NPIs.

Cases

Four of the five studies found that NPIs had a positive effect on reducing COVID-19 cases, and were all based on the US experience. The one study that did not find a positive effect compared countries that had implemented NPIs (England, France, Germany, Iran, Italy, Netherlands, Spain, and the United States) to countries that had not implemented NPIs (South Korea and Sweden), and the study did not control for the fact that countries may have different rules, cultures, and relationships between the government and citizenry that impact the efficacy of public health measures (Bendavid, 2021). Two studies found evidence that a variety of social distancing orders, including the closure of non-essential workplaces and schools, as well as policies on physical spacing when in public, did reduce COVID-19 cases (McGrail, 2020; Siedner, 2020). Neither of these studies identified which NPIs had a stronger effect. One study that looked at an aggregate set of NPIs found that they reduced cases of COVID-19, but that if the NPIs were lifted prematurely, the positive effects on reducing COVID-19 cases were diminished (Singh, 2021).

Mortality

Two studies looked into the effect of NPIs on reducing COVID-19 mortality and both found that NPIs were positively associated with reductions in COVID-19 mortality. One of these studies, however, found that although social distancing requirements had a statistically significant effect on decreasing COVID-19-attributed mortality growth rate beginning seven days after implementation of social distancing, the effect was no longer statistically significant after 10 days (Siedner, 2020). The other study that found a positive effect reported that early implementation of NPIs, longer implementation, and employing multiple NPIs at the same time reduced mortality in the first wave of COVID-19 (Stype, 2023).

Statewide funding + expenditures for public health response

In Report 1, we provided an overview of funding sources and uses for OHA, CBOs and Tribal Organizations, LPHAs, and Tribal Nations with the following note:

Due to the ongoing nature of the pandemic and a lack of detailed categorization and dates on many of the budget documents provided to the study team, total funding amounts and the number of fundees in each funding stream may vary to what is written in this report and are subject to change. A more detailed description of OHA funding for COVID-19 will be included in the second report.

This section clarifies the total funding amounts. For a detailed description of the uses of funding, please see Report 1.

The COVID-19 pandemic response is ongoing in Oregon. As of February 2023, OHA has been granted or received more than \$1.7 billion for COVID-19 response activities. This total includes \$1.1 billion from the FEMA, which has been claimed by OHA, but not necessarily received at the time of this report as many of these claims are still in process. The rest of the funding received by OHA included \$9 million from the state general fund and \$600 million from federal or other funds.

As aforementioned, this study was primarily focused on pandemic response activities between March 2020 through July 31, 2022. During this period, the total received or claimed by OHA was approximately \$1.264 billion, which was distributed in the following ways:

\$145 million to CBOs

CBOs were funded to perform a wide range of pandemic response activities, with many interviewees reporting that they were heavily involved in vaccination and testing events, and providing wraparound supports to individuals in isolation or quarantine. Included in this funding is approximately \$13 million that went to support the Community Partner Outreach Program (CPOP), which included the Protecting Oregon

Farmworkers program. It should be noted that LPHAs also had their own programs and ways of supporting farmworkers, and the POF program was just one method of supporting this critically important population.

The study team was unable to procure a list of all the CBOs supported by OHA for the pandemic response.

\$185 million to LPHAs and the North Central Public Health District

As described in Report 1, LPHAs used their funding to increase their capacity for the pandemic response by hiring personnel and strengthening partnerships to provide testing and contact tracing services, host vaccination events, provide wraparound supports, coordinate and dispense PPE, educate businesses and the public, provide infection control systems-support to health care providers including long term care facilities, provide additional epidemiology services, disseminate information, and any other activities needed to protect the health of their communities. This funding included dollars for more than COVID-19 pandemic response activities.

\$20 million to Tribal Nations and the Native American Rehabilitation Association (NARA)

As described in Report 1, Tribal Nations and NARA used this funding for similar activities as CBOs and LPHAs.

\$34 million in grants

The grant funding includes (but is not limited to) universities, city governments, and critical responders.

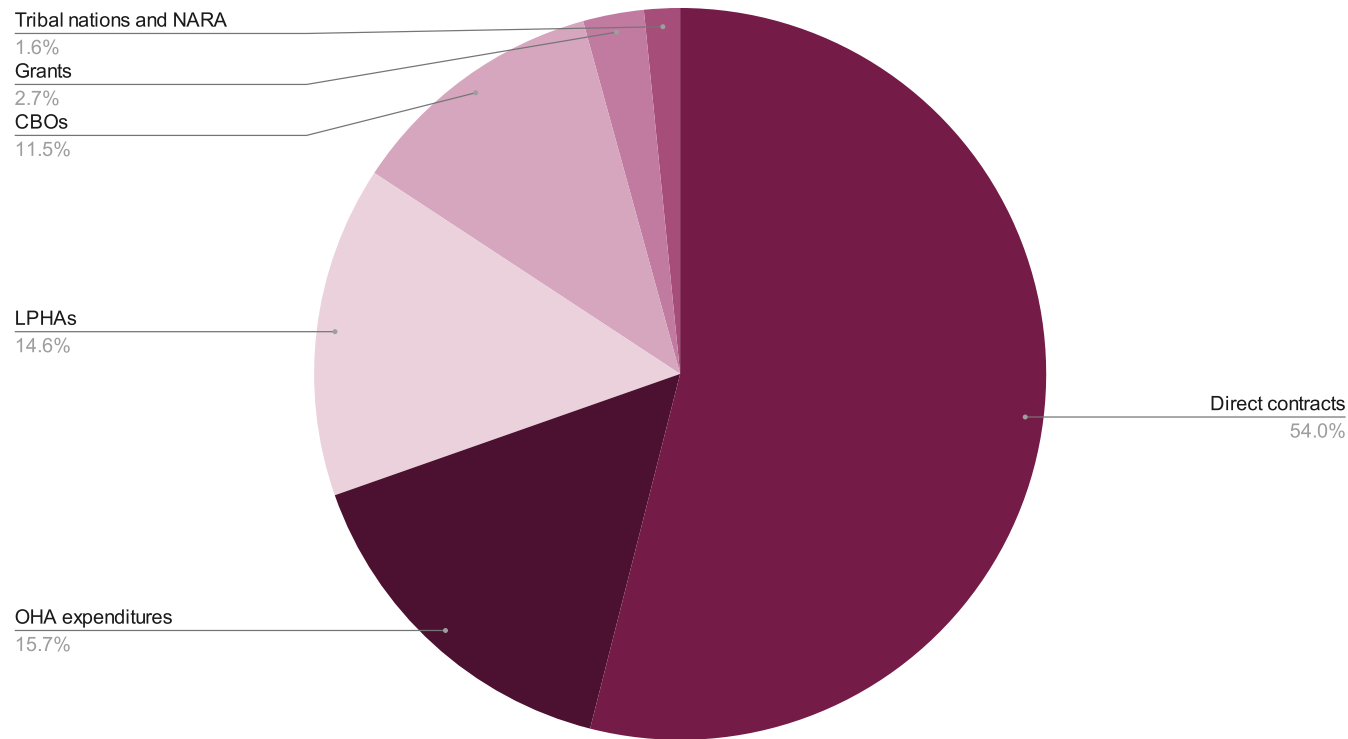
\$682 million in direct contracts

Some examples of direct contracts include but are not limited to: Testing and laboratory supplies and services; staffing companies (to assist health systems, vaccine clinics, etc.); emergency medical services (EMS)/medical transport services; contractors to assist with response planning work; communications activities; translation needs; updated information to 211; application and website development; purchasing personal protective equipment (PPE); and security needs.

\$198 million for direct OHA expenditures

Direct OHA expenditures included funds for personnel and equipment for the state pandemic response.

Figure 61: Allocation of funding for pandemic response through OHA



Public health workforce challenges

Significant challenges to recruiting, on-boarding, + retaining public health staff

This section covers workforce challenges reported by LPHAs and OHA; workforce challenges reported by Tribal Nations, CBOs, and schools are outlined in pages 206, 179, and 157 respectively.

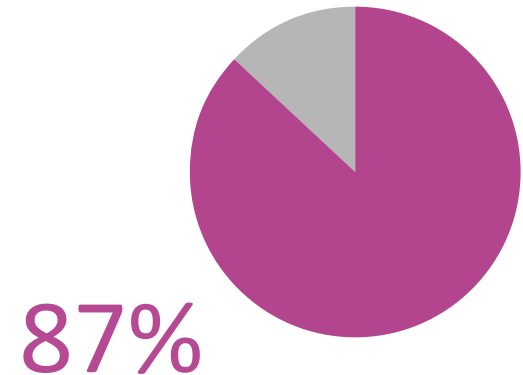
LPHAs

LPHAs overwhelmingly agreed that staffing challenges hindered their pandemic response. Difficulty recruiting, onboarding, and retaining staff was a strong theme across individual interviews, group interviews, and surveys with LPHA administrators and staff.

When asked specifically about vaccine administration, 60.0% (n=21) of LPHA survey respondents reported that staffing challenges were a significant barrier to implementing COVID-19 vaccination programs. Similarly, 71.9% (n=23) of LPHA survey respondents reported that staff capacity to stand-up and maintain COVID-19 response programs was a barrier to the effective utilization of COVID-19 funds.

Analysis of individual interviews, group interviews, and LPHA survey responses surfaced two themes within challenges to recruiting public health staff during the pandemic:

1. County-level administrative burden for hiring
2. Overall public health workforce shortages, especially for nurses, community health workers, and epidemiologists



In the LPHA survey, 87.2% (n=34) of respondents reported that staffing shortages hindered the effectiveness of their pandemic response.

County-level administrative burden + requirements

A majority of LPHAs noted that administrative processes for hiring new employees through county human resource departments were time-consuming and lengthy. This sometimes led to a competitive disadvantage or losing employees to another organization within the county or neighboring counties. A few respondents reported that their counties streamlined the hiring processes for COVID-19 response, but hiring was still taking six to eight weeks, not including recruitment periods.

Some LPHAs reported that operating with the county's employee classification system made it difficult to pivot staffing roles to meet the demands of the pandemic.

Overall public health workforce shortages, especially for nurses, community health workers, + epidemiologists

Several LPHAs reported that the scale of the pandemic led to public health workforce shortages; in some counties, positions that required specific skill sets or credentials often went unfilled for long periods of time. Several LPHAs noted that public health preparedness practices such as having “mutual aid agreements” (formal agreements between or among jurisdictions that establish the legal basis for sharing resources in the event of an emergency) in place were insufficient when faced with a large-scale crisis. They went on to suggest that other public health emergencies, such as fires, present the same challenges and that mutual aid agreements are not the only answer to public health surge capacity.

"There was NOT an adequate infrastructure prior to the pandemic that could have supported something so long-term and of this magnitude. We did not have a system that could rapidly hire, train, and retain staff at the local level....We have been working with the bare minimums for decades."

—LPHA Interviewee

A sub-theme within overall workforce shortages was staff turnover. Some LPHA respondents also stated that some employees' experiences with physical or emotional exhaustion led to a sense of reduced accomplishment and loss of personal identity. Referred to as "burnout," this condition fed into workforce reductions and destabilization of the workforce for a few LPHAs.

Pay + funding delays

A few LPHA respondents also reported that their recruitment efforts were hampered by the pay scale within their organizations. They reported that during the height of the pandemic, LPHAs with lower pay scales were not able to compete with neighboring employers. Interviewees noted this was specifically difficult when trying to recruit nurses. Additionally, some LPHAs reported that delays in receiving funding for hiring exacerbated workforce capacity and shortages.

OHA

A majority of OHA Director interviewees ranked staffing capacity at OHA as a significant challenge that negatively affected OHA's ability to respond to COVID-19. At the beginning of the pandemic, OHA needed to hire numerous new staff to mount and coordinate an effective response; in addition, OHA reassigned many existing staff to new COVID-19-related work and roles. Small applicant pools for hiring and contracting and limited human resources administrative capacity to meet the hiring demand stalled hiring efforts. Some interviewees noted that OHA overcame some aspects of the typically slow pace of government hiring processes and hired staff quickly, but managing new staff and creating

"We needed to staff up with 100+ contact tracers, and we didn't have the HR systems in place to do good, quick hiring. I mean, it just felt like we were always one step behind in trying to catch up. It impacted our ability to be responsive to community. It impacted our ability to get ahead of some of the work like contact tracing and vaccine [distribution]."

—OHA Director Interviewee

"It always felt like we were trying to catch up and it has created a great incredible strain on people and mental health, physical health of us in the agency."

—OHA Director Interviewee

effective teams was labor-intensive. According to several OHA Director interviewees, as the pandemic wore on, staff capacity challenges included public health workforce fatigue and burnout.

OHA Staff and Manager interviewees highlighted how burnout and resignations depleted workforce capacity. They noted that a requirement to continue work in their "regular" (non-COVID-19) positions contributed to extended periods of heavy workloads.

Multiple respondent groups routinely reported working 60-70 hour work weeks for many months during 2020- 2022. Several OHA Staff and Manager interviewees indicated that maintaining overall workforce capacity after the Delta variant emergency was especially difficult because the workforce was already stretched thin.

Skill sets most difficult to recruit for

LPHAs

As documented earlier in this report (see pages 213-220), LPHAs experienced significant difficulty with epidemiological and data workforce capacity. In the LPHA survey, respondents indicated that the most challenging skills to recruit and hire for were first, “public health science skills” and second, “data analytics skills.”

Some LPHAs also struggled to recruit nurses and other staff certified/credentialed to administer vaccines. In addition, several larger LPHAs spoke to the difficulty of finding qualified managers and supervisors. Finally, several LPHAs highlighted the difficulty of finding, hiring, and retaining individuals with dual capacity in emergency management

“On the epi side, we had a lot of trouble...you just couldn't find them. The epi and data analyst people in the US have never been more popular than they were in the middle of this response and they were not there. We could not get them. And we were, of course, watching our neighbors lose them as well. And so that was a significant issue for us as well.”

—LPHA Interviewee

operations and public health. As noted in Report 1 (pages 48-57, and 78-95) collaboration between city and county emergency management and local public health was critical to an effective COVID-19 response; however, this collaboration was often hampered by a lack of previous experience working together and practicing cooperative response tactics. Added to this was the very exhausting pace, scale, and magnitude of COVID-19 operations. Finally, a few LPHAs reported that hiring Spanish-speaking staff was a challenge due to a shortage of workers with this particular skill.

For LPHAs and OHA, a massive statewide COVID-19 contract tracing effort throughout most of 2020- 2022 led to sizable hiring and onboarding efforts. LPHAs reported that onboarding in the midst of continuously evolving disease investigation guidelines was problematic.

A series of questions were asked on the LPHA survey to gain a better understanding of public health workforce challenges. Respondents reported a range in the number of employees that were hired specifically for COVID-19 response; three respondents indicated they did not hire any additional staff, and the largest number added was eight new employees (reported by seven respondents). Contact tracers were most frequently hired, as reported by 80.6% (n=29) of respondents. A little more than 50% (n=19) of respondents reported hiring disease investigators, and 50% (n=18) reported hiring clinical staff.

“It was difficult to onboard staff and do training in the midst of dealing with case investigation and contact tracing. It was definitely like building the plane as you were flying it. It was also challenging to keep training [slide] decks up to date as the information and investigative guidelines kept changing weekly. This was also a challenge for retention of contract workers since there wasn't a ton of stability (work hours and job expectations).”

—LPHA Group Interviewee

Best or promising practices employed to recruit, onboard, + retain staff during this period

LPHA Group Interview Participants shared various promising methods for recruiting, onboarding, and retaining staff throughout the pandemic including working with volunteers, CBOs, and established structures for hiring temporary employees.

Many LPHAs endeavored to relieve some of the burden on staff by turning to volunteers to assist with the work. Medical Reserve Corps were specifically named by several LPHAs as a helpful resource during the pandemic response. However, a few LPHAs noted that because individuals in Medical Reserve Corps were older, they were at higher risk for COVID-19 serious illness and therefore were not able to be as involved. Other LPHAs were able to draw on community volunteers, including retired nurses, through the county government volunteer management department or through partnerships with CBOs.

A few counties developed contracts with CBOs to facilitate major work areas such as contact tracing. In one specific case, the CBO, Oregon Public Health Institute, was able to tap into a regional network for hiring. Several LPHAs also noted that other departments within county government “loaned” them staff for pandemic response. One county reported that a previous relationship with a university school of nursing facilitated swift action to mobilize graduating nurses directly to the LPHA’s pandemic response. Some LPHAs reported the ability to hire temporary staff was important to swiftly increase workforce capacity.

When asked about on-boarding new staff, a few OHA Staff and Manager interviewees pointed out that regional training and data system training were provided by OHA and utilized by LPHAs and CBOs throughout the state.

Recommendations

Public health response in schools

Improve public health emergency response effectiveness in schools by:

1. Building out and investing in comprehensive emergency preparedness for schools at the district- and school-level to incorporate pandemic-level events, and include training for school administrators and frequent EOP updates.
2. Continuing to invest in partnerships between the education (e.g., SDs, ESDs, schools) and public health sectors (e.g., LPHAs, OHA), as this will enable a more timely and collaborative response to future public health emergencies in Oregon's schools.
3. Investing in sustained emergency operations funding for schools; with sustained effort, EOPs and communicable disease management plans in schools will be implemented with more efficiency and timeliness. Specific recommendations regarding funding for schools include:
 - Invest in necessary school building infrastructure improvements (i.e., HVAC, desks, filtration systems, outdoor access) to align with best practices to prevent or slow transmission of communicable diseases;
 - Streamline funding to reduce administrative burden for schools; and
 - Improve communication about emergency operations funding, including communication specific to allowable use of funds, timeline for spending funds, and duration of funding.
4. Clearly defining roles and expectations for all involved in public health response in schools in advance of emergency response.
5. Supporting disease investigation training and resources in schools to effectively respond in future communicable disease related emergencies.
6. Supporting both districts and schools to conduct an after-action review (AAR) of their response and to define areas of improvement to inform future public health emergency response.

7. Involving schools when making decisions about public health mandates and other emergency response decisions that impact schools; it is imperative that the education sector is brought to the table to inform development of guidelines and recommendations for the school setting. School nurses, in particular, are a valuable resource that should be utilized when planning emergency response at both the district and school levels.
8. Ensuring data availability at district and local levels that includes sub-population data and corresponding TA; a designated liaison at LPHAs to coordinate data availability and provide TA for each district would ensure greater availability and accessibility of TA to inform response for future public health emergencies. This recommendation may require additional resources for LPHAs.
9. Public health protection mandate enforcement-related recommendations for schools are summarized as follows:
 - Comprehensively examining the benefits and risks of specific public health mandates in varied schools and population settings, including the long-term impact of using specific mandates in Oregon preschool and school settings on child health and educational outcomes.
 - Re-examining the enforcement structure for public health mandates in schools to ensure schools are adequately equipped with the necessary resources to support enforcement.
 - Clearly articulating compliance roles and responsibilities; all parties involved in this structure should receive the necessary training to ensure successful follow-through in future public health emergencies.
 - Ensuring that enforcement-related messaging is clear, consistent, and takes into consideration the individualized needs of the populations(s) the district or school serves.
10. Coordinating messaging across public health and education organizations before information is communicated to the public. This step is imperative to build trust and allow schools time to digest guidance. Further, schools need support (via additional funding, staffing, or otherwise) with translating and communicating information to be culturally-specific and tailored for the population served.

11. Addressing the substantial challenges Oregon schools faced when transitioning to and maintaining distance learning, by:
 - Sustaining investments in technology infrastructure to ensure that all Oregon students are able to access distance learning, should it ever be required in the future to respond to a public health emergency;
 - Regularly providing professional development for Oregon educators on best practices in distance learning; and
 - Maintaining clear distance learning protocols for districts and schools to enable a smoother, less interrupted transition to distance learning.
12. Considering public health mandates and guidance for future public health emergencies that are flexible to allow for local school authority and decision-making regarding school closures.
13. Continuing investment and support for Oregon schools to specifically address learning loss and socioemotional issues resulting from school closures and distance learning during the COVID-19 pandemic.

Nongovernmental + community partners

Improve support to CBOs by:

1. Improving communication about funding opportunities;
2. Simplifying funding application and documentation processes, including tracking and invoicing systems, processes, and requirements;
3. Increasing flexibility of funding;
4. Prioritizing learning and capacity building around equity practices in a public health emergency response;
5. Designating OHA and LPHA staff contacts for CBOs, creating a clear and consistent chain of communication for support and efficiency; and
6. Fostering and maintaining relationships and collaboration between CBOs and OHA and LPHAs.

Tribal Nations + Tribal Organizations

Improve support to Tribal nations and Tribal organizations by:

1. Implementing flexible funding streams for Tribal nations and Tribal organizations so they can identify and support their communities specific needs;
2. Developing data collection and reporting methods for Tribal-specific data;
3. Increasing communications between Tribal nations and Tribal organizations with LPHAs, OHA, Northwest Portland Area Indian Health Board (NPAIHB) and Indian Health Services (IHS) to better coordinate disease investigation and reporting processes; and
4. Maintaining new and strengthened partnerships that were built by Tribal nations and organizations during COVID-19 response to actively work together to eliminate health inequities in order to reduce the disproportionate impact of public health emergencies on Tribal communities in the future.

Local epidemiological capacity + data

OHA can better support local epidemiological capacity by:

1. Investing in epidemiological data systems improvements; and
2. Continuing to prioritize the development of standards for the collection of and access to REALD and SOGI data.

Hospitals, long-term care facilities and local public health programs

Improve effectiveness of response efforts by:

1. Developing and maintaining relationships among LPHAs, LTCFs, and hospitals to improve communication in future public health emergencies; and,
2. Developing clear guidance for LTCFs around public health and infection control regulations outlining the roles of OHA and ODHS. Ideally, dissemination of this information would be co-created with LTCFs and LTCF advocacy groups.

Public health workforce challenges

Mitigate workforce challenges by:

1. Planning for surge capacity planning within a large-scale, longer-term public health emergency using lessons learned from the COVID-19 experience. Mutual aid agreements, whereby jurisdictions establish the legal basis for sharing resources in the event of an emergency, are critical tools for preparedness planning, but may be of limited value in a geographically dispersed event; thus planning for hiring, reassigning, and limiting non-emergency response functions should be established.
2. Creating plans and protocols at every jurisdiction in the entire public health system that can be activated in a large-scale event, such as the COVID-19 pandemic, for streamlining hiring and worker reassignment processes.
3. Cooperatively, between LPHAs and city and county emergency management programs, create, review, and simulate surge capacity models and plans to outline the most efficient use of available human resources in a public health and medical services emergency.
 - Models and plans should clarify roles and responsibilities for primary, supporting, and coordinating agencies to avoid duplication of efforts and provide a baseline for expanding workforce capacity in areas where it is most needed.
 - Planning should include additional partners such as CBOs, neighborhood associations, and other government agencies (e.g., housing, human services, volunteerism, and natural resources departments).
4. Emphasizing and creating local public health emergency preparedness relationships, especially as the public health leadership workforce rebounds from the strain of the COVID-19 pandemic and experiences an influx of new leadership.
5. Improving local epidemiological capacity while recognizing that local capacity may come in the form of regional epidemiological services or other shared services models. Recognize that funding, in addition to Public Health Modernization funding, may be necessary to create the requisite capacity.

Rede authors' positional statement

In the spirit of reflexivity, the primary authors of this report want to acknowledge their standpoints in relation to the topic of public health systems, health equity and the COVID-19 pandemic. Two authors have been employed in local public health authorities in Oregon (large, Region 1) and three have worked in state government health. Four authors have worked in community-based organizations (three in Oregon, one in another state). One author is the parent of a child who attended Oregon K-12 public schools during the pandemic and one author had children attending K-12 public schools (in another state) during one year of the pandemic and transitioning to private school during the second year of the pandemic. Two authors have worked in or for K-12 public schools in Oregon. One author has worked in a health care system in Oregon.

Four authors are BIPOC (one Hispanic, one Black, one multiracial, and one Asian). One author is transgender. One author is bisexual and one is pansexual. Eight identify as white and non-Hispanic and eight identify as heterosexual (six female, two male). All authors live with economic advantage now. Most authors are formally trained with (or currently training for) advanced degrees in public health, and all are proponents of robust public health systems.

References

- Ahlers, M. J., Aralis, H. J., Tang, W. L., Sussman, J. B., Fonarow, G. C., & Ziaieian, B. (2021). Non-pharmaceutical interventions and COVID-19 burden in the United States. <https://doi.org/10.1101/2021.09.26.21264142>
- Auger, K. A., Shah, S. S., Richardson, T., Hartley, D., Hall, M., Warniment, A., Timmons, K., Bosse, D., Ferris, S. A., Brady, P. W., Schondelmeyer, A. C., & Thomson, J. E. (2020). Association between statewide school closure and covid-19 incidence and mortality in the US. *JAMA*, 324(9), 859. <https://doi.org/10.1001/jama.2020.14348>
- Ballotpedia. (n.d.). School responses in Oregon to the coronavirus (COVID-19) pandemic. Ballotpedia. Retrieved March 13, 2023, from [https://ballotpedia.org/School_responses_in_Oregon_to_the_coronavirus_\(COVID-19\)_pandemic#Timeline_by_school_year](https://ballotpedia.org/School_responses_in_Oregon_to_the_coronavirus_(COVID-19)_pandemic#Timeline_by_school_year)
- Basavaraju, S. V., Patton, M. E., Grimm, K., Rasheed, M. A., Lester, S., Mills, L., Stumpf, M., Freeman, B., Tamin, A., Harcourt, J., Schiffer, J., Semenova, V., Li, H., Alston, B., Ategbale, M., Bolcen, S., Boulay, D., Browning, P., Cronin, L., ... Stramer, S. L. (2020). Serologic testing of US blood donations to identify severe acute respiratory syndrome coronavirus 2 (SARS-cov-2)—reactive antibodies: December 2019–January 2020. *Clinical Infectious Diseases*, 72(12). <https://doi.org/10.1093/cid/ciaa1785>
- Bendavid, E., Oh, C., Bhattacharya, J., & Ioannidis, J. P. (2021). Assessing mandatory stay-at-home and business closure effects on the spread of Covid-19. *European Journal of Clinical Investigation*, 51(4). <https://doi.org/10.1111/eci.13484>
- Bundgaard, H., Bundgaard, J. S., Raaschou-Pedersen, D. E., Von Buchwald, C., Todsén, T., Norsk, J. B., Pries-Heje, M. M., Vissing, C. R., Nielsen, P. B., Winsløw, U. C., Fogh, K., Hasselbalch, R., Kristensen, J. H., Ringgaard, A., Porsborg Andersen, M., Goecke, N. B., Trebbien, R., Skovgaard, K., Benfield, T., ... Iversen, K. (2021).

Effectiveness of adding a mask recommendation to other public health measures to prevent SARS-COV-2 infection in Danish mask wearers. *Annals of Internal Medicine*, 174(3), 335–343. <https://doi.org/10.7326/m20-6817>

CDC Foundation. (n.d.). What is public health? CDC Foundation. Retrieved March 7, 2023, from <https://www.cdcfoundation.org/what-public-health>

Center for Disease Control and Prevention [CDC]. (2022, July 1). What is health equity? Centers for Disease Control and Prevention. Retrieved March 7, 2023, from <https://www.cdc.gov/healthequity/whatis/index.html>

Center for Disease Control and Prevention [CDC]. (2023, March 6). National Initiative to Address COVID-19 Health Disparities Among Populations at High-Risk and Underserved, Including Racial and Ethnic Minority Populations and Rural Communities. Centers for Disease Control and Prevention. Retrieved March 7, 2023, from <https://www.cdc.gov/publichealthgateway/partnerships/COVID-19-Health-Disparities-OT21-2103.html>

Centers for Disease Control and Prevention [CDC]. (2022, October 5). FAQ: Covid-19 data and surveillance. Centers for Disease Control and Prevention. Retrieved March 7, 2023, from <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/faq-surveillance.html>

Centers for Disease Control and Prevention [CDC]. (2023, March 6). CDC- 10 essential public health services - public health infrastructure center. Centers for Disease Control and Prevention. Retrieved March 7, 2023, from <https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html>

Chu, D. K., Akl, E. A., Duda, S., Solo, K., Yaacoub, S., Schünemann, H. J., Chu, D. K., Akl, E. A., El-harakeh, A., Bognanni, A., Lotfi, T., Loeb, M., Hajizadeh, A., Bak, A., Izcovich, A., Cuello-Garcia, C. A., Chen, C., Harris, D. J., Borowiack, E., ... Schünemann, H. J. (2020). Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-COV-2 and COVID-19: A systematic review and meta-analysis. *The Lancet*, 395(10242), 1973–1987. [https://doi.org/10.1016/s0140-6736\(20\)31142-9](https://doi.org/10.1016/s0140-6736(20)31142-9)

Courtemanche, C., Garuccio, J., Le, A., Pinkston, J., & Yelowitz, A. (2020). Strong social distancing measures in the United States reduced the COVID-19 growth rate. *Health Affairs*, 39(7), 1237–1246. <https://doi.org/10.1377/hlthaff.2020.00608>

Covid-19 regional support approach. Oregon Health Authority : COVID-19 Regional Support Approach : Resources for Partners : State of Oregon. (n.d.). Retrieved March 9, 2023, from <https://www.oregon.gov/oha/PH/PREPAREDNESS/PARTNERS/Pages/Regional-Support.aspx>

Dreher, N., Spiera, Z., McAuley, F. M., Kuohn, L., Durbin, J. R., Marayati, N. F., Ali, M., Li, A. Y., Hannah, T. C., Gometz, A., Kostman, J. T., & Choudhri, T. F. (2021). Policy interventions, social distancing, and SARS-COV-2 transmission in the United States: A retrospective state-level analysis. *The American Journal of the Medical Sciences*, 361(5), 575–584. <https://doi.org/10.1016/j.amjms.2021.01.007>

Forum on Medical and Public Health Preparedness for Catastrophic Events; Board on Health Sciences Policy; Institute of Medicine. *Regional Disaster Response Coordination to Support Health Outcomes: Summary of a Workshop Series*. Washington (DC): National Academies Press (US); 2015 Aug 11. 3, Public Health Surge Capacity and Community Resilience. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK311257/>

Fowler, J. H., Hill, S. J., Levin, R., & Obradovich, N. (2021). Stay-at-home orders associate with subsequent decreases in COVID-19 cases and fatalities in the United States. *PLOS ONE*, 16(6). <https://doi.org/10.1371/journal.pone.0248849>

Hansen, N.-J. H., & Mano, R. C. (2023). Mask mandates save lives. *Journal of Health Economics*, 88, 102721. <https://doi.org/10.1016/j.jhealeco.2022.102721>

McGrail, D. J., Dai, J., McAndrews, K. M., & Kalluri, R. (2020). Enacting national social distancing policies corresponds with dramatic reduction in COVID19 infection rates. *PLOS ONE*, 15(7). <https://doi.org/10.1371/journal.pone.0236619>

- Nguyen, M. (2021). Mask mandates and COVID-19 related symptoms in the US. *ClinicoEconomics and Outcomes Research*, Volume 13, 757–766. <https://doi.org/10.2147/ceor.s326728>
- OAR Chapter 333. Public Health Division. Divisions 12, 17, 18, 19 and 24. 2022. <https://secure.sos.state.or.us/oard/displayChapterRules.action?selectedChapter=89>.
- Oregon Department of Education [ODE]. (n.d.). Esser Expenditure Transparency Dashboard. Oregon Department of Education : ESSER Expenditure Transparency Dashboard : Grants and Funding Resources : State of Oregon. Retrieved March 7, 2023, from <https://www.oregon.gov/ode/schools-and-districts/grants/Pages/ESSER-Transparency.aspx>
- Oregon Health Authority [OHA]. (2017, September). Public Health Modernization. Oregon Health Authority : Public Health Modernization : Public Health Modernization : State of Oregon. Retrieved March 7, 2023, from <https://www.oregon.gov/oha/PH/ABOUT/TASKFORCE/Pages/index.aspx>
- Oregon Health Authority [OHA]. (2022). Ready Schools, Safe Learners Resiliency Framework for the 2021-22 School Year. Oregon Department of Education : 2020-21 For Students and Families : Health, Safety & Wellness : State of Oregon. Retrieved March 13, 2023, from <https://www.oregon.gov/ode/students-and-family/healthsafety/Pages/2020-21-For-Students-and-Families.aspx>
- Oregon Health Authority [OHA]. (2023, March 1). Oregon's COVID-19 Weekly Update. *Public.tableau.com*. Retrieved March 7, 2023, from <https://public.tableau.com/app/profile/oregon.health.authority.covid.19/viz/OregonCOVID-19Update/DailyDataUpdate>
- Oregon Health Authority [OHA]. (n.d.). Orpheus. Oregon Health Authority : Orpheus : Disease Reporting : State of Oregon. Retrieved March 8, 2023, from <https://www.oregon.gov/oha/ph/DISEASES/CONDITIONS/COMMUNICABLEDISEASE/REPORTING/COMMUNICABLEDISEASE/Pages/Orpheus.aspx>
- ORS Chapter 431. State and Local Administration and Enforcement of Public Health Laws. 2021 edition. https://www.oregonlegislature.gov/bills_laws/ors/ors431.html

ORS Chapter 432. Vital Statistics. 2021 edition. https://www.oregonlegislature.gov/bills_laws/ors/ors432.html

ORS Chapter 433. Disease and Condition Control; Mass Gatherings; Indoor Air. 2021 edition. https://www.oregonlegislature.gov/bills_laws/ors/ors433.html

ORS Chapter 437. Oregon Occupational Safety and Health Division. <https://osha.oregon.gov/rules/final/pages/default.aspx>

Prepare, respond and stay informed. Oregon Health Authority : Prepare, Respond and Stay Informed : Health Security, Preparedness and Response : State of Oregon. (n.d.). Retrieved March 9, 2023, from <https://www.oregon.gov/oha/PH/Preparedness/Pages/index.aspx>

Rader, B., White, L. F., Burns, M. R., Chen, J., Brilliant, J., Cohen, J., Shaman, J., Brilliant, L., Kraemer, M. U., Hawkins, J. B., Scarpino, S. V., Astley, C. M., & Brownstein, J. S. (2021). Mask-wearing and control of SARS-COV-2 transmission in the USA: A cross-sectional study. *The Lancet Digital Health*, 3(3). [https://doi.org/10.1016/s2589-7500\(20\)30293-4](https://doi.org/10.1016/s2589-7500(20)30293-4)

Siedner, M. J., Harling, G., Reynolds, Z., Gilbert, R. F., Haneuse, S., Venkataramani, A. S., & Tsai, A. C. (2020). Correction: Social distancing to slow the US covid-19 epidemic: Longitudinal pretest–posttest Comparison Group Study. *PLOS Medicine*, 17(10). <https://doi.org/10.1371/journal.pmed.1003376>

Singh, S., Shaikh, M., Hauck, K., & Miraldo, M. (2021). Impacts of introducing and lifting nonpharmaceutical interventions on COVID-19 daily growth rate and compliance in the United States. *Proceedings of the National Academy of Sciences*, 118(12). <https://doi.org/10.1073/pnas.2021359118>

Spira, B. (2022). Correlation between mask compliance and COVID-19 outcomes in Europe. *Cureus*. <https://doi.org/10.7759/cureus.24268>

Stype, A. C., Yaya, M. E., & Osika, J. (2023). Non-pharmaceutical interventions and COVID-19: Do county- and state-level policies predict the spread of COVID-19? *Journal of Economics, Race, and Policy*. <https://doi.org/10.1007/s41996-022-00112-w>

World Health Organization [WHO]. (n.d.). Who coronavirus (COVID-19) dashboard. World Health Organization. Retrieved March 7, 2023, from <https://covid19.who.int/>

Xu, J., Hussain, S., Lu, G., Zheng, K., Wei, S., Bao, W., & Zhang, L. (2020). Associations of stay-at-home order and face-masking recommendation with trends in daily new cases and deaths of laboratory-confirmed covid-19 in the United States. <https://doi.org/10.1101/2020.05.01.20088237>

Zhang, R., Wang, Y., Lv, Z., & Pei, S. (2022). Evaluating the impact of stay-at-home and quarantine measures on covid-19 spread. *BMC Infectious Diseases*, 22(1). <https://doi.org/10.1186/s12879-022-07636-4>

Appendix

- A.** Terminology
- B.** Covid-19 Executive Orders Timeline
- C.** Senate Bill 1554
- D.** Qualitative Interview Guides
- E.** Qualitative Focus Group Guides
- F.** Survey Instruments
- G.** Detailed Methods
- H.** Preliminary Survey Analysis
- I.** Detailed Limitations
- J.** Impact of Public Health Mandates on COVID-19 Case Rates + Mortality Literature Review

Appendix A: Terminology

[Appendix A: Terminology](#)

[Terminology](#)

[Acronyms](#)

[Key terms](#)

Terminology

Acronyms

AAR	After-action review
ADA	Americans with Disability Act
APD	Adults with physical disabilities
ARIAS	At Risk Identification Alerting System
ARPA	(Federal) American Rescue Plan Act
CARES	Coronavirus Aid, Relief, and Economic Security Act
CBO	Community-based organization
CCO	Coordinated care organization
CDC	Centers for Disease Control and Prevention
CDL	Comprehensive distance learning
CMS	Centers for Medicare & Medicaid Services
COSA	Coalition of School Administrators
COVID-19	Novel coronavirus disease
CPOP	Community Partner Outreach Program
EHR	Electronic health record
ELR	Electronic laboratory report
EMS	Emergency medical services
EO	Executive Order
EOP	Emergency operations plan
Epi	Epidemiology/epidemiologist

ESD	Education Service District
ESSER	Elementary and Secondary School Emergency Relief
FEMA	Federal Emergency Management Agency
FTE	Full-Time Equivalent
HIE	Health information exchange
HVAC	Heating, ventilation, and air conditioning
IEP	Individualized educational plan
IHS	Indian Health Service
IT	Information technology
LGBTQIA+	Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual +
LPHA	Local public health authority
MH	Mental health
NARA	Native American Rehabilitation Association
NPAlHB	Northwest Portland Area Indian Health Board
NPI	Non-pharmaceutical intervention
N-95	N-95 respirator mask
ODE	Oregon Department of Education
ODHS	Oregon Department of Human Services
OEA	Oregon Education Association
ODHS	Oregon Department of Human Services
OEM	Oregon Department of Emergency Management
OHA	Oregon Health Authority

OPCA	Oregon Primary Care Association
Opera	Oregon Pandemic Emergency Response Application
Orpheus	Oregon Public Health Epidemiologists' User System
ORS	Oregon Revised Statutes
OR-OSHA	Occupational Safety and Health Administration
PCR	polymerase chain reaction
PH	Public health
PHAB	Public Health Advisory Board
POF	Protecting Oregon Farmworkers
PPE	Personal protective equipment
QR code	Quick-response code
REALD	Race, ethnicity, language or disability
RSSL	Ready Schools, Safe Learners Resiliency Framework
SB 1554	Senate bill 1554
SD	School district
SHA	School Health Assistants
SOGI	Sexual orientation or gender identity
SOP	Standard Operating Procedure
SUD	Substance use disorder
TA	Technical assistance

Key terms

Community Partner Outreach Program: CPOP is a training, outreach, and grant program run by the Oregon Health Authority. CPOP works to build and strengthen community and agency partnerships to better serve vulnerable and hard-to-reach populations.

Emergency management: For the purposes of this study emergency management includes Oregon state, county, city, and tribal offices that are responsible for the mitigation, preparation for, response to, and recovery from emergencies and natural disasters, acts of terrorism, or other man-made disasters.

Health Care Associations: A health care association is an organization with members who work in or share an interest in health care. Members of health care associations will often meet regularly to discuss upcoming news in their field or will host events for other members to meet and network.

Opera, Orpheus, ARIAS: Opera, Orpheus and ARIAS are commonly used databases for COVID-19 data in Oregon. Local and state public health epidemiologists used Oregon Public Health Epidemiology User System (Orpheus) to collect and report local case data. Oregon Pandemic Emergency Response Application (Opera) is a COVID-19 specific module within Orpheus. ARIAS is a platform used by OHA, counties, and some tribes to record contact-tracing related data.

Protecting Oregon Farmworkers Program (POF): Protecting Oregon Farmworkers is a program created to support migrant and seasonal farmworkers in Oregon during the COVID-19 pandemic. POF supports community partner organizations by providing COVID-19-related outreach and education.

Ready Schools, Safe Learners Resiliency Framework: An advisory framework created for schools by the Oregon Department of Education and Oregon Health Authority for safe reopening of schools.

Secondary data: Finding existing data from administrative datasets, public records, grant funding, etc. as opposed to interviews and surveys conducted by the study team.

State Agency(ies): When capitalized, refers to non-OHA state agency study participants. OHA study participants are referenced as OHA Staff and Managers, OHA Staff, OHA Manager, or OHA Director(s).

Study team: For Report 2, this includes Rede Group staff, Dr. Kara Skelton and Vashti Boyce.

Study participant: General term for anyone who responded to a survey, was interviewed, or participated in a focus group.

Tribal Nations: For the purposes of this study, refers to study participants from Oregon's Federally Recognized Tribes.

Tribal organizations: This refers to community based or non-profit organizations that primarily serve tribal members, including urban American Indians/Alaska Natives, and excludes Oregon's nine Federally Recognized Tribes that are referred to as Tribal Nations in this report.

Appendix B: COVID-19 Executive Orders Timeline

Overview

Table 1 below is a table created by the study team to organize all executive orders enacted by Governor Kate Brown in response to the COVID-19 pandemic. The first three columns containing the executive order number, date, and title are all directly copied from the Governor's Office [website](#). Each executive order is hyperlinked in the first column so that the full text may be reviewed. The last two columns, Population affected and Required Action, were created by the study team for analysis. These executive orders, in consultation with OHA, were used to craft the four stages of the pandemic that the study team used for data collection and analysis. The study team elected to only include executive orders that related to the public health system defined in this report.

Table 1. Oregon executive orders in response to the COVID-19 pandemic from March 2020 - March 2022

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO 20-03	3/8/2020	Declaration of Emergency Due to Coronavirus (COVID-19) Outbreak in Oregon	Oregonians	Declaration of Public Health Emergency - State level agencies including the OHA Public Health Director, Governor's Coronavirus Response Team, State Emergency Coordination Center, OEM, and all other state government is tasked with coordinating with each other, providing guidance, deploying emergency health care professionals, and creating guidance.
EO 20-05	3/12/2020	Prohibiting Large Gatherings Due to Coronavirus (COVID-19) Outbreak in Oregon	Oregonians	Prohibit social, spiritual, and recreational gatherings of 250 people or more. Schools, some workplaces, and stores are exempt if they maintain 3 feet of social distancing.

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_20-06	3/17/2020	Declaration of Abnormal Disruption of the Market due to COVID-19	Oregonians	Governor - declaration of abnormal disruption to the market. Residents - report unlawful trade practices such as excessive prices to the Dept of Justice.
EO_20-07	3/17/2020	Prohibiting on-premises consumption of food or drink and gatherings of more than 25 people	Food and Drink Establishments; Oregonians	Food and drink establishments can no longer allow patrons to consume food and drink on the premises, but they can offer take-out and delivery. Allowed gatherings are reduced from 250 people or less to 25 people or less.
EO_20-08	3/17/2020	School closures and the provision of school-based and child care services in response to Coronavirus (COVID-19) outbreak	Schools; Oregonians with children in the K-12 school system	Closure of K-12 public schools; direction to state agencies and Early Learning Center to coordinate and ensure funds are distributed for schools and childcare providers. Some requirements outlined for public schools, including the continuation of school-based meals and supplementary learning (homework).
EO_20-09	3/19/2020	Suspension of in-person instructional activities at higher education institutions in response to Coronavirus (COVID-19) outbreak	Colleges and universities; Oregonian, out-of-state, and international students.	Colleges and universities must limit on-campus activities to critical function and take instruction online.

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_20-10	3/19/2020	Conserving personal protective equipment and hospital beds, protecting health care workers, postponing non-urgent health care procedures, and restricting visitation in response to Coronavirus (COVID-19) outbreak	All patients and potential patients in Oregon	Cancel and postpone all elective procedures that use essential PPE (ex. Masks, gowns, beds, ventilators, cleaning supplies) with some exemptions for life-saving procedures. Limit all non-essential visitation at hospitals and other healthcare facilities. Screen all visitors to health care facilities.
EO_20-11	3/22/2020	Temporary moratorium on residential evictions for nonpayment, in response to Coronavirus (COVID-19) outbreak	Renters and Homeowners	Law enforcement is prohibited from responding to terminations of tenancy due to nonpayment.
EO_20-12	3/23/2020	Stay Home, Save Lives: Ordering Oregonians to stay at home, closing specified retail businesses, requiring social distancing measures for other public and private facilities, and imposing requirements for outdoor areas and licensed childcare facilities	Residents of Oregon; businesses; workplaces; government buildings; childcare facilities; outdoor recreation and travel	Individuals must stay home as much as possible. When outside of the home, individuals must maintain 6 feet of distance, even outside. All gatherings are prohibited where 6 feet of social distancing cannot be maintained. All businesses closed to on-site traffic, but food and drink establishments can continue to offer take-out/delivery. Exemptions given to businesses providing food, grocery, health care, medical, pharmacy, or pet store services. All businesses must

Executive Order (EO) #	Date	Title	Population Affected	Required Action
				comply with social distancing guidelines. Work in offices is prohibited if telework is available. Everyone in office must comply with social distancing guidelines. All licensed childcare facilities must close unless they can have the same group of kids each day and that group is made of 10 or fewer children. Facilities must prioritize the needs of first responders, emergency workers, and health care professionals. All public and private campgrounds are closed. Parks and Rec must close any areas where social distancing cannot be maintained. Individuals are directed to limit travel to essential needs.
EO 20-13	4/1/2020	Temporary Moratorium on Certain Evictions and Terminations of Rental Agreements and Leases, in Response to Coronavirus (COVID-19) Outbreak	Renters, landlords	Landlords of residential and non-residential properties are prohibited from terminating a lease and/or taking any action relating to eviction, including filing, serving, delivering, or acting on any notice of termination of tenancy due to nonpayment. (nonresidential properties include hotels and health buildings)
EO 20-14	4/7/2020	Extending the duration of executive order no. 20-07 (prohibiting on-premises consumption of food or drink)	Food and Drink Establishments; Oregonians	Extension of EO_20-07: prohibition of on-site consumption of food and drink, effective until terminated by the governor.

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_20-15	4/7/2020	Extending the duration of executive order no. 20-06 (declaration of abnormal disruption to the market due to COVID-19)	Oregonians	Extension of EO_20-06: declaration of abnormal disruption to the market, effective until terminated by the governor.
EO_20-16	4/15/2020	Keep Government Working: Ordering necessary measures to ensure safe public meetings and continued operations by local governments during Coronavirus (COVID-19) outbreak	Government officials; Oregonians	Participation in government and public meetings is considered essential. Wherever possible, public meetings must be held over phone/internet. When held in person, 6 feet of social distancing must be maintained. Outlines some specific exemptions to existing rules (pre-executive order) about required in-person meetings that can now be online.
EO_20-17	4/17/2020	Extending executive order no. 20-09 (suspension of in-person instructional activities at higher education institutions)	Colleges and universities; Oregonian, out-of-state, and international students.	Extension of EO_20-09: Colleges and universities are prohibited from conducting non-essential in-person instruction and activities through June 13, 2020.
EO_20-18	4/17/2020	Protecting CARES Act recovery rebate payments from garnishments, so those funds can be used for essential needs	Oregonians	Issues necessary directives to prohibit the garnishment of CARES Act Recovery Rebates, except in certain cases (criminal).

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_20-19	4/23/2020	Extending directives regarding closure of licensed childcare facilities, in response to Coronavirus (COVID-19) outbreak	Childcare facilities; families; Early Learning Division (ELD)	All childcare facilities who are not approved by ODE to remain open as emergency childcare facilities, must remain closed. ELD is directed to provide further guidance.
EO_20-20	4/23/2020	Continued suspension of in-person K-12 instructional activities and the provision of school-based services in response to Coronavirus (COVID-19) outbreak	K-12 schools; students and families	Schools must stay in session remotely. They can still receive State School Funds if they follow requirements outlined in paragraph 4 (continuation of educational services).
EO_20-22	4/27/2020	Allowing measured resumption of non-urgent health care procedures using personal protective equipment, and continuing restrictions on visitation in response to Coronavirus (COVID-19) outbreaks	Patients; healthcare providers	Elective and non-urgent procedures may resume only if they comply with administrative rules and guidance by OHA. OHA is directed to provide such guidance. OHA must also provide guidance on any updates/continuation of prohibition of non-essential visitors in healthcare facilities. Rescinds EO_20-10 (conserving PPE).
EO_20-24	06/06/2020	Extending the COVID-19 declaration of emergency (executive order no. 20-03) for an additional 60 days, through July 6, 2020	Oregonians	Extension of EO_20-03: declaration of state of emergency for an additional 60 days, through July 6, 2020.

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_20-25	05/14/2020	A Safe and Strong Oregon: Maintaining essential health directives in response to COVID-19, and implementing a phased approach for reopening Oregon's economy	Oregonians; Oregon businesses and workplaces; government buildings	Baseline requirements for Oregonians and Oregon businesses to adhere to. Establishes requirements for phased reopening of Oregon.
EO_20-27	06/05/2020	A Safe and Strong Oregon (Phase II): Maintaining essential health directives in response to COVID-19, and continuing to implement a phased approach for reopening	Oregonians; Oregon businesses and workplaces; government buildings	Phased reopening, rescinds and replaces previous EO 20-25. Outlines requirements to enter Phases II + III of reopening, EO 20-25 outlined requirements to enter Phase I reopening.
EO_20-28	06/12/2020	Operation of higher education institutions during Coronavirus pandemic	Higher education institutions	In person restrictions: in person only if minimum standards are followed (face coverings, physical distancing, sanitizations, monitoring, isolations procedures. By 9/1/2020 institutions are required to have a written plan with internal enforcement and complaint process, and comply w/other EOs.

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_20-29	06/24/2020	Ready Schools, Safe Learners: K-12 instructional activities and the provision of school-based services during 2020-2021 academic year in the face of the ongoing Coronavirus (COVID-19) outbreak	K-12 schools	In person restrictions: in person instruction if complies with guidance published by OHA and ODE. Develop a written plan by 8/15/2020 or start of 2020/2021 school year to comply with guidance, provide continuity of ed services, ODE and Oregon State Board of Education and the Teachers Standards and Practices Commission promulgate necessary rules, OHA/ODE/other state agency enforce rules.
EO_20-30	06/30/2020	Second extension of executive order 20-03 and COVID-19 state of emergency; rescinding executive order 20-13 and executive order 20-18	Oregonians; Oregon renters	Extension of state of emergency for 60 days until 9/4/20. Declaring revaluation (by Governor) or EOs every 60 days. Temporary evictions moratorium (EO 20-13) rescinded. Rescindment of EO-20-18.
EO_20-37	12/31/2020	Extending House Bill 4204's mortgage foreclosure moratorium until December 31, 2020	Oregonian homeowners with a mortgage	Extension of mortgage foreclosure moratorium "emergency period".
EO_20-38	09/01/2020	Third extension of executive order 20-03 and COVID-19 state of emergency; rescinding executive order 20-16	Oregonians; Oregon renters	Extension for state of emergency for 60 days until 10/3/20. Rescinding EO 20-16 (public meetings and local government operations) because it is now HB 4212.

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_20-56	09/28/2020	Third extension of executive order 20-03 and COVID-19 state of emergency; rescinding executive order 20-16	Oregonians; Oregon renters	Temporary eviction moratorium period (9/30-12/31/2020); landlords cannot deliver a termination notice without cause or for rental nonpayment.
EO_20-58	10/23/2020	Enhanced health and safety requirements for certain employer-provided housing during agricultural off-season in response to Coronavirus (COVID-19) outbreak	Temporary work housing or employer-provided housing occupants and housing operators in Oregon	Housing operators to ID appropriate physical distance and sanitation in housing. Housing operator to plan and implement activities, including: appropriate # of toilets in home or portable toilets, appropriate # and spacing of beds, cleaning housing between occupants, providing cleaning materials at no cost to occupants. If a resident contracts COVID, the operator must implement policies and procedures to ID and isolate sick occupants.
EO_20-65	11/17/2020	Temporary freeze to address surge in COVID-19 cases in Oregon	All Oregonians and businesses.	Freeze period to slow COVID surge. Home gatherings limited to 6 people , faith institutions + funerals limited to max 25 indoors, 50 outdoors. No indoor dining. Following was prohibited: gyms/fitness centers, indoor rec activities, museums, indoor/outdoor events, zoos, gardens, aquariums, outdoor entertainment activities, indoor pools, sports, athletic activities. Grocery stores, retail, farmers markets, indoor/outdoor malls, state agency operations limited to 75%

Executive Order (EO) #	Date	Title	Population Affected	Required Action
				capacity. Businesses facilitate telework.
EO 21-05	02/25/2021	Sixth extension of executive order 20-03 and COVID-19 state of emergency	Oregonians	Extension of state emergency for additional 60 days, though May 2 2021.
EO 21-06	03/21/2021	Ordering public schools to offer fully on-site or hybrid in-person instruction, requiring all schools to continue to comply with health and safety protocols to control COVID-19	K-12 schools	EO 20-29 rescinded, replaced with this EO. All learning institutions must deliver services through a hybrid instructional model (by 3/29/21). OHA and ODE continue to publish guidance on conduct of in person activities. Public and private schools can offer distance learning for the remainder of 2021 school years.
EO 21-10	04/29/2021	Seventh extension of executive order 20-03 and COVID-19 state of emergency	Oregonians	Extension of the state of emergency for additional 60 days, though June 28, 2021. EOs 20-06 and 20-15 abnormal market disruptions' rescinded, EO 20-58 allowed to expire on 4/30/31,
EO 21-14	06/11/2021	Extending House Bill 2009's mortgage foreclosure moratorium until September 30, 2021	Oregonians; mortgage holders	Extension of mortgage foreclosure moratorium's emergency period provisions under HB 2009 until 9/30/21
EO 21-15	06/25/2021	Rescinding all remaining COVID-19 restrictions; continuing state efforts to support ongoing COVID-19	Oregonians	Rescission of all remaining pandemic EO's: EO 20-66 (county risk framework), EO 20-22 (non-urgent healthcare procedures), EO 21-06 (k-12 schools), EO 20-28 (Higher Education), EO 20-19 (Childcare

Executive Order (EO) #	Date	Title	Population Affected	Required Action
		vaccination, response, and recovery efforts		facilities). Extension of OR 20-03 (state of emergency) until 12/31/21
EO_21-29	08/13/2021	COVID-19 vaccination requirement for state executive branch	Oregon executive branch employees	On or before 10/18/21 employees must provide a proof of vaccination or written request for an exception.
EO_21-30	08/16/2021	Extending House Bill 2009's mortgage foreclosure moratorium until December 31, 2021	Oregonians; mortgage holders	Extension of mortgage foreclosure moratorium's emergency period provisions under HB 2009 until 12/31/21
EO_21-31	09/01/2021	Extending emergency regulatory flexibility for childcare licensing; amending executive order 21-15	Oregonians utilizing childcare, and childcare providers	Amending part of EO 21-15, extending EO 21-15 through 12/31/21. Amending including additional flexibility for unlicensed childcare services.
EO_21-36	12/21/2021	Continuing state efforts to support ongoing COVID-19 vaccination, response, and recovery efforts; extending executive order 20-03; rescinding executive order 21-15 and executive order 21-31	Oregonians, oregonians utilizing childcare, and childcare providers	EO 20-03 (state of emergency) extended until 6/30/22, rescission of EO 21-15 (Rescinding all COVID-19 restrictions) and EO 21-31 (flexibility for childcare)

Executive Order (EO) #	Date	Title	Population Affected	Required Action
EO_22-03	03/17/2022	Terminating COVID-19 state of emergency; rescinding executive order 20-03, executive order 21-29, and executive order 21-36	Oregonians; Executive Branch employees	Rescission of EO 20-03 (state of emergency), EO 21-36, and EO 21-29 (COVID vaccine requirement for Executive Branch employees)

Enrolled

Senate Bill 1554

Sponsored by Senator STEINER HAYWARD, Representatives REYNOLDS, HAYDEN, Senator PATTERSON, Representative DEXTER; Senators GELSER BLOUIN, SOLLMAN, Representatives ALONSO LEON, CAMPOS, EVANS, GRAYBER, HIEB, HOLVEY, MARSH, MOORE-GREEN, NELSON, PRUSAK, REARDON, SALINAS, SCHOUTEN (Presession filed.)

CHAPTER

AN ACT

Relating to public health preparedness; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. (1) The Oregon Health Authority shall study the state's public health response to the COVID-19 pandemic and prepare the reports described in this section.

(2) At a minimum, the study shall initially:

(a) Focus on the public health system, including federal, state and local resources and how funding was coordinated between the state, counties and local governments and community organizations;

(b) Identify efficiencies and deficiencies in the public health system response, areas for improvement and needed investment;

(c) Consider emergency management coordination with the public health system, including distribution of personal protective equipment, where vaccines and testing were provided and isolation and quarantine best practices and guidance;

(d) Analyze the enforcement of public health requirements by the state, local governments and schools;

(e) Examine the efficacy of enforcement of pandemic control evidence-based practices, including any statewide public health mandates, at the county and local levels;

(f) Examine outcomes related to public health modernization implementation, including the roles that public-private partnerships played and any challenges posed by the current intersection of state and county public health systems;

(g) Compare the health equity outcomes related to the COVID-19 pandemic response, including second-hand health disparities resulting from the increased strain on hospitals, health systems and resources;

(h) Engage in a qualitative, in-depth analysis of utilization of resources, differing regulations and enforcement of evidence-based pandemic control practices across this state; and

(i) Assess messaging in general, including whether best practices in public health communication were used during the COVID-19 pandemic.

(3)(a) The authority shall prepare a report that, in addition to information regarding the topics described in subsection (2) of this section, includes at least:

(A) A broad review of the COVID-19 pandemic;

(B) Identification of areas in the public health system COVID-19 response that need improvement;

(C) Recommendations to improve the public health system COVID-19 response;

(D) A summary of key lessons learned; and

(E) Recommendations for improving:

(i) Public health system resiliency; and

(ii) Other deficiencies identified in the study.

(b) The authority shall submit, in the manner provided in ORS 192.245, the report described in paragraph (a) of this subsection to an interim committee of the Legislative Assembly related to public health not later than November 15, 2022.

(4) In addition to the study described in subsection (2) of this section, the authority shall perform a study to:

(a) Identify any local epidemiological data and capacity issues, including those that affected the reporting of data to statewide data systems;

(b) Clarify the roles of hospitals, long-term care facilities and local public health programs in response coordination;

(c) Compare health and health system data, including COVID-19 positivity rates, rates of COVID-19 infection, hospital capacity and other core metrics, with the efficacy of statewide public health mandate enforcement; and

(d) Investigate specific public health workforce challenges.

(5)(a) The authority shall prepare a report that, in addition to information regarding the topics described in subsection (4) of this section, includes at least:

(A) An in-depth report of nongovernmental and community partner contributions to the COVID-19 response; and

(B) Recommendations for improving specific public health workforce challenges.

(b) The authority shall submit, in the manner provided in ORS 192.245, the report described in paragraph (a) of this subsection to an interim committee of the Legislative Assembly related to public health not later than April 1, 2023.

(6) The authority shall submit, in the manner provided in ORS 192.245, a report that includes a final evaluation and synthesis of the topics described in subsections (2) and (4) of this section and a final analysis, including the findings and recommendations described in subsections (3) and (5) of this section, to an interim committee of the Legislative Assembly related to public health not later than September 1, 2023.

(7) In order to perform the studies described in subsections (2) and (4) of this section and prepare the reports described in subsections (3), (5) and (6) of this section, the authority shall contract with an independent third-party consultant with experience in performing public health after-action studies and preparing reports. The consultant shall perform the studies in partnership with urban, rural, frontier, small and large counties in this state, and shall perform all assessments as a neutral party.

SECTION 2. Section 1 of this 2022 Act is repealed on April 1, 2024.

SECTION 3. Notwithstanding any other provision of law, the General Fund appropriation made to the Oregon Health Authority by section 1 (1), chapter 668, Oregon Laws 2021, for the biennium ending June 30, 2023, for health systems, health policy and analytics, and public health, is increased by \$899,573 for the purpose of carrying out section 1 of this 2022 Act.

SECTION 4. This 2022 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2022 Act takes effect on its passage.

Passed by Senate February 28, 2022

.....
Lori L. Bocker, Secretary of Senate

.....
Peter Courtney, President of Senate

Passed by House March 3, 2022

.....
Dan Rayfield, Speaker of House

Received by Governor:

.....M.,....., 2022

Approved:

.....M.,....., 2022

.....
Kate Brown, Governor

Filed in Office of Secretary of State:

.....M.,....., 2022

.....
Shemia Fagan, Secretary of State

Appendix D: Qualitative Interview Guides

[Education Service District + School District Superintendents](#)

[Health Care Associations](#)

[Labor Unions](#)

[Tribal Organizations](#)

Education Service District + School District Superintendents

Roles, responsibilities, decision making

1. I would like to start by asking you to state your current role at [insert school system name for superintendents or ESD name] and describe how you were involved in the COVID-19 public health system response.

Overall public health response

Next, I would like you to think about your school district's response across the different stages.

2. As we stated earlier, the goal of this study is to assess Oregon's public health system response to the COVID-19 pandemic. In general, the public health response was focused on reducing the spread of Covid-19. Can you tell us how your school district was involved with the public health response?
3. For each stage, can you walk us through one aspect of the response that your school district performed well and another aspect of the response that did not work as well?
 - a. PROMPT for walking interviewee through each stage and extracting one efficiency and one deficiency.

Funding:

4. What were sources of COVID-19 funding for your school district and how were these funds linked to the public health response in your community?
5. What, if anything, stands out for you about the processes for receiving and distributing COVID-19 specific funding?
 - a. Probes: mechanisms for determining funding and program elements, timelines for making funds available, disbursements, budget/reporting requirements, and flexibility within funding streams
 - b. Probe for what worked well and areas of improvement

Public health response system collaboration and coordination

Now, we are going to discuss collaboration within the public health system response.

6. Please describe how your school district coordinated and collaborated with partners throughout the pandemic, including who your partners were, and what worked well and didn't work well?
 - a. PROBE for partnerships with:
 - i. OHA
 - ii. ODE
 - iii. ESD/School Districts
 - iv. County health department/public health
 - v. CBOs

Emergency management

Now, we would like to explore a little about emergency management coordination within the public health system, including distribution of PPE, where vaccines and testing were provided, and isolation and quarantine guidance.

7. In what ways did state and local emergency response coordinate with your school community related to:
 - a. Personal protective equipment distribution?
 - b. On-site testing? (at individual schools or at a district, central, or regional site)
 - c. Contact tracing?
 - d. Vaccine distribution?
 - e. Public information dissemination?
8. How did your district take into consideration different students' and families' needs with respect to emergency management coordination?
 - a. Were racial/ethnicity, age, income, sexual and gender minorities, people with disabilities, etc. taken into consideration?.
9. What worked well in Covid-19 emergency management coordination with your district?
10. What are some lessons learned for coordination with emergency management?

Enforcement of public health measures

Now we are going to move into a series of questions about enforcement of public health measures to reduce exposure and transmission of COVID-19.

11. During the pandemic there were statewide public health mandates that applied in schools, in general can you tell me about your experience with those statewide mandates?
 - a. What were the greatest challenges your district faced related to implementing or enforcing public health protections?
 - b. Probe for:
 - i. Students
 - ii. Teachers, other staff members
 - c. In the future, what ways could state and local policy making be improved to support adherence to statewide mandates and requirements in schools?
 - d. What are additional measures that could have prevented the spread in your school?
 - e. How could the school and local public health systems better coordinate in a future public health response? How could they better partner? In what ways could state and local communications be improved to increase adherence to statewide mandates and requirements?

Epidemiological data:

The next question is focused on the use of COVID-19 data to inform decision making.

12. How did your district use epidemiological data or databases to support COVID-19 response?
 - a. Probe: What support(s) from outside entities did your district receive for finding, accessing, or using epidemiological data for COVID response in your community?

Wrap up

That is all the prepared questions we have for you.

13. We had challenges getting interviews with other ESDs/superintendents. We understand this is not necessarily a good time to be working with schools. Other

than timing, what recommendations do you have for recruiting superintendents for these interviews?

14. We also hope to survey school leadership; what recommendations do you have for getting surveys returned from superintendents, ESDs, and school principals?

15. Do you have any additional thoughts or recommendations you'd like to share about the public health system response to the COVID-19 pandemic?

Health Care Associations

We recognize that the public health system response likely shifted across the span of the COVID-19 pandemic. For the purposes of this interview, we are going to be talking about the COVID-19 pandemic in stages.

< SCREEN SHARE [chronological stages graphic](#), walk through stages. Leave graphic up as screen share during full interview, share pdf in chat if requested by interviewee >

COVID-19 Chronological Stages:

Stage 1 - *March 2020 - November 2020*: outbreak, disease investigation, implementing public health protections (masking, distancing, shutdowns), preparing for vaccination

Stage 2 - *December 2020 - August 2021*: vaccination, disease investigation, enforcing public health protections, and partial reopening

Stage 3 - *September 2021 - February 2022*: vaccinations, reopening and dealing with variants

Stage 4 - *March 2022 - Present June 2022*: total reopening, no public health protections, and changes in investigative guidelines

We will be referencing these stages during our conversation today. When answering a question, you do not need to worry so much about the exact months but rather, use these stages as a general guideline to reference responses in different periods. In addition, when answering questions here today, please only discuss the stages when you were at the [organization name] and working on the pandemic response.

Introductions

1. Let's start with your name(s) and current role or job title(s) in [organization name].

Overall public health response

Today we will focus this interview on the public health response, this means... use our def. Systems level approach involving government, private industry, and non-profit organizations to slow the transmission of COVID-19. Public health responses may also

include activities to address social determinants of health such as housing and food insecurity but for the most part we are focused on slowing the spread of COVID-19.

Roles, responsibilities, decision making

2. In what ways, if any, is your organization *typically* involved in public health emergency response efforts (not including COVID-19)?
3. Can you briefly describe how you were/are involved in the COVID-19 public health system response.
4. For each stage, can you walk me through the areas of focus you were involved in personally?
 - a. PROMPT for walking interviewee through each stage to elicit explanation of their key activities in that stage.
 - b. In what ways did you provide support to your membership to respond to the COVID-19 pandemic during each stage?

Public health response system collaboration and coordination

Now, we are going to discuss collaboration within the public health system response.

5. Please describe how your organization coordinated and collaborated with partners for public health response throughout the pandemic, including who your partners were, and what worked well and didn't work well?
 - a. PROBE for partnerships with:
 - i. Oregon Health Authority
 - ii. Local public health authorities
 - iii. Tribes
 - iv. Office of Emergency Management
 - v. Hospitals/health systems
 - vi. Long-term care facilities
 - vii. Schools
 - viii. CBOS
 - ix. Businesses

Overall response

6. Overall, what was your agency's greatest challenge during responding to the pandemic?
7. Overall, what was your agency's greatest contribution to the pandemic response?
8. From your experience, were there aspects of the pandemic response that were handled well by the Oregon Health Authority?
9. From your experience, were there aspects of the pandemic response that were handled poorly by the Oregon Health Authority?
10. How do you think lessons learned from Oregon's public health system response to COVID-19 can inform future response to public health emergencies?

Wrap up

Those are all the prepared questions we have for you.

11. What, if any, additional thoughts or comments, or recommendations would you like to share about the public health system's response to the COVID-19 pandemic?

Labor Unions

Roles, responsibilities, decision making

1. I would like to start by asking you (or both of you) to state your organization and position and describe your organization was involved in the COVID-19 public health system response.

We recognize that the public health system response likely shifted across the span of the COVID-19 pandemic. For the purposes of this interview, we are going to be talking about the COVID-19 pandemic in stages.

< SCREEN SHARE chronological stages graphic, walk through stages. Leave graphic up as screen share during full interview, share pdf in chat if requested by interviewee >

COVID-19 Chronological Stages:

Stage 1 - *March 2020 - November 2020*: outbreak, disease investigation, implementing public health protections (masking, distancing, shutdowns), preparing for vaccination

Stage 2 - *December 2020 - August 2021*: vaccination, disease investigation, enforcing public health protections, and partial reopening

Stage 3 - *September 2021 - February 2022*: vaccinations, reopening and dealing with variants

Stage 4 - *March 2022 - Present June 2022*: total reopening, no public health protections, and changes in investigative guidelines

We will be referencing these stages during our conversation today. When answering a question, you do not need to worry so much about the exact months but rather, use these stages as a general guideline to reference responses in different periods. In addition, when answering questions here today, please only discuss the stages when you were at the [organization name] and working on the pandemic response.

2. Looking at the COVID-19 stages, how has your role changed throughout the COVID-19 pandemic?

Overall public health response

Next, I would like you to think about your organization's response across the different stages.

3. As we stated earlier, the goal of this study is to assess Oregon's public health system response to the COVID-19 pandemic. In general, the public health response was focused on reducing the spread of Covid-19. Can you tell us how your organization was involved with the public health response?
 - a. In what ways did you provide support to your membership to respond to the COVID-19 pandemic?
4. For each stage, can you walk us through one aspect of the response that your organization performed well and another aspect of the response that did not work as well?
 - a. PROMPT for walking interviewee through each stage and extracting one efficiency and one deficiency.

Public health response system collaboration and coordination

Now, we are going to discuss collaboration within the public health system response.

5. Please describe how your organization coordinated and collaborated with partners throughout the pandemic, including who your partners were, and what worked well and didn't work well?
 - a. PROBE for partnerships with:
 - i. OHA
 - ii. ODE
 - iii. Other labor unions
 - iv. OrOHSA
 - v. ESDs
 - vi. School Districts
 - vii. (County health department/public health
 - viii. CBOs

Emergency management

Now, we would like to explore a little about emergency management coordination within the public health system, including distribution of PPE, where vaccines and testing were provided, and isolation and quarantine guidance.

6. In what ways, if any, was your agency involved in the distribution of personal protective equipment?
 - a. Can you describe any barriers or challenges you encountered in operationalizing PPE distribution?
 - b. Can you describe things that went well with PPE distribution?
7. In what ways, if any, was your agency involved in supporting vaccination efforts during stages 2-4?
 - a. What worked well?
 - b. What could be improved?
8. From your perspective, what statewide improvements in emergency management could be made?

Enforcement of public health measures

Now we are going to move into a series of questions about enforcement of public health measures to reduce exposure and transmission of COVID-19.

9. What were the greatest challenges your organization faced related to implementing or enforcing public health protections?
10. What were the greatest challenges your members faced related to implementing or enforcing public health protections?
11. In the future, what ways could state and local policy making be improved to support adherence to statewide mandates and requirements in schools?
12. How could the school and local public health systems better coordinate in a future public health response? How could they better partner? In what ways could state and local communications be improved to increase adherence to statewide mandates and requirements?

Wrap up

Those are all the prepared questions we have for you.

13. Do you have any additional thoughts or recommendations you'd like to share about the public health system response to the COVID-19 pandemic?

Tribal Organizations

We recognize that the public health system response likely shifted across the span of the COVID-19 pandemic. For the purposes of this interview, we are going to be talking about the COVID-19 pandemic in stages.

< SCREEN SHARE [chronological stages graphic](#), walk through stages. Leave graphic up as screen share during full interview, share pdf in chat if requested by interviewee >

COVID-19 Chronological Stages:

Stage 1 - *March 2020 - November 2020*: outbreak, disease investigation, implementing public health protections (masking, distancing, shutdowns), preparing for vaccination

Stage 2 - *December 2020 - August 2021*: vaccination, disease investigation, enforcing public health protections, and partial reopening

Stage 3 - *September 2021 - February 2022*: vaccinations, reopening and dealing with variants

Stage 4 - *March 2022 - Present June 2022*: total reopening, no public health protections, and changes in investigative guidelines

We will be referencing these stages during our conversation today. When answering a question, you do not need to worry so much about the exact months but rather, use these stages as a general guideline to reference responses in different periods. In addition, when answering questions here today, please only discuss the stages when you were at the [organization name] and working on the pandemic response.

Roles, responsibilities, decision making

1. Can you please state your current role and describe how you were involved in the COVID-19 public health system response, including how your role changed throughout the COVID-19 pandemic?
 - a. PROBE for
 - i. Key responsibilities in addition to job titles
 - ii. Date (or stage) for which they started at their role

Overall public health response

Next, I would like you to think about your organization's public health response across different stages of the pandemic.

2. As we stated earlier, the goal of this study is to assess Oregon's public health system response to the COVID-19 pandemic. How would you define "public health system response"?
 - a. Probe: What are key elements of Oregon's public health system response?
 - b. Can you describe the role of Tribes in Oregon's public health response?
3. For each stage, can you walk us through one aspect of the response that your organization performed well and another aspect of the response that did not work as well?

Funding

Now, we are going to discuss pandemic-specific funding to Oregon Tribes and use of funds.

4. What were sources of COVID-19 funding for the Oregon Tribes and how were these funds linked to the public health response in Tribal Nations?
 - a. Probe for how this funding helped to fill pandemic response gaps
5. What, if anything, stands out for you about the processes for receiving and distributing COVID-19 specific funding?
 - a. Probes: mechanisms for determining funding formulas and program elements, timelines for making funds available, disbursements, budget/reporting requirements, and flexibility within funding streams
 - b. Probe for what worked well and areas of improvement
6. For each stage, can you walk me through the main bodies of work you were involved in personally?
 - a. PROMPT for walking interviewee through each stage to elicit explanation of their key activities in that stage
7. Looking back at each of these stages is there anything that stands out to you as an area DOJ could have handled differently to bring about a better outcome?

8. Looking back at each of these stages is there anything that stands out to you as something that other sectors within the public health system could have handled differently to bring about a better outcome?
9. Are there one or two things you absolutely would do the same?

Emergency management

The next few questions are about emergency management coordination within the public health system, including distribution of PPE, where vaccines and testing were provided, and isolation and quarantine guidance.

10. How did your organization coordinate with Tribal, state, and local emergency response systems relating to:
 - a. Personal protective equipment distribution?
 - b. Vaccine distribution and testing?
 - c. Getting COVID-19 information to the community?
11. How were the needs of Tribal communities taken into consideration for PPE distribution, vaccine distribution and testing, and getting COVID-19 information to Tribes?
12. What statewide improvements in emergency management could be made to better support and prepare Oregon's public health response in Tribal Nations?

Enforcement of public health measures

Now we are going to move into a series of questions about the enforcement of public health requirements in response to COVID-19.

13. How was your organization involved in the enforcement of public health requirements to reduce the transmission of COVID-19?
14. In regards to implementing and enforcing public health protections, what would you say was the biggest success of your organization? Biggest challenge?

Communications and messaging

Next I'd like to turn to the topic of public health communication during the COVID-19 pandemic.

15. In what ways did COVID-19 related communication and messaging work or not work?
- a. Probe for community needs, response gaps, culturally-specific media
 - b. Probe for
 - i. communication about mandates
 - ii. vaccine-specific communication
 - iii. Local requirements

Epidemiological data

The next question is focused on data.

16. How did your organization use epidemiological data or databases to support COVID response?
- a. Probe: How did IHS support Oregon Tribes in accessing or using COVID-19 data?

Public health response system collaboration and coordination

Now, we are going to discuss collaboration within the public health system response.

17. Please describe how your organization coordinated and collaborated with partners throughout the pandemic, including who your partners were, and what worked well and didn't work well?

Overall response

Now, we are going to discuss collaboration within the public health system response.

18. Can you describe one or two public health system response decisions you had to make that were particularly difficult?
19. Overall, what was your organization's greatest challenge during responding to the pandemic?
20. How do you think lessons learned from Oregon's public health system response to COVID-19 can inform future response to public health emergencies at a local level?

Wrap up

Those are all the prepared questions we have for you.

21. Do you have any additional thoughts or recommendations you'd like to share about the public health system's response to the COVID-19 pandemic?

Appendix E: Qualitative Focus Group Guides

[Appendix E: Qualitative Focus Group Guides](#)

[Local Public Health Authority Group Interviews](#)

[Principals](#)

[School Nurses](#)

Local Public Health Authority Group Interviews

1. Discussion topic: specific public health workforce challenges
 - a. What were the most significant challenges to recruiting, onboarding, and retaining public health staff during the pandemic?
 - b. What were the skill sets that were hardest to recruit for?
 - c. What were some best or promising practices you employed to recruit, onboard and retain staff during this period?
2. Discussion topic: Partnering with CBOs
 - a. We would like to know if any of you worked directly with CBOs on COVID-19 response? Please chat in yes, if you have have.
 - b. For those who did, what are the lessons learned from the LPHA and CBO partnerships that should be applied in the future?

Principals

1. To start, please introduce yourself using your first name, pronouns if you would like, and tell us your role and the school you represent.
2. Can you please describe your role in supporting the public health response to the COVID-19 pandemic?
 - a. Probe: How has your role in Oregon's COVID-19 response changed during the pandemic, if at all?
 - b. Probe: role in implementing public health protection requirements in your school such as masking, vaccine mandates/clinics, social distancing, exclusion measures
3. What types of resources did you receive to support your school's public health response to the COVID-19 pandemic?
 - a. Probe for resources that are needed to ensure your school is well-equipped to respond to future public health emergencies
4. Who did you partner with to support COVID-19 response in your school and describe how you partnered?
 - a. Probe for ODE, LPHAs, OHA, CBOs
5. Describe how you were involved in making decisions about your school's response to COVID-19?
 - a. Follow-up: How did your involvement change as the pandemic progressed?
6. What was your role in communicating COVID-19 information to your school community?
 - a. Probe for successes and challenges
7. Looking back, what is one thing, if anything, you would change about how your school responded to the COVID-19 pandemic?

- a. Probe for public health protections
- b. Enforcement
- c. Virtual instruction

8. How did your school enforce public health protections among faculty, staff and students

- a. Probe for vaccine mandate, mask mandate, social distancing, exclusion measures
- b. Probe for faculty and staff and students

9. What strategies or approaches did your school use that were successful in improving adherence to public health mandates in your school?

- a. Prompt for teachers/faculty/staff and students

10. What strategies do you think would be effective in improving adherence to public health mandates in your school?

11. What is the greatest challenges you experienced as a principal during the COVID-19 pandemic?

12. What is the greatest success you experienced as a principal during the COVID-19 pandemic?

13. Do you have any final thoughts you'd like to share with us today?

School Nurses

1. To start, please introduce yourself using your first name, pronouns if you would like, and tell us your role and the organization you represent.
2. Can you please describe your role in supporting the public health response to the COVID-19 pandemic?
 - a. Probe: How has your role in Oregon's COVID-19 response changed during the pandemic, if at all?
 - i. Probe for: implementing masking, testing, social distancing, exclusion measures
3. What types of resources did you receive to support your school's public health response to the COVID-19 pandemic?
4. Who did you partner with to support COVID-19 response in your school and describe how you partnered?
 - a. Probe for ODE, LPHAs, OHA, CBOs
5. Describe how you were involved in making decisions about your school's response to COVID-19.
 - a. Follow-up: How did your involvement change as the pandemic progressed?
6. What was your role in communicating COVID-19 information to your school community?
 - a. Probe for successes and challenges
7. Please describe the process of school-based vaccine clinics, including facilitators and challenges.
 - a. Probe for vaccines for staff and students
8. Looking back, what is one thing, if anything, you would you change about how your school responded to the COVID-19 pandemic?

- a. Probe for:
 - i. Public health protections
 - ii. Enforcement
 - iii. Virtual instruction
- 9. Describe the role you played in enforcing public health protections at your school.
 - a. Probe for vaccine mandate, mask mandate, social distancing, exclusion measures
- 10. What strategies or approaches did your school use that were successful in improving adherence to public health mandates in your school?
 - a. Prompt for teachers/faculty/staff and students
- 11. What strategies do you think would be effective in improving adherence to public health mandates in your school?
- 12. What were the greatest challenges you experienced as a school nurse during the COVID-19 pandemic?
- 13. What is the greatest success you experienced as a school nurse during the COVID-19 pandemic?
- 14. What improvements or resources, if any, do you think are needed to ensure your school is well-equipped to respond to future public health emergencies?
- 15. Do you have any final thoughts you'd like to share with us today?

Appendix F: Survey Instruments

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Introduction

Thank you for agreeing to complete this survey. Your responses are valuable to our understanding of the Oregon public health system's response to the COVID-19 pandemic. The purpose of this study is to identify lessons learned and recommendations for improvement in response to large-scale public health emergencies and public health system resiliency (the ability to recover from emergencies).

This survey is for Oregon Educational Service District Superintendents during a portion or all of 2020-2022. The survey contains questions related to funding, funding mechanisms, emergency management coordination, enforcement and compliance, data, health equity, public private partnerships, the public health workforce, and more.

We will not ask for any identifying information in the survey. Data collected will be reported in the aggregate, and responses to open ended questions may be quoted anonymously.

This survey will take approximately 30 minutes to complete. Please complete the survey by February 3, 2023. We understand that you may have not been working on Covid-19 response during the entire study timeframe or may not be able to answer a particular question or set of questions due to your role in the Covid-19 response; we have incorporated response options to account for these circumstances. Please do your best to answer all the questions from your experience working on Covid-19 response at an Oregon educational service district.

If you have any questions or difficulties accessing the survey, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co.

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Demographics

* 1. Which region(s) of Oregon does your Educational Service District (ESD) serve? (These regions are based on modified emergency response regions to include at least 5 counties per region) Select all that apply

- ☐ Region 1: Clackamas, Clatsop, Columbia, Multnomah, Tillamook, Washington
- ☐ Region 2: Benton, Lincoln, Linn, Marion, Polk, Yamhill
- ☐ Region 3: Coos, Curry, Douglas, Jackson, Josephine, Lane
- ☐ Region 4: Baker, Gillam, Hood River, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco
- ☐ Region 5: Crook, Deschutes, Grant, Harney, Jefferson, Klamath, Lake, Wheeler

* 2. What is your current role?

- ☐ Superintendent
- ☐ Assistant Superintendent
- ☐ Director of Student Services
- ☐ Director of Business Services
- ☐ Other (please specify)

* 3. Were you working for your ESD for at least 6 months during one or more of the following school years: 2019-2020, 2020-2021, or 2021-2022?

- ☐ Yes
- ☐ No

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Demographics

* 4. Looking at the pandemic stages graphic, during which phases were you involved in COVID-19 response activities in your Educational Service District? (Please select all that apply)

- ☐ Stage 1
- ☐ Stage 2
- ☐ Stage 3
- ☐ Stage 4
- ☐ All stages

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Preparedness

The next several questions will ask about overall preparedness, capacity, and expertise to respond to the COVID-19 pandemic.

* 5. Thinking about when you first became involved in the public health system response to COVID-19, how would you rate your individual level of emergency preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise)?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

6. Please elaborate on why you selected your response to the question above.

* 7. Based on your experience to date, how would you evaluate your ESD's overall level of preparedness to respond to the COVID-19 pandemic?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

8. Please elaborate on why you selected your response to the question above.

* 9. Based on your experience, how would you rate your ESD's preparedness to transition to distance learning for educational instruction delivery?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Site Response

* 10. Did your ESD provide supports to **preschools** for the COVID-19 response?

- ☐ Yes
- ☐ No
- ☐ Don't know

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Preschool Response

* 11. When did your ESD begin formal COVID-19 response in **preschools**?

- ☐ Date of Oregon's emergency declaration
- ☐ Date of first COVID-19 case in your school community
- ☐ Date of federal emergency declaration
- ☐ Other (please specify)

* 12. In which of the following ways did your ESD respond to the COVID-19 pandemic in **preschools**? (Select all that apply)

- ☐ Transition to distance learning
- ☐ Perform COVID-19 monitoring and contact tracing
- ☐ Facilitate distribution of PPE to students and teachers
- ☐ Develop and conduct outreach strategies specific to the needs of your school population
- ☐ Ensure access to accurate and timely COVID-19 information in multiple languages
- ☐ Provide vaccination clinics at schools
- ☐ Disseminate COVID-19 information to the community
- ☐ Other (please specify)

* 13. Overall, how would you rate your **ESD's** response to the COVID-19 pandemic in **preschools** during each stage?

	Poor	Fair	Good	Excellent	I was not working for my ESD at this stage.
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 14. For each of the following stages, how would you rate **Oregon's** management of the COVID-19 response in **preschools**?

	Poor	Fair	Good	Excellent
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Please elaborate on why you selected your response to the question above.

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

K-12 Response

* 16. When did your ESD begin formal COVID-19 response in **K-12 schools**?

- ☐ Date of Oregon's emergency declaration
- ☐ Date of first COVID-19 case in your school community
- ☐ Date of federal emergency declaration
- ☐ Other (please specify)

* 17. In which of the following ways did your ESD respond to the COVID-19 pandemic in **K-12 schools**? (Select all that apply)

- ☐ Transition to distance learning
- ☐ Perform COVID-19 monitoring and contact tracing
- ☐ Facilitate distribution of PPE to students and teachers
- ☐ Develop and conduct outreach strategies specific to the needs of your school population
- ☐ Ensure access to accurate and timely COVID-19 information in multiple languages
- ☐ Provide vaccination clinics at schools
- ☐ Disseminate COVID-19 information to the community
- ☐ Other (please specify)

* 18. Did the abrupt closure of schools and resulting transition to distance learning require significant changes to existing policies?

- ☐ Yes, adopted new policies
- ☐ Yes, changed policies
- ☐ No, no changes needed

* 19. Overall, how would you rate your **ESD's** response to the COVID-19 pandemic in **K-12 schools** during each stage?

	Poor	Fair	Good	Excellent	I was not working for my ESD at this stage.
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 20. For each of the following stages, how would you rate **Oregon's** management of the COVID-19 response in **K-12 schools**?

	Poor	Fair	Good	Excellent
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Please elaborate on why you selected your response to the question above.

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Supports for response

* 22. During any of the following stages, did your ESD receive technical assistance (TA) from any agencies/organizations to inform your COVID-19 response activities?

	Yes	No	Don't know	My ESD was not involved in COVID-19 response during this stage
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 23. Which agencies or organizations did you receive technical assistance (TA) from? (Select all that apply).

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Oregon Department of Education
- ☐ Local school districts
- ☐ Health Care Partner (e.g., hospital, clinic, Coordinated Care Organization, etc.)
- ☐ My ESD did not receive TA to inform our COVID-19 response activities.
- ☐ Other (please specify)

* 24. Which of the following resources did your ESD use, if any?

- ☐ Ready Schools, Safe Learners Resiliency Framework
- ☐ Equity Decision Tools for School Leaders
- ☐ ODE Communications Toolkit
- ☐ OHA/ODE Communicable Disease Guidance
- ☐ ODE Individualized COVID-19 Recovery Services Guidance
- ☐ Oregon School Nurses COVID-19 Toolkit 2022-2023
- ☐ None
- ☐ Other (please specify)

OR PH Responses to Covid-19 - Educational Service District Superintendents
Survey

Partnerships

* 25. How did your ESD partner with the following organizations or agencies as part of the COVID-19 response? (Select all that apply)

	Partnered for COVID-19 response planning	Partnered for COVID-19 testing sites	Partnered for PPE distribution	Partnered for vaccine clinics	Partnered for culturally-responsive, targeted health equity response	Partnered for community- or population-specific communications	Partnered for enforcement of public health mandates or requirements	Did not partner during pandemic response
Community Based Organizations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education - Higher Ed (college, university, trade school)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospitals/Health Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinated Care Organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long term care facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tribes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local Public Health Authority/County Health Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Health Authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Department of Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other partners (please specify)

* 26. Thinking about your COVID-19 response partners, did your ESD have existing partnerships, develop new partnerships, or not partner with the following organizations?

	Existing partnership	New partnership	Some existing and some new partnerships	Did not partner
Community Based Organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education - Higher Ed (college, university, trade school)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals/Health Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordinated Care Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long term care facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tribes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Public Health Authority/County Health Department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Health Authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Department of Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other partners (please specify)

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Funding

* 27. Aside from COVID-19 funding dispersed by the Oregon Department of Education (ODE), did your ESD receive any additional COVID-19 specific funding?

- ☐ No
- ☐ Yes
- ☐ Don't know

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Funding

* 28. Aside from ODE, what other sources did your ESD receive COVID-19 specific funding?

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Funding

* 29. For each of the following statements about COVID-19 funding received by your ESD, select which response option best suits you.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My ESD received adequate funding for COVID-19 case investigation and contact tracing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My ESD received adequate funding for COVID-19 testing (e.g., planning, set-up, communications, running testing sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My ESD received adequate funding for COVID-19 vaccination (e.g., planning, set-up, communications, running vaccination sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 30. For which of the following areas did your ESD use COVID-19 funding? (Select all that apply)

- ☐ COVID-19 response planning
- ☐ Contact tracing
- ☐ COVID-19 testing communications
- ☐ School-based screening testing programs
- ☐ Personal Protective Equipment (PPE) distribution
- ☐ Running vaccination clinics at your school
- ☐ Combating vaccine hesitancy
- ☐ Culturally-tailored, population-specific COVID-19 communications
- ☐ Translating federal, state or local COVID-19 communications (e.g., flyers, social media posts, videos, campaigns, etc.)
- ☐ Quarantine/isolation support
- ☐ Wraparound supports
- ☐ Securing other funding
- ☐ Hiring new staff
- ☐ Other (please specify)

* 31. Which of the following, if any, were a barrier to efficient use of COVID-19 funds? (Select all that apply)

- ☐ The length of time it took to receive funds
- ☐ Frequency of receiving funds
- ☐ Reporting requirements associated with the funding source
- ☐ Reimbursement structure or model of funding
- ☐ Spending requirements for funding source (e.g., could only spend money on specific items)
- ☐ Hiring new employees
- ☐ ESD administrative requirements
- ☐ None of these
- ☐ Other (please specify)

* 32. During any of the phases, did your ESD worry if you would continue to have enough funds to support your community in managing the COVID-19 pandemic?

	Yes	No	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

COVID-19 Communications

The next several questions will ask you about communication about public health mandates.

* 33. Which of the following mass-reach communication platforms did your ESD use to communicate COVID-19 information?

- ☐ District Website
- ☐ Local news stations
- ☐ Social media
- ☐ Radio stations
- ☐ Newspapers
- ☐ My ESD did not use mass-reach communication platforms
- ☐ Other (please specify)

* 34. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 1 (March - November 2020)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 35. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 2 (December 2020 - August 2021)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 36. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 3 (September 2021 - February 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 37. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 4 (March - July 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to investigative guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 38. How would you evaluate the Oregon Department of Education's (ODE) communication during the COVID-19 response?

- ☐ Poor
☐ Fair
☐ Good
☐ Excellent
☐ My school did not receive communication from ODE

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

COVID-19 Communications

* 39. How was information received from ODE used to support the COVID-19 response in your school?

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

COVID-19 Communications

* 40. Did your ESD develop and disseminate any COVID-19 public health messaging?

- ☐ Yes
- ☐ No
- ☐ Unsure

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

COVID-19 Communications

* 41. When developing targeted public health messaging, how often did your ESD do the following:

	Always	Sometimes	Rarely	Never
Make COVID-19 messaging available in multiple languages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging met ADA standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging was written in plain language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

COVID-19 Communications

* 42. What strategies or approaches have you found most effective in communicating with faculty and staff, students, parents, and the community about COVID-19?

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Data

* 43. For each stage, did your ESD have access to local epidemiological data necessary to guide decision-making related to COVID-19?

	No	Yes	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 44. During which of the stages, if any, did any entity provide technical assistance to your district to access, understand, or use COVID-19 epidemiological data? (Select all that apply)

- ☐ Stage 1
- ☐ Stage 2
- ☐ Stage 3
- ☐ Stage 4
- ☐ No technical assistance was provided at any time
- ☐ Unsure

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

Data

* 45. Which entities provided technical assistance?

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Oregon Department of Education
- ☐ Other (please specify)

OR PH Responses to Covid-19 - Educational Service District Superintendents Survey

46. Please share any additional thoughts on your experience of Oregon's response to the COVID-19 pandemic.



Thank you for taking the time to complete this survey, we really appreciate your perspectives and feedback. Information you've provided will be included in reports on Oregon's public health response to COVID-19 for the Oregon legislature; the first report is linked [here](#), and the following reports will be available in April 2023 and September 2023. If you have any additional thoughts or questions, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co. Thanks again!

OR PH Response to COVID-19 Survey - School Principals

Thank you for agreeing to complete this survey. Your responses are valuable to our understanding of the Oregon public health system's response to the COVID-19 pandemic. The purpose of this study is to identify lessons learned and recommendations for improvement in response to large-scale public health emergencies and public health system resiliency (the ability to recover from emergencies).

This survey is for Oregon school leaders in their position during part or all of 2020-2022. The survey contains questions related to funding, funding mechanisms, emergency management coordination, enforcement and compliance, data, health equity, public-private partnerships, the public health workforce, and more.

We will not ask for any identifying information in the survey. Data collected will be reported in the aggregate, and responses to open-ended questions may be quoted anonymously.

This survey will take approximately 30 minutes to complete. Please complete the survey by February 3, 2023. We understand that you may not have been working on COVID-19 response in your organization during the entire pandemic or may not be able to answer a particular question or set of questions due to your role in the COVID-19 response; we have incorporated response options to account for these circumstances. Please do your best to answer all the questions relevant to your time working on the COVID-19 response and your role.

If you have any questions or difficulties accessing the survey, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co.

* 1. What is your current position?

- ☐ Principal
- ☐ Vice principal
- ☐ Other administrative role
- ☐ Other (please specify)

2. Have you worked for multiple schools in Oregon between 2020-2022?

- ☐ Yes
- ☐ No

OR PH Response to COVID-19 Survey - School Principals

You identified that you have worked in multiple Oregon schools between 2020-2022. Please select the Oregon school where you had the most experience working in a leadership position on COVID-19 response activities and answer the survey based on your experience in that school.

OR PH Response to COVID-19 Survey - School Principals

* 3. Were you working for an Oregon school for 6 months or more between March 2020-July 2022?

- ☐ Yes
- ☐ No

OR PH Response to COVID-19 Survey - School Principals

* 4. In which region of Oregon is your school located? (These regions are based on modified emergency response regions to include at least 5 counties per region) *If you worked at multiple schools between 2019-2022, please identify the school where you have the greatest experience working in a leadership position on COVID-19 response and complete the survey based on your experience in that position.

- ☐ Region 1: Clackamas, Clatsop, Columbia, Multnomah, Tillamook, Washington
- ☐ Region 2: Benton, Lincoln, Linn, Marion, Polk, Yamhill
- ☐ Region 3: Coos, Curry, Douglas, Jackson, Josephine, Lane
- ☐ Region 4: Baker, Gilliam, Hood River, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco
- ☐ Region 5: Crook, Deschutes, Grant, Harney, Jefferson, Klamath, Lake, Wheeler

* 5. Which of the following grades did you oversee at your school?

- ☐ K-5
- ☐ K-8
- ☐ 6-8
- ☐ 9-12
- ☐ Other (please specify)

* 6. What type of school do you oversee?

- ☐ Public
- ☐ Private
- ☐ Charter
- ☐ Other (please specify)

OR PH Response to COVID-19 Survey - School Principals

* 7. Looking at the pandemic stages graphic above, during which stages were you involved in COVID-19 response activities in your school? (Please select all that apply)

- ☐ Stage 1
- ☐ Stage 2
- ☐ Stage 3
- ☐ Stage 4
- ☐ All stages

OR PH Response to COVID-19 Survey - School Principals

Preparedness

The next several questions will ask about overall preparedness, capacity, and expertise to respond to the COVID-19 pandemic.

* 8. Thinking about when you first became involved in the public health system response to COVID-19, how would you rate your individual level of emergency preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise)?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

9. Please elaborate on why you selected your response to the question above.

* 10. Which of the following best describes the existence of a School Emergency Operations Plan (EOP) at your school?

- ☐ My school had a plan that was developed or updated prior to the start of the COVID-19 pandemic
- ☐ My school did not have a plan at the start of the pandemic, but developed one after the start of the COVID-19 pandemic
- ☐ My school does not have a plan
- ☐ I don't know

* 11. Which of the following best describes the existence of a Communicable Disease Management Plan at your school?

- ☐ My school had a plan that was developed or updated prior to the start of the COVID-19 pandemic
- ☐ My school did not have a plan at the start of the pandemic, but developed one after the start of the COVID-19 pandemic
- ☐ My school does not have a plan
- ☐ I don't know

* 12. Based on your experience to date, how would you evaluate your school's overall level of preparedness to respond to the COVID-19 pandemic?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

13. Please elaborate on why you selected your response to the question above.

* 14. Based on your experience, how would you rate your school's preparedness to transition to distance learning for educational instruction delivery?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

* 15. When did your school begin formal COVID-19 response?

- ☐ Date of Oregon's emergency declaration
- ☐ Date of first COVID-19 case in your school community
- ☐ Date of federal emergency declaration
- ☐ Other (please specify)

* 16. In which of the following ways did your school respond to the COVID-19 pandemic?

(Select all that apply).

- ☐ Transition to distance learning
- ☐ Perform COVID-19 monitoring and contact tracing
- ☐ Facilitate distribution of PPE to students and teachers
- ☐ Develop and conduct outreach strategies specific to the needs of your school population
- ☐ Ensure access to accurate and timely COVID-19 information in multiple languages
- ☐ Provide vaccination clinics at schools
- ☐ Disseminate COVID-19 information to the community
- ☐ Other (please specify)

* 17. Which of the following challenges hindered the effectiveness, scale, or quality of your school's COVID-19 response? (Select all that apply)

- ☐ Did not have enough staff
- ☐ Lack of adequate funding
- ☐ Lack of training in emergency preparedness
- ☐ Lack of guidance from state government
- ☐ Inconsistent guidance from state government
- ☐ Lack of guidance from local public health/county health department
- ☐ Inconsistent guidance from local public health/county health department
- ☐ Lack of guidance from state government
- ☐ Inconsistent guidance from state government
- ☐ Not enough community partnerships (including health care and CBO partnerships)
- ☐ Politicization of public health
- ☐ Inadequate data, especially sub-population data
- ☐ Not applicable; My school did not encounter any challenges
- ☐ Other (please specify)

* 18. Which of the following barriers, not related to funding, did your school experience during response to the COVID-19 pandemic? (Select all that apply)

- ☐ Lack of locally available PPE
- ☐ Difficulty onboarding new staff
- ☐ Creating scripts for contact tracing
- ☐ Lack of culturally-tailored communications, including language accessibility
- ☐ Other (please specify)

* 19. Did the abrupt closure of schools and resulting transition to distance learning require significant changes to existing policies? (Select all that apply)

- ☐ Yes, adopted new policies
- ☐ Yes, changed policies
- ☐ No, no changes needed

* 20. Overall, how would you rate **your school's** response to the COVID-19 pandemic during each stage?

	Poor	Fair	Good	Excellent	I was not involved in COVID-19 response at my school during this stage.
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Please elaborate on why you selected your response to the question above.

* 22. For each of the following stages, how would you rate the **state of Oregon's** management of the COVID-19 response in schools?

	Poor	Fair	Good	Excellent
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. Please elaborate on why you selected your response to the question above.

OR PH Response to COVID-19 Survey - School Principals

Supports for Response

* 24. During any of the following stages, did your school receive technical assistance (TA) from any agencies/organizations to inform your COVID-19 response activities?

	No	Yes	My school was not involved in COVID-19 response during this stage	Don't know
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 25. Which agencies or organizations did you receive technical assistance (TA) from? (Select all that apply).

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Oregon Department of Education
- ☐ Educational Service District
- ☐ Health Care Partner (e.g., hospital, clinic, Coordinated Care Organization, etc.)
- ☐ My school did not receive TA to inform our COVID-19 response activities.
- ☐ Other (please specify)

* 26. Which of the following resources did your school use, if any? (Select all that apply.)

- ☐ Ready Schools, Safe Learners Resiliency Framework
- ☐ Equity Decision Tools for School Leaders
- ☐ ODE Communications Toolkit
- ☐ OHA/ODE Communicable Disease Guidance
- ☐ ODE Individualized COVID-19 Recovery Services Guidance
- ☐ Oregon School Nurses COVID-19 Toolkit 2022-2023
- ☐ None
- ☐ Other (please specify)

* 27. Which of the following supports would have been helpful for your school when first responding to the COVID-19 pandemic in your community?

- ☐ Dedicated staff contact at governmental partner organizations (e.g., LPHA, OHA, ODE) for my school
- ☐ COVID-19 communications in languages other than English (videos, flyers, scripts, etc.)
- ☐ Communication about and support applying for funding opportunities
- ☐ Other (please specify)

* 28. How did your school/district partner with the following organizations or agencies as part of the COVID-19 response? (Select all that apply)

	Partnered for COVID-19 response planning	Partnered for COVID-19 testing sites	Partnered for PPE distribution	Partnered for vaccine clinics	Partnered for culturally-responsive, targeted health equity response	Partnered for community- or population-specific communications	Partnered for enforcement of public health mandates or requirements	Did not partner during pandemic response
Community Based Organizations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education - Higher Ed (college, university, trade school)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospitals/Health Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinated Care Organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long term care facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tribes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local Public Health Authority/County Health Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Health Authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Department of Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Educational Service District	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other partner (please specify)

* 29. Thinking about your COVID-19 response partners, did your school/district have existing partnerships, develop new partnerships, or not partner with the following organizations?

	Existing partnership	New partnership	Some existing and some new partnerships	Did not partner
Community Based Organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education - Higher Ed (college, university, trade school)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals/Health Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordinated Care Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long term care facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tribes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Public Health Authority/County Health Department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Health Authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Department of Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educational Service District	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

* 30. Aside from COVID-19 funding dispersed by the Oregon Department of Education (ODE), did your school/district receive any additional COVID-19 specific funding?

- ☐ No
- ☐ Yes
- ☐ Don't know

OR PH Response to COVID-19 Survey - School Principals

* 31. Aside from ODE, what other sources did your school/district receive COVID-19 specific funding?

OR PH Response to COVID-19 Survey - School Principals

* 32. For each of the following statements about COVID-19 funding received by your school, select which response option best suits you.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	N/A, My school did not engage in these activities
My school received adequate funding for COVID-19 case investigation and contact tracing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school received adequate funding for COVID-19 testing (e.g., planning, set-up, communications, running testing sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school received adequate funding for COVID-19 vaccination (e.g., planning, set-up, communications, running vaccination sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 33. For which of the following areas did your school use COVID-19 funding? (Select all that apply)

- ☐ COVID-19 response planning
- ☐ Contact tracing
- ☐ COVID-19 testing communications
- ☐ School-based screening testing programs
- ☐ Personal Protective Equipment (PPE) distribution
- ☐ Running vaccination clinics at your school
- ☐ Combating vaccine hesitancy
- ☐ Culturally-tailored, population-specific COVID-19 communications
- ☐ Translating federal, state, or local COVID-19 communications (e.g., flyers, social media posts, videos, campaigns, etc.)
- ☐ Quarantine/isolation support
- ☐ Wraparound supports
- ☐ Securing other funding
- ☐ Hiring new staff
- ☐ Other (please specify)

* 34. Which of the following, if any, were a barrier to efficient use of COVID-19 funds? (Select all that apply)

- ☐ The length of time it took to receive funds
- ☐ Frequency of receiving funds
- ☐ Reporting requirements associated with the funding source
- ☐ Reimbursement structure or model of funding
- ☐ Spending requirements for funding source (e.g., could only spend money on specific items)
- ☐ Hiring new employees
- ☐ School/district administrative requirements
- ☐ Other (please specify)

- ☐ None of the above

* 35. During any of the phases, did your school worry if you would continue to have enough funds to support your community in managing the COVID-19 pandemic?

	Yes	No	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR PH Response to COVID-19 Survey - School Principals

Public health requirements

* 36. Which of the following public health requirements, if any, did your school adopt?

- ☐ Masking in public spaces/workplaces
- ☐ Prohibiting public gathering (churches, community events, etc.)
- ☐ Prohibiting indoor dining
- ☐ Prohibiting in person attendance in schools
- ☐ Isolation and quarantine rules
- ☐ Other, please describe:

- ☐ None; did not adopt any public health requirements

* 37. Did your school enforce any of the following public health requirements adopted by **your school**?

- ☐ Masking in public spaces/workplaces
- ☐ Prohibiting indoor dining
- ☐ Prohibiting in person attendance in schools
- ☐ Vaccination requirements for teachers
- ☐ Isolation and quarantine rules
- ☐ Other (please specify)

- ☐ None of the above

* 38. Did your school enforce any of following public health requirements enacted by Oregon state or local county government?

- ☐ Masking in public spaces/workplaces
- ☐ Prohibiting public gathering (churches, community events)
- ☐ Prohibiting indoor dining
- ☐ Prohibiting in person attendance in schools
- ☐ Isolation and quarantine rules
- ☐ Vaccination requirements for teachers and school staff
- ☐ Other (please specify)

- ☐ None of the above

* 39. Which of the following strategies were most effective for your school in enforcing public health mandates, such as mask mandates?

- ☐ Targeted messaging (e.g., messaging developed for students, teachers)
- ☐ School leaders as a spokepeople/modeling behavior
- ☐ Messaging about responsibility to community
- ☐ Punitive consequences (e.g., detention, silent lunch)
- ☐ Other (please specify)

OR PH Response to COVID-19 Survey - School Principals

COVID-19 Communications

The next several questions will ask you about how your school communicated about public health mandates with the public.

* 40. Which of the following mass-reach communication platforms did your school/district use to communicate COVID-19 information?

- ☐ School's Website
- ☐ Local news stations
- ☐ Social media
- ☐ Radio stations
- ☐ Newspapers
- ☐ Other (please specify)

* 41. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 1 (March - November 2020)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 42. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 2 (December 2020 - August 2021)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 43. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 3 (September 2021 - February 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 44. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 4 (March - July 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to investigative guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 45. How would you evaluate the Oregon Department of Education's (ODE) communication during the COVID-19 response?

- ☐ Poor
☐ Fair
☐ Good
☐ Excellent
☐ My school did not receive communication from ODE

OR PH Response to COVID-19 Survey - School Principals

Information from ODE

46. How was information received from ODE used to support the COVID-19 response in your school?

OR PH Response to COVID-19 Survey - School Principals

COVID-19 Communications

* 47. When developing public health messaging, how often did your school do the following:

	Always	Sometimes	Rarely	Never	My school did not develop public health messaging
Make COVID-19 messaging available in multiple languages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging met ADA standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging was written in plain language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

48. What strategies or approaches did you use to communicate with faculty and staff, students, parents, and the community about COVID-19?

OR PH Response to COVID-19 Survey - School Principals

Data

* 49. For each stage, did your school have access to local epidemiological data necessary to guide decision making related to COVID-19?

	Yes	No	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 50. During which of the stages, if any, did any entity provide technical assistance to your school to access, understand, or use COVID-19 epidemiological data? (Select all that apply)

- ☐ Stage 1
- ☐ Stage 2
- ☐ Stage 3
- ☐ Stage 4
- ☐ No technical assistance was provided at any time
- ☐ Unsure

OR PH Response to COVID-19 Survey - School Principals

* 51. Which entities provided technical assistance?

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Educational Services District
- ☐ School District
- ☐ Oregon Department of Education
- ☐ Other (please specify)

OR PH Response to COVID-19 Survey - School Principals

Distance Learning

* 52. Please rank the following from most challenging to least challenging as your school transitioned to distance learning

- ☐ Technology infrastructure
- ☐ Platform or systems to manage distance learning
- ☐ Training and preparedness of teachers in distance learning methods and delivery
- ☐ Training and preparedness of students in using distance learning technology

* 53. How would you evaluate the effectiveness of your school's delivery of distance learning?

- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Excellent

OR PH Response to COVID-19 Survey - School Principals

54. Please share any additional thoughts on your experience of Oregon's response to the COVID-19 pandemic as a school administrator.

Thank you for taking the time to complete this survey, we really appreciate your perspectives and feedback. Information you've provided will be included in reports on Oregon's public health response to COVID-19 for the Oregon legislature; the first report is linked [here](#), and the following reports will be available in April 2023 and September 2023. If you have any additional thoughts or questions, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co. Thanks again!

OR PH Responses to Covid-19 - School Nurses

Introduction

Thank you for agreeing to complete this survey. Your responses are valuable to our understanding of the Oregon public health system's response to the COVID-19 pandemic. The purpose of this study is to identify lessons learned and recommendations for improvement in response to large-scale public health emergencies and public health system resiliency (the ability to recover from emergencies).

This survey is for school nurses working for schools in Oregon during a portion or all of 2020-2022. The survey contains questions related to funding, funding mechanisms, emergency management coordination, enforcement and compliance, data, health equity, public-private partnerships, the public health workforce, and more.

We will not ask for any identifying information in the survey. Data collected will be reported in the aggregate, and responses to open-ended questions may be quoted anonymously.

This survey will take approximately 30 minutes to complete. Please complete the survey by February 8, 2023. We understand that you may have not been working on the Covid-19 response during the entire study timeframe or may not be able to answer a particular question or set of questions due to your role in the Covid-19 response; we have incorporated response options to account for these circumstances. Please do your best to answer all the questions from your experience working on Covid-19 response at an Oregon school.

If you have any questions or difficulties accessing the survey, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co.

OR PH Responses to Covid-19 - School Nurses

Demographics

* 1. What is your current position?

- ☐ School nurse
- ☐ School nurse assistant
- ☐ Other (please specify)

2. Have you worked as a school nurse for multiple schools in Oregon between 2020-2022?

- ☐ Yes
- ☐ No

OR PH Responses to Covid-19 - School Nurses

You identified that you have worked in multiple Oregon schools between 2020-2022. Please select the Oregon school where you had the most experience working as a school nurse on COVID-19 response activities and answer the survey based on your experience in that school.

OR PH Responses to Covid-19 - School Nurses

* 3. Were you working for an Oregon school/school district as a school nurse for 6 months or more between March 2020-July 2022?

- ☐ Yes
- ☐ No

OR PH Responses to Covid-19 - School Nurses

Demographics

* 4. In which region of Oregon is your school located? (These regions are based on modified emergency response regions to include at least 5 counties per region)

- ☐ Region 1: Clackamas, Clatsop, Columbia, Multnomah, Tillamook, Washington
- ☐ Region 2: Benton, Lincoln, Linn, Marion, Polk, Yamhill
- ☐ Region 3: Coos, Curry, Douglas, Jackson, Josephine, Lane
- ☐ Region 4: Baker, Gilliam, Hood River, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco
- ☐ Region 5: Crook, Deschutes, Grant, Harney, Jefferson, Klamath, Lake, Wheeler

* 5. Which of the following grades did you serve at your school?

- ☐ K-5
- ☐ K-8
- ☐ 6-8
- ☐ 9-12
- ☐ Other (please specify)

* 6. What type of school do you work for?

- ☐ Public
- ☐ Private
- ☐ Charter
- ☐ Other (please specify)

* 7. Looking at the pandemic stages graphic, during which stages were you involved in COVID-19 response activities in your school? (Please select all that apply)

- ☐ Stage 1
- ☐ Stage 2
- ☐ Stage 3
- ☐ Stage 4
- ☐ All stages

OR PH Responses to Covid-19 - School Nurses

Preparedness

The next several questions will ask about overall preparedness, capacity, and expertise to respond to the COVID-19 pandemic.

* 8. Thinking about when you first became involved in the public health system response to COVID-19, how would you rate your individual level of emergency preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise)?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

9. Please elaborate on why you selected your response to the question above.

* 10. Which of the following best describes the existence of a School Emergency Operations Plan (EOP) at your school?

- ☐ My school had a plan that was developed or updated prior to the start of the COVID-19 pandemic
- ☐ My school did not have a plan at the start of the pandemic, but developed one after the start of the COVID-19 pandemic
- ☐ My school does not have a plan
- ☐ I don't know

* 11. Which of the following best describes the existence of a Communicable Disease Management Plan at your school?

- ☐ My school had a plan that was developed or updated prior to the start of the COVID-19 pandemic
- ☐ My school did not have a plan at the start of the pandemic, but developed one after the start of the COVID-19 pandemic
- ☐ My school does not have a plan
- ☐ I don't know

* 12. Based on your experience, how would you evaluate your school's overall level of preparedness to respond to the COVID-19 pandemic?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

13. Please elaborate on why you selected your response to the question above.

OR PH Responses to Covid-19 - School Nurses

Response

* 14. When did your school begin formal COVID-19 response?

- ☐ Date of Oregon's emergency declaration
- ☐ Date of first COVID-19 case in your school community
- ☐ Date of federal emergency declaration
- ☐ Other (please specify)

* 15. In which of the following ways did your school respond to the COVID-19 pandemic?
(Select all that apply).

- ☐ Transition to distance learning
- ☐ Perform COVID-19 monitoring and contact tracing
- ☐ Facilitate distribution of PPE to students and teachers
- ☐ Develop and conduct outreach strategies specific to the needs of your school population
- ☐ Ensure access to accurate and timely COVID-19 information in multiple languages
- ☐ Provide vaccination clinics at schools
- ☐ Disseminate COVID-19 information to the community
- ☐ Other (please specify)

* 16. Which of the following challenges hindered the effectiveness, scale, or quality of your school's COVID-19 response? (Select all that apply)

- ☐ Did not have enough staff
- ☐ Lack of adequate funding
- ☐ Lack of training in emergency preparedness
- ☐ Lack of guidance from the state government
- ☐ Inconsistent guidance from the state government
- ☐ Lack of guidance from local public health/county health department
- ☐ Inconsistent guidance from local public health/county health department
- ☐ Lack of guidance from the state government
- ☐ Inconsistent guidance from the state government
- ☐ Not enough community partnerships (including health care and CBO partnerships)
- ☐ Politicization of public health
- ☐ Inadequate data, especially sub-population data
- ☐ Not applicable; My school did not encounter any challenges
- ☐ Other (please specify)

* 17. Which of the following barriers, not related to funding, did your school experience during response to the COVID-19 pandemic? (Select all that apply)

- ☐ Lack of locally available PPE
- ☐ Difficulty onboarding new staff
- ☐ Creating scripts for contact tracing
- ☐ Lack of culturally-tailored communications, including language accessibility
- ☐ Other (please specify)

18. What specific challenges did you face as a school nurse during the COVID-19 pandemic response?

* 19. Did the abrupt closure of schools and resulting transition to distance learning require significant changes to existing policies? (Select all that apply)

- ☐ Yes, adopted new policies
- ☐ Yes, changed policies
- ☐ No, no changes needed

* 20. Overall, how would you rate your school's response to the COVID-19 pandemic during each stage?

	Poor	Fair	Good	Excellent	I was not involved in COVID-19 response in my school during this stage.
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Please elaborate on why you selected your response to the question above.

* 22. For each of the following stages, how would you rate the **state of Oregon's** management of the COVID-19 response in schools?

	Poor	Fair	Good	Excellent
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. Please elaborate on why you selected your response to the question above.

OR PH Responses to Covid-19 - School Nurses

Supports for response

* 24. During any of the following stages, did your school receive technical assistance (TA) from any agencies/organizations to inform your COVID-19 response activities?

	Yes	No	Don't know	My school was not involved in COVID-19 response during this stage
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 25. Which agencies or organizations did you receive technical assistance (TA) from? (Select all that apply).

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Oregon Department of Education
- ☐ Educational Service District
- ☐ Health Care Partner (e.g., hospital, clinic, Coordinated Care Organization, etc.)
- ☐ My school did not receive TA to inform our COVID-19 response activities.
- ☐ Other (please specify)

* 26. Which of the following resources did your school use, if any?

- ☐ Ready Schools, Safe Learners Resiliency Framework
- ☐ Equity Decision Tools for School Leaders
- ☐ ODE Communications Toolkit
- ☐ OHA/ODE Communicable Disease Guidance
- ☐ ODE Individualized COVID-19 Recovery Services Guidance
- ☐ Oregon School Nurses COVID-19 Toolkit 2022-2023
- ☐ None
- ☐ Other (please specify)

* 27. Which of the following supports would have been helpful for your school when first responding to the COVID-19 pandemic in your community?

- ☐ Dedicated staff contact at governmental partner organizations (e.g., LPHA, OHA, ODE) for my school
- ☐ COVID-19 communications in languages other than English (videos, flyers, scripts, etc.)
- ☐ Communication about and support applying for funding opportunities
- ☐ Other (please specify)

OR PH Responses to Covid-19 - School Nurses

Partnerships

* 28. How did your school/district partner with the following organizations or agencies as part of the COVID-19 response? (Select all that apply)

	Partnered for COVID-19 response planning	Partnered for COVID-19 testing sites	Partnered for PPE distribution	Partnered for vaccine clinics	Partnered for culturally-responsive, targeted health equity response	Partnered for community- or population-specific communications	Partnered for enforcement of public health mandates or requirements	Did not partner during pandemic response
Community Based Organizations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education - Higher Ed (college, university, trade school)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospitals/Health Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinated Care Organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long term care facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tribes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local Public Health Authority/County Health Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Health Authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Department of Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other partners (please specify)

* 29. Thinking about your COVID-19 response partners, did your school/district have existing partnerships, develop new partnerships, or not partner with the following organizations?

	Existing partnership	New partnership	Some existing and some new partnerships	Did not partner
Community Based Organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education - Higher Ed (college, university, trade school)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals/Health Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordinated Care Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long term care facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tribes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Public Health Authority/County Health Department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Health Authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Department of Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other partners (please specify)

OR PH Responses to Covid-19 - School Nurses

Funding

* 30. Aside from COVID-19 funding dispersed by the Oregon Department of Education (ODE), did your school/district receive any additional COVID-19 specific funding?

- ☐ No
- ☐ Yes
- ☐ Don't know

OR PH Responses to Covid-19 - School Nurses

Funding

* 31. Aside from ODE, what other sources did your school/district receive COVID-19 specific funding from?

OR PH Responses to Covid-19 - School Nurses

Funding

* 32. For each of the following statements about COVID-19 funding received by your school, select which response option best suits you.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A, My school did not engage in these activities
My school received adequate funding for COVID-19 case investigation and contact tracing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school received adequate funding for COVID-19 testing (e.g., planning, set-up, communications, and running testing sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school received adequate funding for COVID-19 vaccination (e.g., planning, set-up, communications, and running vaccination sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 33. For which of the following areas did your school use COVID-19 funding? (Select all that apply)

- ☐ COVID-19 response planning
- ☐ Contact tracing
- ☐ COVID-19 testing communications
- ☐ School-based screening testing programs
- ☐ Personal Protective Equipment (PPE) distribution
- ☐ Running vaccination clinics at your school
- ☐ Combating vaccine hesitancy
- ☐ Culturally-tailored, population-specific COVID-19 communications
- ☐ Translating federal, state or local COVID-19 communications (e.g., flyers, social media posts, videos, campaigns, etc.)
- ☐ Quarantine/isolation support
- ☐ Wraparound supports
- ☐ Securing other funding
- ☐ Hiring new staff
- ☐ Other (please specify)

* 34. Which of the following, if any, were a barrier to efficient use of COVID-19 funds? (Select all that apply)

- ☐ The length of time it took to receive funds
- ☐ Frequency of receiving funds
- ☐ Reporting requirements associated with the funding source
- ☐ Reimbursement structure or model of funding
- ☐ Spending requirements for funding source (e.g., could only spend money on specific items)
- ☐ Hiring new employees
- ☐ School/district administrative requirements
- ☐ None of these
- ☐ Other (please describe)

* 35. During any of the phases, did your school worry if you would continue to have enough funds to support your community in managing the COVID-19 pandemic?

	Yes	No	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR PH Responses to Covid-19 - School Nurses

Requirements and Enforcement

* 36. Which of the following public health requirements, if any, did your school adopt?

- ☐ Masking in public spaces/workplaces
- ☐ Prohibiting public gatherings (churches, community events, etc.)
- ☐ Prohibiting indoor dining
- ☐ Prohibiting in-person attendance in schools
- ☐ Isolation and quarantine rules
- ☐ None; did not adopt any public health requirements
- ☐ Other (please describe)

* 37. Did your school **enforce** any of the following public health requirements adopted by **your school**?

- ☐ Masking in public spaces/workplaces
- ☐ Prohibiting indoor dining
- ☐ Prohibiting in-person attendance in schools
- ☐ Vaccination requirements for teachers
- ☐ Isolation and quarantine rules
- ☐ None of the above
- ☐ Other (please specify)

* 38. Did your school enforce any of the following public health requirements enacted by **Oregon state or local county government?**

- ☐ Masking in public spaces/workplaces
- ☐ Prohibiting public gatherings (churches, community events)
- ☐ Prohibiting indoor dining
- ☐ Prohibiting in-person attendance in schools
- ☐ Isolation and quarantine rules
- ☐ Vaccination requirements for teachers and school staff
- ☐ None of the above
- ☐ Other (please specify)

* 39. Which of the following strategies were most effective for your school in enforcing public health mandates, such as mask mandates?

- ☐ Targeted messaging (e.g., messaging developed for students, teachers)
- ☐ School leaders as a spokespeople/modeling behavior
- ☐ Messaging about responsibility to community
- ☐ Punitive consequences (e.g., detention, silent lunch)
- ☐ Other (please specify)

40. Please tell us any other thoughts you have about the enforcement of COVID-19 public health requirements in your school.

OR PH Responses to Covid-19 - School Nurses

COVID-19 Communications

The next several questions will ask you about communication about public health mandates.

* 41. Which of the following mass-reach communication platforms did your school/district use to communicate COVID-19 information?

- ☐ District Website
- ☐ Local news stations
- ☐ Social media
- ☐ Radio stations
- ☐ Newspapers
- ☐ Other (please specify)

42. What strategies or approaches did you use to communicate with faculty and staff, students, parents, and the community about COVID-19?

* 43. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 1 (March - November 2020)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 44. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 2 (December 2020 - August 2021)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 45. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 3 (September 2021 - February 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 46. How would you evaluate Oregon Health Authority's communication with the community about the following public health requirements during **Stage 4 (March - July 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to investigative guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 47. How would you evaluate the Oregon Department of Education's (ODE) communication during the COVID-19 response?

- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Excellent
- ☐ My school did not receive communication from ODE

OR PH Responses to Covid-19 - School Nurses

COVID-19 Communications

* 48. How was information received from ODE used to support the COVID-19 response in your school?

OR PH Responses to Covid-19 - School Nurses

COVID-19 Communications

* 49. When developing public health messaging, how often did your school do the following:

	Always	Sometimes	Rarely	Never	My school did not develop public health messaging
Make COVID-19 messaging available in multiple languages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging met ADA standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging was written in plain language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR PH Responses to Covid-19 - School Nurses

Data

* 50. For each stage, did your school have access to local epidemiological data necessary to guide decision-making related to COVID-19?

	No	Yes	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

51. How did you, as a school nurse, use local epidemiologic data?

* 52. During which of the stages, if any, did any entity provide technical assistance to your school/district to access, understand, or use COVID-19 epidemiological data? (Select all that apply)

- ☐ Stage 1
- ☐ Stage 2
- ☐ Stage 3
- ☐ Stage 4
- ☐ No technical assistance was provided at any time
- ☐ Unsure

OR PH Responses to Covid-19 - School Nurses

Data

* 53. Which entities provided technical assistance?

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Educational Service District
- ☐ School District
- ☐ Oregon Department of Education
- ☐ Other (please specify)

OR PH Responses to Covid-19 - School Nurses

54. Please share any additional thoughts on your experience of Oregon's response to the COVID-19 pandemic.

Thank you for taking the time to complete this survey, we really appreciate your perspectives and feedback. Information you've provided will be included in reports on Oregon's public health response to COVID-19 for the Oregon legislature; the first report is linked [here](#), and the following reports will be available in April 2023 and September 2023. If you have any additional thoughts or questions, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co. Thanks again!

OR PH Response to Covid-19 - School District Superintendents Survey

Thank you for agreeing to complete this survey. Your responses are valuable to our understanding of the Oregon public health system's response to the COVID-19 pandemic. The purpose of this study is to identify lessons learned and recommendations for improvement in response to large-scale public health emergencies and public health system resiliency (the ability to recover from emergencies).

This survey is for Oregon School District Superintendents in their position during a portion or all of 2020-2022. The survey contains questions related to funding, funding mechanisms, emergency management coordination, enforcement and compliance, data, health equity, public private partnerships, the public health workforce, and more.

We will not ask for any identifying information in the survey. Data collected will be reported in the aggregate, and responses to open ended questions may be quoted anonymously.

This survey will take approximately 30 minutes to complete. Please complete the survey by January 31, 2023. We understand that you may have not been working on Covid-19 response during the entire study timeframe or may not be able to answer a particular question or set of questions due to your role in the Covid-19 response; we have incorporated response options to account for these circumstances. Please do your best to answer all the questions relevant to your time working on Covid-19 response as a Superintendent of an Oregon school district.

If you have any questions or difficulties accessing the survey, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co.

* 1. What is your current role?

☐ Superintendent for an Oregon school district

☐ Other (please specify)

* 2. Have you worked for multiple school districts in Oregon between 2020-2022?

☐ Yes

☐ No

OR PH Response to Covid-19 - School District Superintendents Survey

You identified that you have worked in multiple Oregon school districts between 2020-2022. Please select the Oregon school district where you had the most experience working as a superintendent on COVID-19 response activities and answer the survey based on your experience in that school district.

OR PH Response to Covid-19 - School District Superintendents Survey

* 3. Were you working for an Oregon school district for 6 months or more between March 2020-July 2022?

- ☐ Yes
☐ No

OR PH Response to Covid-19 - School District Superintendents Survey

* 4. Which region(s) of Oregon are covered by the school district you worked at between 2019-2022? (These regions are based on modified emergency response regions to include at least 5 counties per region) (Select all that apply) *If you worked at multiple school districts between 2020-2022, please identify the district where you have the greatest experience working in a leadership position on COVID-19 response and complete the survey based on your experience in that position.

- ☐ Region 1: Clackamas, Clatsop, Columbia, Multnomah, Tillamook, Washington
☐ Region 2: Benton, Lincoln, Linn, Marion, Polk, Yamhill
☐ Region 3: Coos, Curry, Douglas, Jackson, Josephine, Lane
☐ Region 4: Baker, Gilliam, Hood River, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco
☐ Region 5: Crook, Deschutes, Grant, Harney, Jefferson, Klamath, Lake, Wheeler

Stages of the Covid-19 Pandemic

* 5. Looking at the pandemic stages graphic above, during which phases were you involved in COVID-19 response activities in your school district? (Please select all that apply)

- ☐ Stage 1
☐ Stage 2
☐ Stage 3
☐ Stage 4
☐ All stages

OR PH Response to Covid-19 - School District Superintendents Survey

Preparedness

The next several questions will ask about overall preparedness, capacity, and expertise to respond to the COVID-19 pandemic.

* 6. Thinking about when you first became involved in the public health system response to COVID-19, how would you rate your individual level of preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise)?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

7. Please elaborate on why you selected your response to the question above.

* 8. Based on your experience to date, how would you evaluate your district's overall level of preparedness to respond to the COVID-19 pandemic?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

9. Please elaborate on why you selected your response to the question above.

* 10. Based on your experience, how would you rate your district's preparedness to transition to distance learning for educational instruction delivery?

- ☐ Not at all prepared
- ☐ Minimally prepared
- ☐ Moderately prepared
- ☐ Highly prepared

OR PH Response to Covid-19 - School District Superintendents Survey

Response

* 11. When did your district begin formal COVID-19 response?

- ☐ Date of Oregon's emergency declaration
- ☐ Date of first COVID-19 case in your school community
- ☐ Date of federal emergency declaration
- ☐ Other (please specify)

* 12. In which of the following ways did your district respond to the COVID-19 pandemic?
(Select all that apply)

- ☐ Transition to distance learning
- ☐ Perform COVID-19 monitoring and contact tracing
- ☐ Facilitate distribution of PPE to students and teachers
- ☐ Develop and conduct outreach strategies specific to the needs of your school population
- ☐ Ensure access to accurate and timely COVID-19 information in multiple languages
- ☐ Provide vaccination clinics at schools
- ☐ Disseminate COVID-19 information to the community
- ☐ Other (please specify)

* 13. Did the abrupt closure of schools and resulting transition to distance learning require significant changes to existing policies?

- ☐ Yes, adopted new policies
- ☐ Yes, changed policies
- ☐ No, no changes needed

* 14. Overall, how would you rate your **district's** response to the COVID-19 pandemic during each stage?

	Poor	Fair	Good	Excellent
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 15. For each of the following stages, how would you rate the **state of Oregon's** management of the COVID-19 response in schools?

	Poor	Fair	Good	Excellent	I was not involved in COVID-19 response at my district during this stage.
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Please elaborate on why you selected your response to the previous question.

OR PH Response to Covid-19 - School District Superintendents Survey

Supports for response

* 17. During any of the following stages, did your district receive technical assistance (TA) from any agencies/organizations to inform your COVID-19 response activities?

	No	Yes	My district was not involved in COVID-19 response during this stage	Don't know
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Which agencies or organizations did your district receive technical assistance (TA) from?
(Select all that apply).

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Oregon Department of Education
- ☐ Educational Service District
- ☐ Health Care Partner (e.g., hospital, clinic, Coordinated Care Organization, etc.)
- ☐ My district did not receive TA to inform our COVID-19 response activities.
- ☐ Other (please specify)

* 19. Which of the following resources did your district use, if any?

- ☐ Ready Schools, Safe Learners Resiliency Framework
- ☐ Equity Decision Tools for School Leaders
- ☐ ODE Communications Toolkit
- ☐ OHA/ODE Communicable Disease Guidance
- ☐ ODE Individualized COVID-19 Recovery Services Guidance
- ☐ Oregon School Nurses COVID-19 Toolkit 2022-2023
- ☐ Other (please specify)

- ☐ None of the above

OR PH Response to Covid-19 - School District Superintendents Survey

Partnerships

* 20. How did your district partner with the following organizations or agencies as part of the COVID-19 response?

	Partnered for COVID-19 response planning	Partnered for COVID-19 testing sites	Partnered for PPE distribution	Partnered for vaccine clinics	Partnered for culturally-responsive, targeted health equity response	Partnered for community- or population-specific communications	Partnered for enforcement of public health mandates or requirements	Did not partner during pandemic response
Community Based Organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education - Higher Ed (college, university, trade school)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals/Health Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordinated Care Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long term care facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tribes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Public Health Authority/County Health Department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Health Authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Department of Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educational Service District	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other partners (please specify)

* 21. Thinking about your COVID-19 response partners, did your district have existing partnerships, develop new partnerships, or not partner with the following organizations?

	Existing partnership	New partnership	Some existing and some new partnerships	Did not partner
Community Based Organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education - Higher Ed (college, university, trade school)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals/Health Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordinated Care Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long term care facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tribes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Public Health Authority/County Health Department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Health Authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oregon Department of Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educational Service District	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other partners (please specify)

* 22. Aside from COVID-19 funding dispersed by the Oregon Department of Education (ODE), did your district receive any additional COVID-19 specific funding?

- ☐ No
- ☐ Yes
- ☐ Don't know

OR PH Response to Covid-19 - School District Superintendents Survey

23. Aside from ODE funding, what other sources did your district receive COVID-19 specific funding?

OR PH Response to Covid-19 - School District Superintendents Survey

* 24. For each of the following statements about COVID-19 funding received by your district, select which response option best suits you.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
My district received adequate funding for COVID-19 case investigation and contact tracing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My district received adequate funding for COVID-19 testing (e.g., planning, set-up, communications, running testing sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My district received adequate funding for COVID-19 vaccination (e.g., planning, set-up, communications, running vaccination sites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 25. For which of the following areas did your district use COVID-19 funding? (Select all that apply)

- ☐ COVID-19 response planning
- ☐ Contact tracing
- ☐ COVID-19 testing communications
- ☐ School-based screening testing programs
- ☐ Personal Protective Equipment (PPE) distribution
- ☐ Running vaccination clinics at your school
- ☐ Combating vaccine hesitancy
- ☐ Culturally-tailored, population-specific COVID-19 communications
- ☐ Translating federal, state or local COVID-19 communications (e.g., flyers, social media posts, videos, campaigns, etc.)
- ☐ Quarantine/isolation support
- ☐ Wraparound supports
- ☐ Securing other funding
- ☐ Hiring new staff
- ☐ Other (please specify)

* 26. Which of the following, if any, were a barrier to efficient use of COVID-19 funds? (Select all that apply)

- ☐ The length of time it took to receive funds
- ☐ Frequency of receiving funds
- ☐ Reporting requirements associated with the funding source
- ☐ Reimbursement structure or model of funding
- ☐ Spending requirements for funding source (e.g., could only spend money on specific items)
- ☐ Hiring new employees
- ☐ School/district administrative requirements
- ☐ Other (please specify)

- ☐ None of the above

* 27. During any of the phases, did your district worry if you would continue to have enough funds to support your community in managing the COVID-19 pandemic?

	Yes	No	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR PH Response to Covid-19 - School District Superintendents Survey

Public health requirements

* 28. Which of the following public health requirements, if any, did your School District adopt?

- ☐ Masking in public spaces/workplaces
- ☐ Prohibiting public gathering (churches, community events, etc.)
- ☐ Prohibiting indoor dining
- ☐ Prohibiting in person attendance in schools
- ☐ Isolation and quarantine rules
- ☐ None; did not adopt any public health requirements
- ☐ Other (please specify)

OR PH Response to Covid-19 - School District Superintendents Survey

COVID-19 Communication

The next several questions will ask you about communication about public health mandates.

* 29. Which of the following mass-reach communication platforms did your district use to communicate COVID-19 information?

- ☐ District Website
- ☐ Local news stations
- ☐ Social media
- ☐ Radio stations
- ☐ Newspapers
- ☐ My district did not use mass-reach communication platforms
- ☐ Other (please specify)

* 30. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 1 (March - November 2020)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 31. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 2 (December 2020 - August 2021)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Stay-at-home orders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit public gatherings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prohibit indoor dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person school closures (higher ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 32. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 3 (September 2021 - February 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 33. How would you evaluate OHA's communication with the community about the following public health requirements during **Stage 4 (March - July 2022)**?

	Poor	Fair	Good	Excellent	Not applicable to this stage
Isolation and quarantine guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to investigative guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaccine availability and priority populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34. How would you evaluate the Oregon Department of Education's (ODE) communication during the COVID-19 response?

- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Excellent
- ☐ My school district did not receive communication from ODE.

35. How was information received from ODE used to support COVID-19 response in your school district?

* 36. When developing targeted public health messaging, how often did your district do the following:

	Always	Sometimes	Rarely	Never
Make COVID-19 messaging available in multiple languages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging met ADA standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure COVID-19 messaging was written in plain language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 37. What strategies or approaches have you found most effective in communicating with faculty and staff, students, parents, and the community about COVID-19?

* 38. For each stage, did your district have access to local epidemiological data necessary to guide decision making related to COVID-19?

	No	Yes	Unsure
Stage 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 39. During which of the stages, if any, did any entity provide technical assistance to your district to access, understand, or use COVID-19 epidemiological data? (Select all that apply)

- ☐ Stage 1
- ☐ Stage 2
- ☐ Stage 3
- ☐ Stage 4
- ☐ No technical assistance was provided at any time
- ☐ Unsure

OR PH Response to Covid-19 - School District Superintendents Survey

Technical assistance

40. Which entities provided technical assistance?

- ☐ Oregon Health Authority
- ☐ Local Public Health Authority/County Health Department
- ☐ Educational Services District
- ☐ Oregon Department of Education
- ☐ Other (please specify)

OR PH Response to Covid-19 - School District Superintendents Survey

Additional thoughts

41. Please share any additional thoughts on your experience of Oregon's response to the COVID-19 pandemic as an Oregon school district superintendent.



Thank you for taking the time to complete this survey, we really appreciate your perspectives and feedback. Information you've provided will be included in reports on Oregon's public health response to Covid-19 for the Oregon legislature (April 2023 and September 2023). If you have any additional thoughts or questions, please contact Elisabeth Castillo at Rede Group at elisabeth.castillo@redegroup.co. Thanks again!

Appendix G: Detailed Methods

[Appendix G: Detailed Methods](#)

[Study Design](#)

[Qualitative Phase](#)

[Key Informant Interviews](#)

[Focus Groups](#)

[Process Interviews](#)

[Quantitative Phase](#)

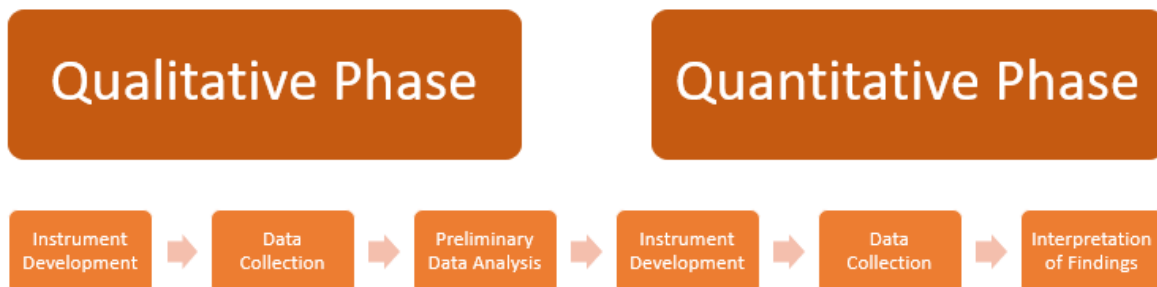
[Survey](#)

Study Design

To ensure we were able to successfully answer the research questions set forth by the Oregon State Legislature, we used an exploratory sequential design for this study, a robust mixed-methods study design. A mixed-methods study design was most appropriate for this study, as it allows the integration of qualitative data to provide an enhanced understanding and interpretation of quantitative findings. With this design, the qualitative phase of the study, including data collection and preliminary analysis, precedes quantitative data collection and analysis. Quantitative data instruments are then informed by qualitative study findings, enhancing the validity of the quantitative measures. A schematic of the study design is presented in Figure 1.

SB 1554 required different study questions for Reports 1 and 2, with several study informants spanning both sets of study questions. To reduce the burden on these study participants, Rede gathered information from participants for both reports during the initial phase of this project (July-Nov. 2022). The detailed methods described in this Appendix cover methods used to gather additional data during the second phase of this study (Dec. 2022-Mar. 2023). For detailed methods of data collected in phase 1 of the study (July-Nov. 2022) please see [Report 1 Appendix G](#).

Figure 1: Study Design Schematic



Qualitative Phase

In the qualitative phase of this study, a variety of data collection methods were used, including individual interviews, group interviews, focus groups, and documents review.

Given the short timeframe to collect, analyze, and report information for Report 2, all qualitative interviews could not be conducted and analyzed prior to survey distribution (the ideal sequence to allow qualitative responses to inform survey development).

Key Informant Interviews

Interview Methodology

Rede engaged a diverse set of participant groups for individual interviews, including Health Care Associations, a Labor Union, School District Superintendents (SDs), Education Service District Superintendents (ESDs), and a Tribal Organization. In total, Rede Group and partners supporting the project conducted a total of 17 interviews (with 21 interviewees) for Report 2 between December 2022 and February 2023, with one ESD interview conducted in the first phase of data collection.

Interview Sampling and Response Rates

Qualitative data is an excellent source of information, but it is both time and resource-intensive to collect. Given the time constraints of this study, it was not possible to interview every person involved in Oregon's Public Health System Response to the COVID-19 pandemic. Therefore, we used both probability and purposeful sampling strategies to reach different informant groups. Stratified random sampling, a type of probability sampling strategy, was also utilized to ensure the representativeness of our evaluation sample to the larger target population and thus, the generalizability of study findings. In stratified random sampling, the study participant groups are divided into mutually exclusive, non-overlapping groups of sampling units called strata. Within each stratum, we

assigned each member of the group a random number and used a random number generator to pull individuals to participate in the study.

Interview Recruitment

The primary method for recruiting interview participants was via email. Recruitment email scripts were written and distributed by Rede staff and partner organizations. If a participant was unresponsive to an initial email, at a minimum, one follow-up email was distributed, and in most cases, multiple follow-up emails and a phone call were made as part of the recruitment protocol.

Before scheduling interviews, Rede requested information from potential interviewees about the length of time in their current position. Given the retrospective nature of this study, this was an important methodological consideration. We requested participation from interviewees that met the following criteria:

1. Interviewees that had been in their current position since March 2020 and involved in COVID-19 response or had been involved in the COVID-19 response within their organization in another position since March 2020.
 - a. If the potential interviewee did not meet the above item 1 criteria, Rede requested an additional interviewee within the organization who had been involved with COVID-19 response at a Director/Administration/leadership level since March 2020.
 - b. If the intended interviewee was unavailable during the data collection timeframe, Rede requested an alternative interviewee at the Director/Administration/leadership level who met criteria 1 above.

Interview Guide Development

Rede staff developed interview guides tailored for each participant group.

Interview Data Collection

Interviews were scheduled for 60 minutes and were conducted by a Rede staff member with experience conducting other interviews for this project. The interviews were conducted via Zoom between Dec. 2022 and Feb. 2023.

Interview Data Transcription & De-identification

Interviews were recorded and uploaded to Rev for professional transcription. Once transcribed, interviews were reviewed for accuracy and de-identified to omit any information that could compromise the confidentiality of participants. De-identification journals were used by the analysts to record omitted information and for consistency in de-identification. Once the transcript was de-identified, the file was relabeled to remove participant names and uploaded to Dedoose qualitative analysis software for coding and analysis. Interview recordings were deleted once the transcript was finalized.

Interviews by Participant Group

Education Serving Labor Union

The study team, in consultation with OHA, identified three labor unions that could inform answers to the study questions. Identifying a contact person and contact information for a person in a leadership position at the labor unions was a challenge as well as receiving a response from the labor unions. Ultimately, the study team conducted one interview with an education-serving labor union for Report 2.

ESD Superintendents

Rede conducted a web search to identify all ESDs in Oregon. In total, there are 19 ESDs. ESDs were reviewed to determine the primary region served. After ESDs were stratified by the primary region served, stratified random sampling was used to select one ESD from each region. In total, Rede conducted five interviews (approximately 26% of ESDs) with representation from each region.

School District Superintendents

For Report 2, the study team conducted interviews with Oregon K-12 public school district superintendents. To identify all Oregon public SD Superintendents and their contact information, Rede went through the ODE website and found the Oregon School Directory 2021-22 (as of July 2022). SDs were reviewed to determine the primary region served. Rede opted for stratified random sampling and randomly selected three SDs from each of the following regions:

- Region 1: Clatsop, Columbia, Washington, Tillamook, Clackamas, Multnomah
- Region 2: Yamhill, Marion, Linn, Polk, Lincoln, Benton
- Region 3: Lane, Douglas, Coos, Curry, Josephine, Jackson
- Region 4: Hood River, Wasco, Sherman, Gillman, Morrow, Umatilla, Union, Wallowa: Baker, Malheur
- Region 5: Jefferson, Wheeler, Grant, Deschutes, Crook, Klamath, Lake, Harney

In an effort to increase SD participation, Rede worked with the Coalition of Oregon School Administrators (COSA) to distribute direct emails to SD Superintendents who were unresponsive to initial email outreach from Rede. In cases where potential interviewees were unresponsive to multiple recruitment attempts, Rede randomly sampled an alternative participant. This occurred with 7 SDs who were randomly selected but unresponsive to recruitment methods.

There were 201 school districts in the Oregon School Directory 2021-22 (as of July 2022). Rede used stratified random sampling to identify 15 (three from each region) SD Superintendents for interviews. Nine interviews were completed with SD Superintendents (4% of the public school districts in Oregon). Figure 2 details the number of SD and ESD interviews conducted by region.

Figure 2: Number SD and ESD Interviews by Region

	Number of SD interviewees	Number of ESD interviewees

Region 1	2	1
Region 2	2	1
Region 3	3	1
Region 4	2	1
Region 5	0	1
Total number of interviews:	9	5

Health Care Associations

Rede conducted one additional interview for Report 2 with a Health Care Association. Rede used online research to find contact information for executive-level leadership within the organization. Rede had previously reached out to this organization and other Health Care Associations during the initial phase (July-Nov. 2022) of this study, however, this organization was previously unresponsive so Rede attempted additional outreach that was successful in phase 2 (Dec. 2022-Mar. 2023).

Tribal Organizations

Rede conducted one additional interview for Report 2 with a Tribal Organization. Rede used online research to find contact information for executive-level leadership within the organization. Rede had previously reached out to this organization and other Tribal Organizations during the initial phase (July-Nov. 2022) of this study, however, this organization was previously unresponsive so Rede attempted additional outreach that was successful in phase 2 (Dec. 2022-Mar. 2023).

Interview Analysis

Each participant group's interview data was analyzed in Dedoose by an experienced analyst. SD and ESD Superintendent transcripts were coded using a single coding tree and themes were assessed across SD and ESDs and for SDs and

ESDs separately. Transcripts for Tribal Organizations and Health Care Associations were analyzed in existing projects and with existing coding trees with other transcripts from the participant groups gathered during phase 1 (July-Nov. 2022) Transcripts were coded and then codes and excerpts were reviewed for key themes and important narratives. The labor union transcript was reviewed for important narratives outside of Dedoose because it was the only interview for this participant group.

Focus Groups

Focus Group Methodology

To increase the number of participants and expand on findings from the individual interviews, Rede engaged participants in focus groups. Focus groups were conducted with Oregon K-12 Public School Principals and School Nurses. The study team conducted a total of six focus groups with 25 participants for Report 2. Two of the focus groups were conducted with School Nurses (8 participants) and four of the focus groups were conducted with Principals (16 participants). Two of the Principal focus groups were conducted with Oregon K-8 Public School Principals (7 participants) and two groups with Oregon grade 9-12 Public School Principals (9 participants).

Focus Group Recruitment

Principals

The study team used purposeful sampling to recruit focus group participants through a partnership with COSA. To boost response rates, focus groups were held at existing meeting times with COSA's board of principal members. COSA informed the study team that the board of K-8 principals and the board of grade 9-12 principals had geographic representation.

School Nurses

The study team used purposeful sampling to recruit focus group participants through a partnership with Oregon School Nurses Association (OSNA). Rede

developed email templates that OSNA distributed through their listserv to school nurses. The study team worked with OSNA to identify the best time of day to conduct the focus groups for this participant group. The recruitment email included a link to a short survey to sign up for one of two focus groups. OSNA sent two reminder emails through their listserv to support the recruitment of focus group participants.

Focus Group Guide Development

The study team developed interview guides for each participant group informed by initial analysis of interviews with SD and ESD Superintendents.

Focus Group Data Collection

Focus groups were scheduled for 90 minutes and were conducted by Rede staff via Zoom in February 2023.

Focus Group Data Transcription & De-identification

Focus groups were recorded and uploaded to Rev for professional transcription. Once transcribed, focus groups were reviewed by the interviewer for accuracy and de-identified to omit any information that could compromise the confidentiality of participants. De-identification journals were used by the analysts to record omitted information and for consistency in de-identification. Once the transcript was de-identified, the file was uploaded to Dedoose qualitative analysis software for coding and analysis.

Focus Group Data Analysis

Principal and School Nurse transcripts were analyzed in Dedoose by an experienced analyst. Transcripts were coded, and codes and excerpts were reviewed for key themes and important narratives.

Process Interviews

Statewide Funding + Expenditures for Public Health Response

Funding to LPHAs, CBOs, Tribal Nations, and Tribal Organizations was originally explored in Report 1. However, the funding documentation that was provided to

Rede was incomplete and we were not able to provide the total funding amounts allocated to the actors in the public health system included in this study. However, Rede did commit to working with OHA after the submission of Report 1 to provide a more complete picture of funding for the pandemic response and include this information in Report 2. OHA was able to provide a list of total funding amounts and FEMA claims for COVID-19 response by OHA, LPHAs, CBOs, Tribal Nations and NARA, and other grantees or direct contracts. Rede met with OHA in a process interview to confirm the amounts and clarify expenditure categories and allowable activities.

Local Epidemiological Capacity + Data

To better understand the COVID-19 data supply chain and databases, Rede conducted a process interview with the COVID-19 Data Analysis and Reporting Manager at OHA. After this process interview, Rede also asked for a technical review of the local epidemiological capacity and data section of the report to ensure that we were accurately describing the databases, the types of COVID-19 data that were collected, and how these data flowed between state, local, and Tribal public health agencies. In OHA's review of the draft section of the report, some inaccuracies were noted and Rede confirmed these corrections with OHA one final time before finalizing Report 2.

Quantitative Phase

Survey

Survey Methodology

Primary data collection for quantitative data was collected via a series of online surveys that were tailored for each participant group. Four unique surveys were distributed to four participant groups (School District (SD) Superintendents, ESD Superintendents, School Nurses, and Principals). Some of the questions and response options on the four surveys were based on responses to questions asked during individual interviews and focus groups with the same participant groups.

Survey Sampling and Data Collection

ESD Superintendents

Rede obtained a list of Oregon ESDs through a web search. The ESD survey was distributed to individual email addresses of ESD Superintendents through SurveyMonkey. Up to three email reminders were sent to unresponsive ESD Superintendents. ESD respondents were excluded from the survey if they had not worked at their ESD for at least six months during one or more of the following school years: 2019-2020, 2020-2021, or 2021-2022. Eight ESD superintendents responded out of the 19 Oregon ESDs, a sample size of 42%.

School District Superintendents + Principals

Surveys were distributed to Oregon K-12 Public School SD Superintendents and Oregon K-12 Public School Principals by COSA through an email listserv previously established for these groups. The email to these groups included a link to the survey. COSA sent a reminder email to each of the listservs to increase survey participation. SD respondents were excluded if they did not work for an Oregon school district for at least six between March 2020-July 2022, and School Principals were excluded if they did not work for an Oregon school for at least six months between March 2020-July 2022. Seventy-one out of 201 SDs responded, a sample size of 35%, and of the approximately 1,160 school principals in Oregon¹ 171 principals completed the survey, a sample size of 15%.

School Nurses

Surveys were distributed to Oregon K-12 Public School Nurses by a representative of the Oregon School Nurses Association (OSNA) through an email listserv previously established for this group. The email to these groups included a link to the survey. OSNA sent a reminder email to each of the listservs to increase survey participation. School Nurses were excluded if they did not work for an Oregon school or school district for at least 6 months between March 2020-July 2022. According to a 2020 report from ODE, there were 376 FTE of nurses reported

¹ National Center for Education Statistics (2012) School and Staffing Survey, table 1. Total number of public school principals and percentage distribution of school principals, by race/ethnicity and state: 2011–12. https://nces.ed.gov/surveys/sass/tables/sass1112_2013313_p1s_001.asp

statewide². Seventy-four nurses submitted completed surveys, for an approximate response rate of 20%.

All four surveys were intended to be open for two weeks for each participant group, however, due to difficulties in getting responses, the surveys were open longer than anticipated as additional recruitment strategies were utilized to gather more responses.

Survey Data Analysis

Survey data was downloaded from Survey Monkey and analyzed within Google Sheets. Partial surveys with at least 25% of questions completed were included in each data set. The primary approach to analysis was descriptive, and when possible, subclass analysis was performed (such as by Region and/or pandemic Stage) except for educational surveys. Educational survey analysis by region and stage will be reported on in Report 3. Charts and other data visualizations were created to aid with data interpretation and highlight key findings. For further details on survey analysis, including regional representation, please review Appendix H: Preliminary Survey Analysis of Report 2.

² Oregon Department of Education (2020). *2020 Nursing Services in Oregon Public Schools*. <https://www.oregon.gov/ode/students-and-family/healthsafety/SiteAssets/Pages/School-Nurses-Annual-Report/2020%20School%20Nursing%20Report.pdf>

Appendix H: Preliminary Survey Analysis

[OR Public Health Response to COVID-19: LPHA Survey Preliminary Analysis: Report 2](#)

[OR Public Health Response to COVID-19: Educational Service District Superintendents Survey Preliminary Analysis](#)

[OR Public Health Response to COVID-19: School Principal Survey Preliminary Analysis](#)

[OR Public Health Response to COVID-19: School District Superintendents Survey Preliminary Analysis](#)

[OR Public Health Response to COVID-19: School Nurse Survey Preliminary Analysis](#)

OR Public Health Response to COVID-19: LPHA Survey

Preliminary Analysis: Report 2

Introduction

For this study, a survey was administered to 118 LPHA staff between August 18 and September 23, 2022. It was sent to a variety of positions within each LPHA, including Administrator, Public Health Director, PH Officer, Communicable Disease Lead, Emergency Preparedness Manager or Coordinator, Public information officer, Equity lead or liaison (if applicable), and Epidemiology lead (if applicable). Forty surveys were submitted, with one respondent being removed due to only completing the demographics section. Including one incomplete survey, a total of 39 surveys are included in the sample representing 18 LPHAs, for a response rate of 33%.

Demographics of survey respondents

Eighty-two percent (n=32) of respondents had been in their role for over six months. Of the seven respondents who had been in their role less than six months, previous positions included: Communicable Disease Investigator, Office Manager, LPHA Director, Nursing Supervisor, Public Health Program Manager, and County public health director.

Across roles, 18 LPHAs are represented in the data. Fourteen respondents selected Public Health Administrator for their role, representing 13 LPHAs.

Characteristics	n (%)
Region	
Region 1	11(28%)
Region 2	12 (31%)
Region 3	4 (10%)
Region 4	9 (23%)
Region 5	3 (8%)
Stage Involvement	
Stage 1 Only	0
Stages 2, 3 & 4	3 (8%)
Stage 3	1 (3%)
Stages 3 & 4	1 (3%)
Stage 4	2 (5%)
All 4 Stages	32 (82%)
Current Role (Respondents could select all that apply)	

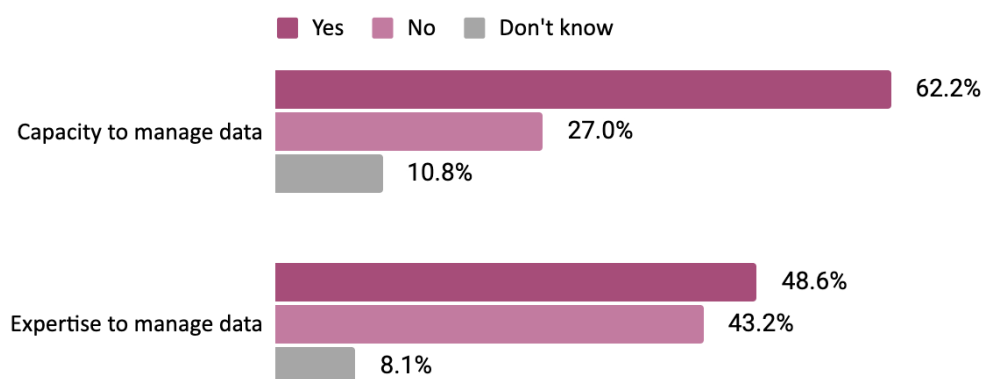
LPHA Administrator	14 (36%)
Emergency Preparedness Manager or Coordinator	10 (26%)
Communicable Disease Lead	9 (23%)
Epidemiology Lead	6 (15%)
Public Information Officer	4 (10%)
Equity Lead or Liaison	4 (10%)
Public Health Officer	3 (26%)
Other	7 (18%)

Local epidemiology capacity

LPHA capacity and expertise

LPHA survey respondents were asked if they had the capacity and expertise to manage COVID-19 epidemiological data locally. The majority of respondents felt they did have capacity, but only about half reported that they have the expertise (Figure 1).

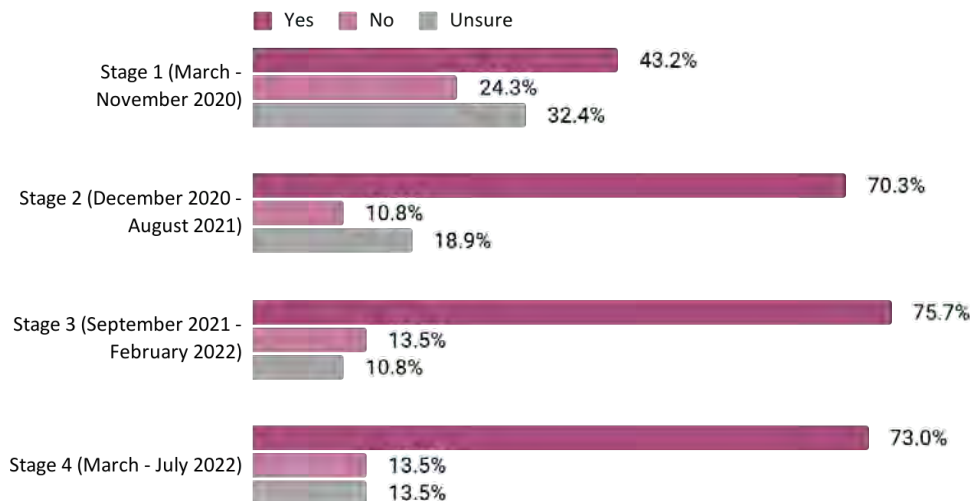
Figure 1: Capacity and Expertise to manage COVID-19 data (LPHA respondents, N=37)



Access to data

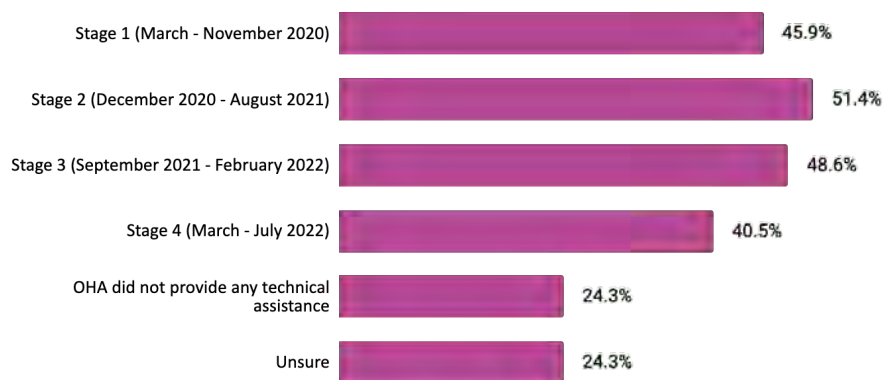
Survey respondents were asked if their LPHA had access to local epidemiological data necessary to guide decision making related to their COVID-19 response. During Stage 1, less than half of LPHA survey respondents reported that they did have the right access, but that jumped up to three quarters of respondents agreeing in Stages 2 through 4 (See Figure 2).

Figure 2: Access to local epidemiological data to guide COVID-19 decision making by stage (LPHA respondents, N=37)



Respondents were also asked if they received any technical assistance from OHA to access, understand, or utilize COVID-9 data (Figure 3). About a quarter of all did not receive any technical assurance from OHA, and another quarter did not know. Forty percent of respondents indicated that they received support from OHA during all four stages.

Figure 3: Stages during which OHA provided TA to LPHAs to access, understand, or use epidemiological data (LPHA respondents, N=37)



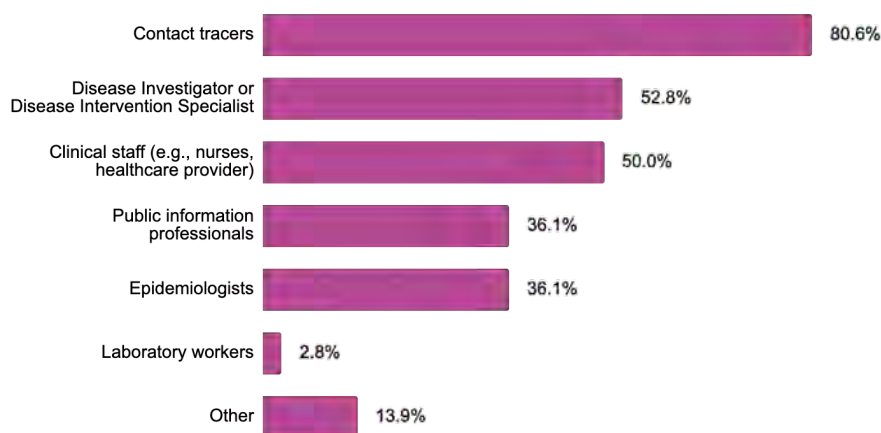
Public Health Staffing

A series of questions were asked on the LPHA survey to gain a better understanding of public health workforce challenges. Respondents reported a range of the number of employees that were hired specifically for COVID-19 response - three respondents indicated they did not hire any additional staff, and the largest number of staff added was eight new employees (reported by seven respondents). The top type of employee hired was contact tracers, as reported by 80.6% (n=29) of respondents (see

Figure 4). A little more than 50% of respondents reported hiring disease investigators, and 50% reported hiring clinical staff. “Other” responses included:

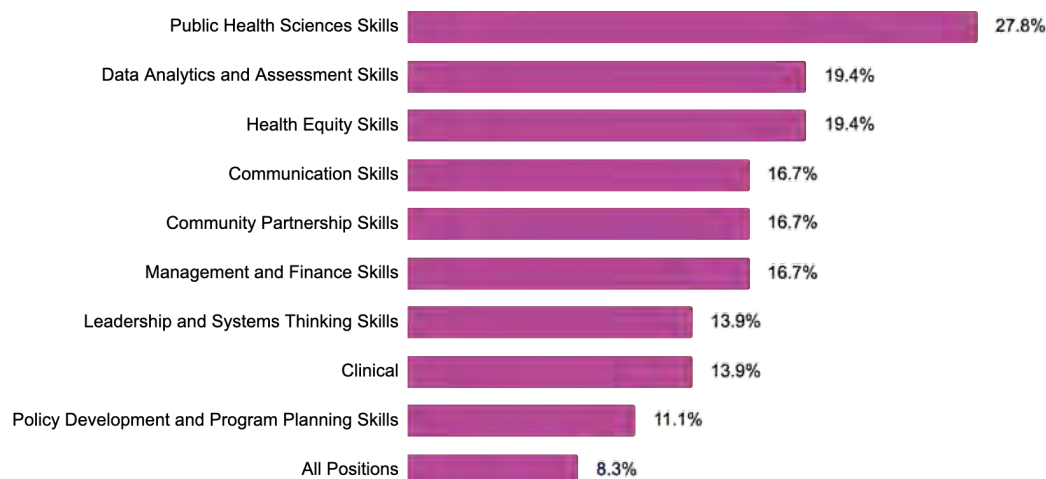
- “logistics folks in the EOC, call center staff, office assistant staff, lots of bilingual staff”
- “Case Investigators, Wrap-around services, vaccine and testing organizers”
- “logistics for all venues (huge crew to set up testing, vaccination -both mass and smaller events). Another huge need was the isolation and quarantine sites, needed lots of contracted staff to run those sites, deliver supplies to I&Q community members. Contracted with motel, cleaning. Case Management specialists to deal with the folks in I&Q, had a lot of issues and needs. Contracted with crowd management and security ppl. Call center- staffed that 7 days/10 hrs, 3-10 ppl, bilingual”
- “wrap around service coordinators”

Figure 4: Employee types hired to meet the needs of COVID-19 response (N=36)



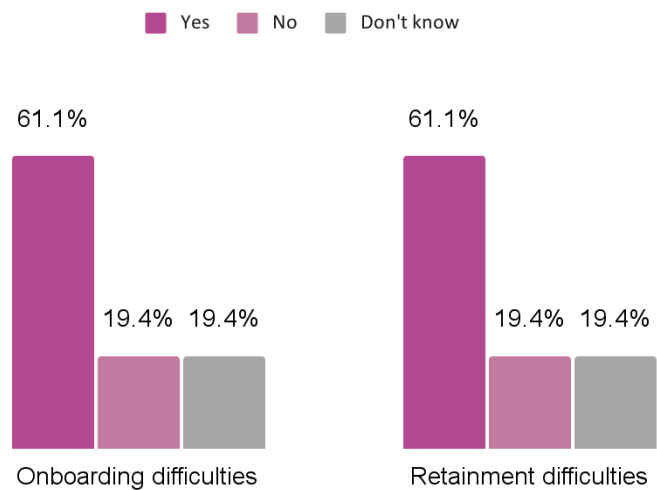
Two-thirds of LPHA respondents (n=24) reported that they had challenges with recruiting public health staff. Three respondents reported difficulty recruiting for all positions. The top skill reported as hard to recruit for was public health sciences skills (27.8%, n=10), followed by data analytics and assessment skills (19.4%, n=7), and health equity skills (19.4%, n=7) (Figure 5).

Figure 5: Skills difficult to recruit for (N=36)



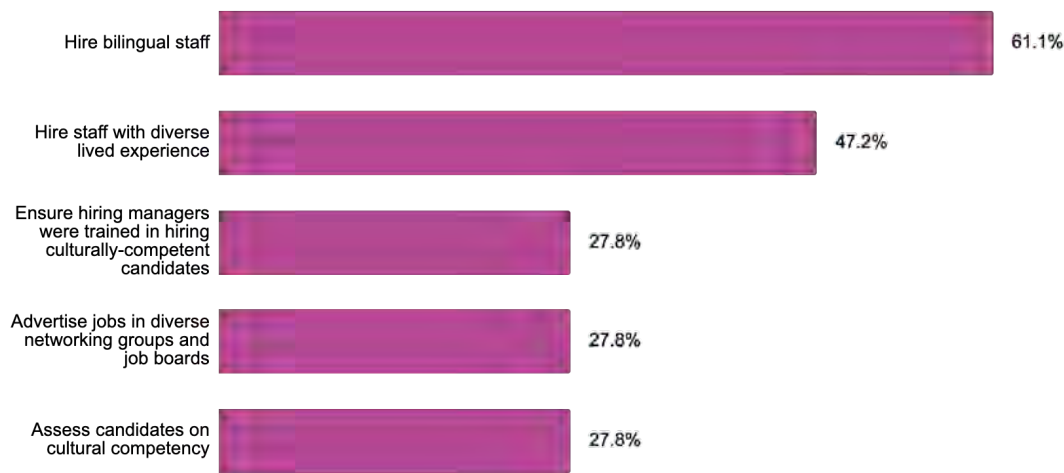
Respondents also reported whether they had difficulties with onboarding and retaining public health staff to respond to the pandemic. The majority of respondents had challenges with both.

Figure 6: Types of staffing difficulties experienced with public health staff to support COVID-19 (N=36)



LPHA survey respondents also shared what types of strategies they utilized to ensure a culturally competent workforce (Figure 7). The top strategy reported was hiring bilingual staff (61.1%, n=22), followed by hiring staff with diverse lived experience (47.2%, n=17).

Figure 7: Strategies employed to ensure culturally competent workforce (N=36)

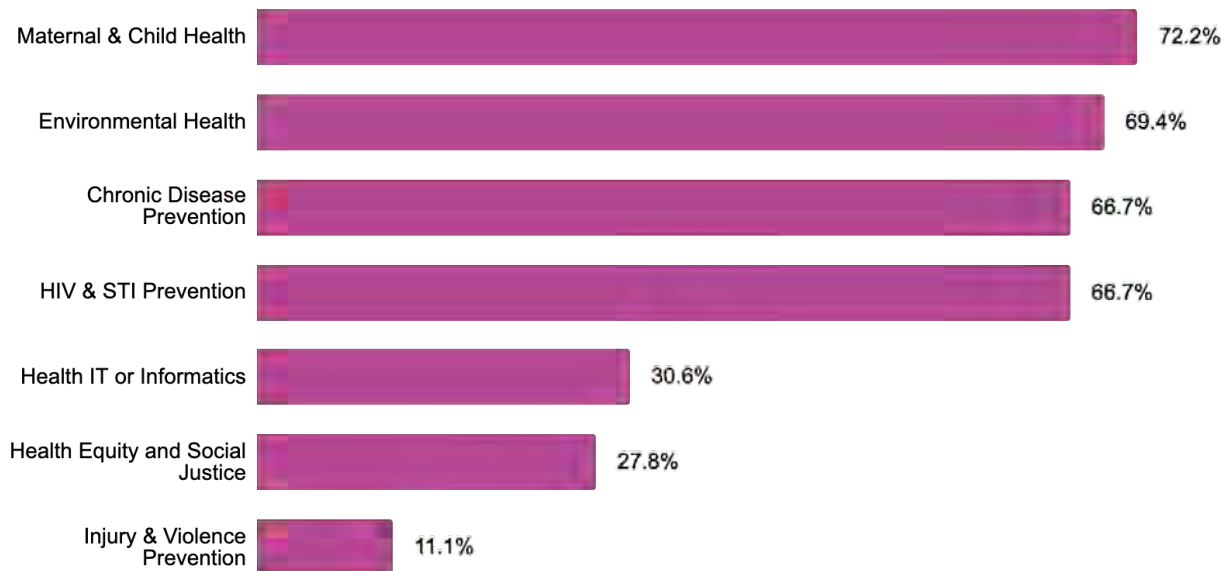


Some respondents added details in response to this question:

- “We live in a county where 98% of our county is white. I'm all for diversity. But the emphasis that is placed on this is challenge.”
- “basically we were hiring 24/7 and training new ppl constantly”
- “I do not think my department did a good job of this”

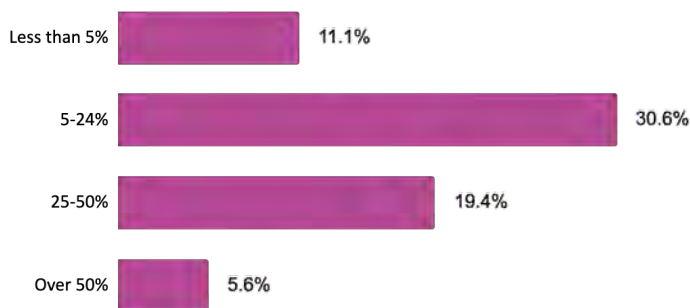
All respondents reported that their LPHA had to reassign employees from their regular duties to support the COVID-19 response (n=36). They shared what program areas they had to pull their employees from, see Figure 8. The top four programs that survey respondents reported employees were pulled from were maternal and child health (72.2%, n=26), environmental health (69.4%, n=25), chronic disease prevention (66.7%, n=24), and/or HIV & STI prevention (66.7%, n=24).

Figure 8: Programs from which employees were pulled to work on pandemic response (N=36)



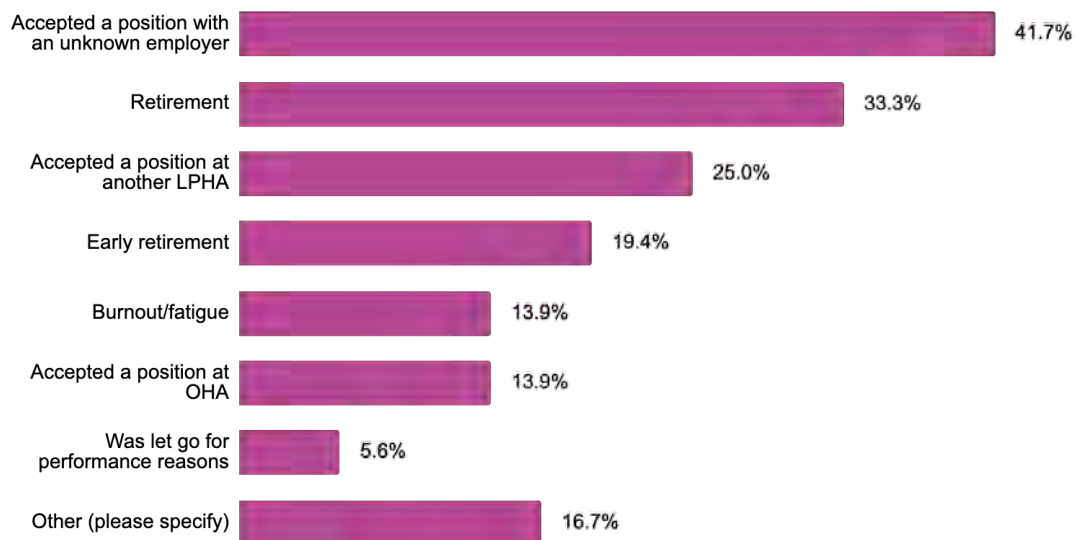
Survey respondents were asked to estimate the percent of permanent staff who left their LPHA between March 2020-July 2022. They were asked specifically not to include temporary or limited duration COVID-19 response staff. Of those who were able to answer this question, none of them reported zero staff leaving. Nearly one-third (n=11) reported between 5-24% of their staff leaving during this period (Figure 9).

Figure 9: Estimated percent of staff who left during COVID-19 response (N=36)



Survey respondents were also asked to share why staff left their LPHA (Figure 10). The top reason reported was that their staff accepted another position with an unknown employer (41.7%, n=15), followed by retirement (33.3%, n=12), accepted a position at another LPHA (25%, n=9), and early retirement (19.4%, n=7).

Figure 10: Why staff left LPHA (N=36)



“Other” responses to the question of why staff left between March 2020 and July 2022 were:

- “Accepted another position - other”
- “CBOs were given funding and recruited our LPHA staff at higher wages.”
- “Workplace stress”
- “Personal reasons”
- “Accepted position at a City”
- “moving out of state and choosing to not work, stay home with kids”

OR Public Health Response to COVID-19: Educational Service District Superintendents Survey Preliminary Analysis

Introduction

For this study, a survey was administered to all 19 Oregon Educational Service District (ESD) Superintendents between **January 24 and February 8, 2023**. Eight survey responses were recorded and included in the sample size, including one partial survey, for a response rate of 42%.

Characteristics of survey respondents

Characteristics	n(%)
Region*	
Region 1	2 (25%)
Region 2	2 (25%)
Region 3	1 (13%)
Region 4	2 (25%)
Region 5	2 (25%)
Role	
Superintendent	5 (63%)
Assistant Superintendent	2 (25%)
Director of Student Services	1 (13%)
Stage involvement	
All stages	7 (88%)
Stages 2, 3, & 4	1 (13%)

*One respondent selected multiple regions so the total equals more than 100%

Emergency preparedness

ESD preparedness

When respondents were asked to evaluate their ESD's overall level of preparedness to respond to the COVID-19 pandemic, 75% (n=6) of respondents felt their district was either moderately or highly prepared; 25% (n=2) of respondents felt their district was minimally prepared. Survey respondents were also asked to reflect on how prepared their district was to transition to distance learning. Five respondents felt their district was moderately prepared, and less than half (n=3) felt they were minimally or not at all prepared.

	Individual level of preparedness	ESD's overall level of preparedness	ESD's preparedness to transition to distance learning
Not at all prepared	1 (12.5%)		1 (12.5%)
Minimally prepared	4 (50%)	2 (25%)	2 (25%)
Moderately prepared	3 (37.5%)	5 (62.5%)	5 (62.5%)
Highly prepared		1 (12.5%)	

Self-preparedness

When asked about their individual level of emergency preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise), five respondents felt that they were not at all prepared or minimally prepared, and 3 felt they were moderately prepared. Respondents reported the following as reasons for their self-assessment:

Moderately prepared:

- *“Was well aware of health response and education response during emergency or risk situations. We had internal mechanisms and protocols to immediately implement. Roll out of plans from ODE was slow for school reopening documents and protocols. Excellent working relationship, collaboration and communication with local health department.”*

Minimally prepared:

- *“While I was certainly familiar with board policy related to communicable disease response, I was not at all prepared to respond to any kind of pandemic.”*
- *“We had a pandemic annex plan for our EOP but no-one knew what that was going to mean!”*
- *“Took emergency and crisis response training (for major catastrophic events) in the late 1990's. Experienced in reading technical, research, and biology courses in college which prepared me to be able to read the science and data as it came from CDC, JAMA, etc.”*
- *“skill in crisis management, but not in the context of health”*

Not at all prepared:

- *“I had not engaged in this activity before.”*

Funding

Two respondents reported affirmatively that their ESD received COVID-19 funding from entities other than OHA, and 5 reported that they did not. Other sources of funding reported by respondents included federal funds and ESSER funds.

Survey respondents were asked to report on what types of activities they used their COVID-19 funding for. Everyone reported spending funding on Personal Protective Equipment distribution. See table below for additional ways ESDs used their COVID-19 funding.

Areas ESD used COVID-19 funding (N=7)	
Personal Protective Equipment distribution	7 (100%)
COVID-19 response planning	6 (85.7%)
Contact tracing	5 (71.4%)
COVID-19 testing communications	5 (71.4%)
Wraparound supports	5 (71.4%)
Culturally-tailored, population-specific COVID-19 communications	4 (57.1%)
School-based screening testing programs	3 (42.9%)
Combating vaccine hesitancy	3 (42.9%)
Translating federal, state or local COVID-19 communications	3 (42.9%)
Quarantine/isolation support	3 (42.9%)
Hiring new staff	3 (42.9%)
Running vaccination clinics at your school	2 (28.6%)
Other (HEPA filters, HVAC)	1 (14.3%)

Over half of respondents agreed or strongly agreed that their ESD received adequate funding for case investigation and contact tracing (n=4), one was neutral, and two respondents disagreed or strongly disagreed. Over half of respondents agreed or strongly agreed that they received adequate funding for testing (n=5), and vaccinations (n=4).

	My ESD received adequate funding for COVID-19 case investigation and contact tracing	My ESD received adequate funding for COVID-19 testing	My ESD received adequate funding for COVID-19 vaccination
Strongly Agree			
Agree	4 (57.1%)	5 (71.4%)	4 (57.1%)
Neutral	1 (14.3%)	1 (14.3%)	
Disagree	1 (14.3%)		2 (28.6%)
Strongly Disagree	1 (14.3%)	1 (14.3%)	1 (14.3%)

Respondents reported that their ESD experienced barriers to the efficient use of COVID-19 funds. Over half of respondents (n=4) identified spending requirements as a challenge. A little less than half (n=3) identified reporting requirements as a challenge, and two respondents reported hiring new employees as challenging.

Barriers to efficient use of COVID-19 funds (N=7)	
Spending requirements for funding source	4 (57.1%)
Reporting requirements associated with the funding source	3 (42.9%)
Hiring new employees	2 (28.6%)
The length of time it took to receive funds	1 (14.3%)
Reimbursement structure or model of funding	1 (14.3%)
None of these	1 (14.3%)

With the exception of Stage 1 of the pandemic, the majority of respondents were not concerned they did not have enough funding to support their community. During Stage 3, no respondent was worried about running out of funds. One respondent was unsure across all stages.

ESD worried about having enough funds to support community in the COVID-19 pandemic (N=7)				
	Stage 1 (March - Nov 2020)	Stage 2 (Dec 2020 - Aug 2021)	Stage 3 (Sept 2021 - Feb 2022)	Stage 4 (March - July 2022)
Yes	3 (42.9%)	2 (28.6%)		2 (28.6%)
No	3 (42.9%)	4 (57.1%)	6 (85.7%)	4 (57.1%)
Unsure	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)

Epidemiology Data Access

Survey respondents were asked if they had access to local epidemiological data to guide their COVID-19 decision making. In Stage 1, only about half respondents reported that they did not have access to local data. But for Stages 2-3, all respondents felt they did have access to local data to guide decision making, and in stage all but one respondent felt they have access.

ESD had access to local epidemiological data necessary to guide decision-making related to COVID-19 (N=7)				
	Stage 1	Stage 2	Stage 3	Stage 4
No	3 (42.9%)			1 (14.3%)
Yes	3 (42.9%)	7 (100%)	7 (100%)	6 (85.7%)
Unsure	1 (14.3%)			

Respondents were also asked if they received technical assistance (TA) to access, understand, or use epidemiological data. The majority of respondents reported receiving TA during every stage of the pandemic.

ESD received technical assistance to access, understand, or use COVID-19 data (N=7)	
Stage 1	6 (85.7%)
Stage 2	7 (100%)
Stage 3	5 (71.4%)
Stage 4	5 (71.4%)

Respondents who reported receiving TA were also asked what entities they received support from. TA was provided by local health departments, Educational Service Districts, and OHA.

Entities that provided technical assistance (N=7)	
Oregon Health Authority	5 (71.4%)
Local Public Health Authority	7 (100%)
Educational Services District	5 (71.4%)

COVID-19 Response Activities- K-12

Formal Pandemic Response:

Respondents were asked when their ESD began their formal COVID-19 response in K-12 schools. The majority of respondents (62.5%, n=5) reported that they began their response the date of Oregon's emergency declaration, two respondents said they began their emergency response the date of the federal emergency declaration, and one respondent wrote in, "We started to prepare in Jan and Feb as we knew it was spreading."

Overall Response:

Respondents shared ways their ESD responded to the pandemic in K-12 schools. All respondents reported facilitating the distribution of PPE to their school community and transitioning to distance learning.

Ways ESD responded to the COVID-19 pandemic in K-12 schools (N=8)	
Facilitate distribution of PPE to students and teachers	8 (100%)
Transition to distance learning	8 (100%)
Perform COVID-19 monitoring and contact tracing	7 (87.5%)
Develop and conduct outreach strategies specific to the needs of your school population	7 (87.5%)

Disseminate COVID-19 information to the community	7 (87.5%)
Ensure access to accurate and timely COVID-19 information in multiple languages	5 (62.5%)
Provide vaccination clinics at schools	3 (37.5%)
Other (Offered summer school outdoors, offered devices, tech support to families)	1 (12.5%)

When asked if they had to update policies to transition to distance learning, half of respondents (n=4) said they changed policies, and half (n=4) said they did not change or create new policies.

Rating of ESD's response to COVID-19 in K-12 schools:

Respondents were asked to evaluate how well they felt their ESD's response to the COVID-19 pandemic was during each stage. In all Stages, respondents rated their ESD as doing good or excellent. In Stage 1, one respondent was not working at their ESD at that time.

Rating of ESD's response to the COVID-19 pandemic in K-12 schools during each stage (N=8)				
	Stage 1	Stage 2	Stage 3	Stage 4
Poor				
Fair				
Good	6 (85.7%)	5 (63.5%)	6 (85.7%)	6 (85.7%)
Excellent	1 (12.5%)	3 (37.5)	2 (25%)	2 (25%)

Rating of Oregon's response to COVID-19 in K-12 schools:

Survey respondents were asked to rate the state of Oregon's management of the pandemic response to COVID-19 in schools during each stage. Half of respondents (n=4) reported Oregon as fair in Stage 1, and the majority of respondents (n=5) rated Oregon fair in Stages 2, 3 and 4.

Rating of Oregon's response to the COVID-19 pandemic in K-12 schools during each stage (N=8)				
	Stage 1	Stage 2	Stage 3	Stage 4
Poor				
Fair	4 (50%)	5 (63.5%)	5 (63.5%)	5 (63.5%)
Good	2 (25%)	1 (12.5%)	2 (25%)	2 (25%)
Excellent	2 (25%)	2 (25%)	1 (12.5%)	1 (12.5%)

Technical Assistance

All respondents reported receiving technical assistance to inform their COVID-19 response activities. A variety of entities provided TA to school districts to inform their COVID-19 response efforts. All respondents (n=8) received TA from their local public health authority and the Oregon Department of Education, and the majority of respondents (n=7) received TA from the Oregon Health Authority.

Entities that provided TA to ESDs (N=8)	
Local Public Health Authority	8 (100%)
Oregon Department of Education	8 (100%)
Oregon Health Authority	7 (87.5%)
Health Care Partner	3 (27.5%)
Local school districts	2 (25%)
Other (Oregon Association of ESDs)	1 (12.5%)

Respondents were also asked about their use of a variety of resources. All respondents reported using ODE's Ready School, Safe Learners Resiliency Framework, and OHA/ODE's Communicable Disease Guidance.

Resources utilized by ESDs (N=8)	
Ready Schools, Safe Learners Resiliency Framework	8 (100%)
OHA/ODE Communicable Disease Guidance	8 (100%)
Equity Decision Tools for School Leaders	7 (87.5%)
ODE Communications Toolkit	7 (87.5%)
ODE Individualized COVID-19 Recovery Services Guidance	6 (75%)
Oregon School Nurses COVID-19 Toolkit 2022-2023	5 (62.5%)

Communications

All respondents reported providing public health messaging through mass media communication methods. All respondents (n=7) provided information on their websites and nearly half (n=3) through social media and in newspapers.

Mass-reach communication platforms ESD used to communicate COVID-19 information (N=7)	
District Website	7 (100%)
Social media	3 (42.9%)
Newspapers	3 (42.9%)
Local news stations	2 (28.6%)
Radio stations	1 (14.3%)

Five respondents responded affirmatively that their ESD developed and disseminated COVID-19 public health messaging. These five respondents were also asked to reflect on how their district incorporated accessibility standards into their public health messaging. All respondents (n=5) reported that COVID-19 messaging was always or sometimes written in plain language and that messaging was always or sometimes available in multiple languages. Most respondents (n=4) reported that messaging always or sometimes met ADA standards, and one respondent reported that messaging never met ADA standards.

	Make COVID-19 messaging available in multiple languages	Ensure COVID-19 messaging met ADA standards	Ensure COVID-19 messaging was written in plain language
Always	20%	40%	60%
Sometimes	80%	40%	40%
Rarely			
Never		20%	

All respondents rated the Oregon Department of Education's communication during pandemic response. The majority of respondents evaluated ODE favorably, with all but one respondent (n=6) selected good or excellent. Only one person rated ODE's communications as fair.

Survey respondents were asked to rate OHA on their communication with the community about a variety of public health requirements that were implemented by stage. Note that for in-person school closure (higher ed) in Stage 1, three respondents selected "Not applicable to stage," and in Stage 2, two respondents selected "Not applicable to stage."

Evaluation of OHA's communication with the community about the following public health requirements during Stage 1 (March - November 2020) (N=7)							
	Stay-at-home orders	Prohibit public gatherings	Prohibit indoor dining	In-person school closures (K-12)	In-person school closures (higher ed)	Isolation and quarantine guidance	Mask mandates
Poor							
Fair	2 (28.6%)	1 (14.3%)	2 (28.6%)	1 (14.3%)	1 (14.3%)	2 (28.6%)	3 (42.3%)
Good	5 (71.4%)	5 (71.4%)	4 (57.1%)	6 (85.7%)	3 (42.3%)	4 (57.1%)	3 (42.3%)
Excellent		1 (14.3%)	1 (14.3%)			1 (14.3%)	1 (14.3%)

Evaluation of OHA's communication with the community about the following public health requirements during Stage 2 (December 2020 - August 2021) (N=7)									
	Stay-at-home orders	Prohibit public gatherings	Prohibit indoor dining	In-person school closures (K-12)	In-person school closures (higher ed)	Isolation and quarantine guidance	Mask mandates	Vaccine availability and priority populations	Lifting restrictions
Poor									
Fair	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	2 (28.6%)	2 (28.6%)	2 (28.6%)	3 (42.9%)
Good	5 (71.4%)	5 (71.4%)	4 (57.1%)	6 (85.7%)	4 (57.1%)	4 (57.1%)	4 (57.1%)	4 (57.1%)	4 (57.1%)
Excellent			1 (14.3%)			1 (14.3%)	1 (14.3%)	1 (14.3%)	

Evaluation of OHA's communication with the community about the following public health requirements during Stage 3 (September 2021 - February 2022) (N=7)				
	Isolation and quarantine guidance	Mask mandates	Vaccine availability and priority populations	Lifting restrictions
Poor				
Fair	3 (42.9%)	2 (28.6%)	3 (42.9%)	4 (57.1%)
Good	3 (42.9%)	4 (57.1%)	3 (42.9%)	3 (42.9%)
Excellent	1 (14.3%)	1 (14.3%)	1 (14.3%)	

Evaluation of OHA's communication with the community about the following public health requirements during Stage 4 (March - July 2022) (N=7)				
	Isolation and quarantine guidance	Changes to investigative guidelines	Vaccine availability and priority populations	Lifting restrictions
Poor		1 (14.3%)	1 (14.3%)	1 (14.3%)
Fair	5 (71.4%)	4 (57.1%)	3 (42.9%)	3 (42.9%)
Good	1 (14.3%)	2 (28.6%)	2 (28.6%)	3 (42.9%)
Excellent	1 (14.3%)		1 (14.3%)	

Partnerships

Respondents engaged in many COVID-19 public health response activities with partners.

Types of COVID-19 response activities ESD's partnered on with community, education, and health organizations (N=7)					
	Community Based Organizations	Higher Education	Hospitals/Health Systems	Coordinated Care Organization	Long term care facilities
Response planning	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)
COVID-19 testing	1 (14.3%)	1 (14.3%)	4 (57.1%)	2 (28.6%)	
PPE distribution	3 (42.9%)		1 (14.3%)	2 (28.6%)	1 (14.3%)
Vaccine clinics	2 (28.6%)		5 (71.4%)	2 (28.6%)	
Targeted health equity response	3 (42.9%)				
Population specific communications	4 (57.1%)				
Enforcement	2 (28.6%)		1 (14.3%)		
Did not partner	2 (28.6%)	5 (71.4%)		4 (57.1%)	6 (85.7%)

Types of COVID-19 response activities ESD's partnered on with government agencies (N=7)				
	Tribes	Local Public Health Authority	Oregon Health Authority	Oregon Department of Education
Response planning	1 (14.3%)	6 (85.7%)	6 (85.7%)	6 (85.7%)
COVID-19 testing	1 (14.3%)	5 (71.4%)	1 (14.3%)	2 (28.6%)
PPE distribution	2 (28.6%)	4 (57.1%)	1 (14.3%)	3 (42.9%)
Vaccine clinics	1 (14.3%)	6 (85.7%)	1 (14.3%)	1 (14.3%)
Targeted health equity response	2 (28.6%)	4 (57.1%)	1 (14.3%)	3 (42.9%)
Population specific communications	1 (14.3%)	3 (42.9%)	3 (42.9%)	3 (42.9%)
Enforcement		5 (71.4%)	4 (57.1%)	4 (57.1%)
Did not partner	3 (42.9%)		1 (14.3%)	

ESD survey respondents developed some new relationships with partners during COVID-19 response, but had many existing partnerships pre-pandemic.

Types of partnerships for COVID-19 response (N=7)				
	Existing partnership	New partnership	Some existing, some new	Did not partner
Community Based Organizations	3 (42.9%)		2 (28.6%)	2 (28.6%)
Higher Education	3 (42.9%)		1 (14.3%)	3 (42.9%)
Hospitals/Health Systems	2 (28.6%)	1 (14.3%)	2 (28.6%)	2 (28.6%)
Coordinated Care Organization	2 (28.6%)		2 (28.6%)	3 (42.9%)
Long term care facilities	1 (14.3%)			6 (85.7%)
Tribes	3 (42.9%)		1 (14.3%)	3 (42.9%)
Local Public Health Authority	3 (42.9%)	1 (14.3%)	3 (42.9%)	
Oregon Health Authority	1 (14.3%)	2 (28.6%)	3 (42.9%)	1 (14.3%)
Oregon Department of Education	6 (85.7%)		1 (14.3%)	

OR Public Health Response to COVID-19: School Principal Survey Preliminary Analysis

Introduction

For this study, a survey was administered to Oregon School Principals between **January 23 and February 10, 2023**. There were 220 surveys recorded; 49 respondents were removed due to only completing less than 25% of the questions. Including 42 partial surveys (at least 25% complete), a total of 171 surveys are included in the data set. Because partial surveys are included, sample sizes may change for each data point.

Characteristics of survey respondents (N=171)

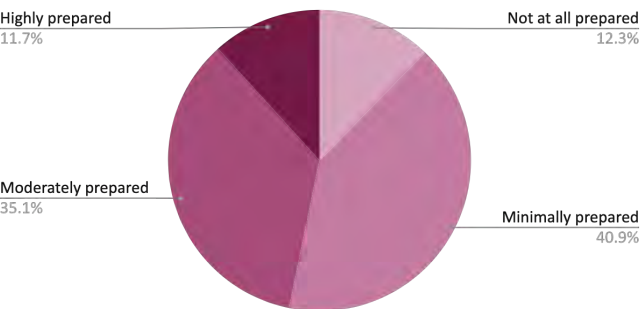
Characteristics	n(%)	Characteristics	n(%)
Region		Role	
Region 1	59 (35%)	Principal	129 (75%)
Region 2	31 (18%)	Vice principal	33 (19%)
Region 3	33 (19%)	Other administrative role	6 (4%)
Region 4	28 (16%)	Other	3 (2%)
Region 5	20 (12%)		
		Stage involvement	
Grades served		Stage 1 only	1 (1%)
Pre K-12	3 (2%)	Stages 1 & 2	2 (1%)
K-12	5 (3%)	Stages 1, 2, & 3	1 (1%)
Pre K-5	3 (2%)	Stages 2 & 3	2 (1%)
K-5	42 (25%)	Stages 2, 3 & 4	5 (3%)
K-6	4 (2%)	Stages 3 & 4	7 (4%)
K-8	17 (10%)	Stage 4 only	1 (1%)
6-8	37 (22%)	All Stages	152
7-12	7 (4%)		
9-12	43 (25%)		
Other	10 (6%)		
Type of school			
Public school	162 (95%)		
Charter	7 (4%)		
Other	2 (1%)		

Emergency preparedness

School preparedness

When respondents were asked to evaluate their school's overall level of preparedness to respond to the COVID-19 pandemic, 11.7% (n=20) felt that their school was highly prepared, and another 35.1% (n=60) felt their school was moderately prepared (Figure 1). A little over half of respondents (53.2%, n=91) felt that their school was minimally or not at all prepared.

Figure 1: School preparedness for COVID-19 pandemic (School Principal respondents, N=171)



Survey respondents were also asked if their school had an Emergency Operations Plan (EOP) and/or a Communicable Disease Management Plan. Half of respondents (49.7%, n=85) said that their school did not have an EOP before the pandemic but developed one after the start of the pandemic, and almost half (43.9%, n=76) said their school already had one (Figure 2). Only 6.4% of respondents (n=11) did not know about the existence of an EOP. Almost half of respondents (44.4%, n=76) said there was a Communicable Disease Management Plan in existence prior to the pandemic, and half (49.7%, n=85) created one once the pandemic began (Figure 3). Notable, one respondent stated that their school did not have a Communicable Disease Management Plan.

Figure 2: Which of the following best describes the existence of a School Emergency Operations Plan (EOP) at your school? (N=171)

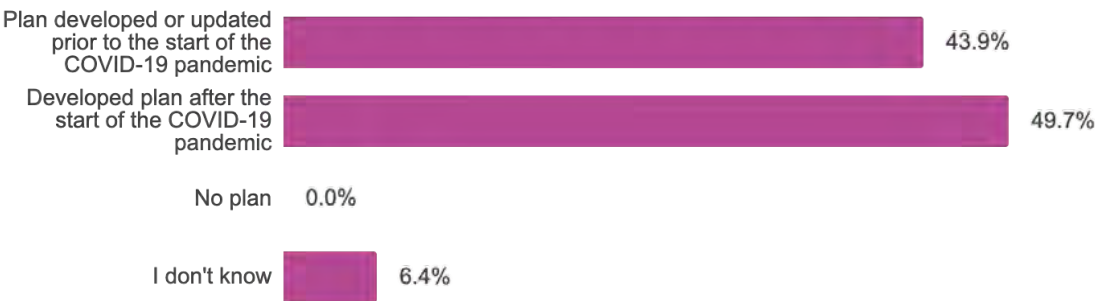
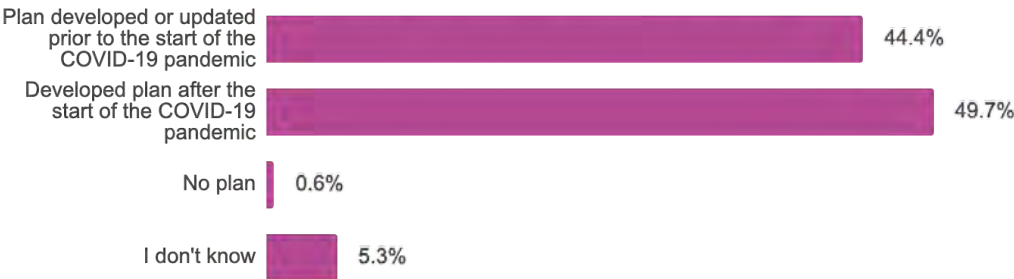


Figure 3: Which of the following best describes the existence of a Communicable Disease Management Plan at your school? (N=171)

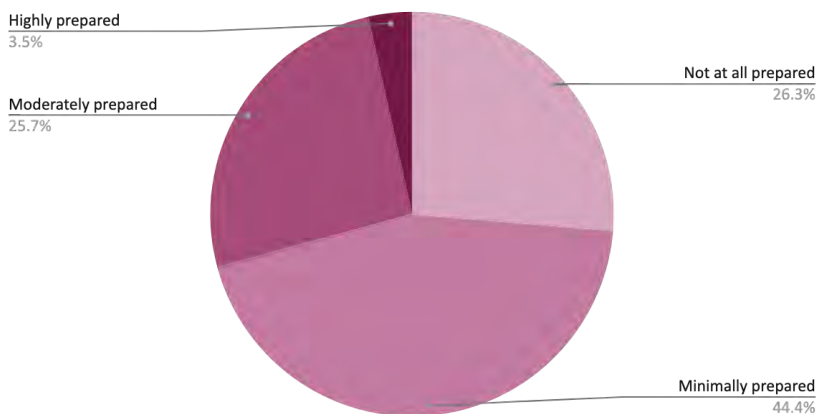


Self-preparedness

When asked about their individual level of emergency preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise), almost three-quarters of respondents felt that they were not at all prepared or minimally prepared (70.8%, n=121). Only six respondents felt highly prepared.

Respondents reported the following as reasons for their self-assessment:

Figure 4: Self-preparedness for COVID-19 pandemic (School Principal respondents, N=171)



Highly prepared:

- *We were informed all along the way by our district and state officials about how to manage our schools following the most up to date guidelines. Our folks communicated well and thoroughly.*
- *I met with our county health department weekly and was involved in designing and implementing our district's pandemic plan.*
- *We had multiple trainings on proper procedures for staff and students. I also have a healthcare background so I am comfortable and familiar with the expectations.*
- *The biggest problem facing someone in a major crisis is that nobody has experience dealing with it so there is no one to lean on or learn from. After going through I feel highly prepared to be able to use that experience to have better support and outcomes if another major crisis occurred.*
- *Response to the pandemic did not require anything out of my skill set.*
- *I felt that our Superintendent and district staff did an amazing job at keeping building principals up to date with the latest information.*

Moderately prepared:

- *I have had extensive emergency preparedness training as a private citizen.*
- *We practice fire escape procedures, lock downs, lock outs, earthquake procedures, but never anything like the expectations for the pandemic.*
- *I had some emergency preparedness coming from Washington state. I was able to use a lot of that information, however there were some differences and needed to become informed on Oregon regulations.*
- *Our admin team worked with school nurse and county health department to develop our plan.*
- *My first aid trainings every year gave me a working knowledge of disease spread.*

- *The superintendent had weekly meetings between school principals and the health department and gave us specific guidance on our roles.*
- *We had a good team in place that was in a place where pivoting wasn't seen as a massive stressor. It was a challenge to set up, but the staff was ready and willing. No one is fully prepared for what happened, but our team moved on willingly and positively.*
- *Just finished an administrative program in May 2020. We finished during the beginning of the pandemic and part of the requirements were to create a Crisis Response Plan.*
- *We took extensive time building and implementing a plan, based on the templates and examples of others, and the knowledge and expertise from ODE and the county health department.*
- *We are a 1-to-1 district, so all my students had Chromebooks. The biggest learning curve was about learning to use Zoom and teaching families how to use Zoom.*
- *Before education I have been trained in All Risk Incident Response through the USDA Forest Service and FEMA*
- *There was a plan for moving to distance learning, how to operate in schools and plan for hybrid learning according to OHA and CDC guidance.*
- *Our school district helped us prepare for information communication, building setup, sustaining safety protocols*
- *I've been involved and even taught emergency preparedness courses for decades.*
- *I knew that there would be a lot of logistics and I was prepared for the amount of work we would need to do and the decisions that would need to be made, but I didn't have any of the materials or PPE to put an immediate plan into action.*
- *My wife is in health care and could explain a lot about the reasoning.*
- *I had already help reopen schools in Texas.*
- *10 years as a school administrator, with a focus on school safety preparedness, gave me additional skills for this*
- *I have water, food and other emergency supplies stored. I know basic medical/emergency care and have a network of neighbors who prepare for events.*
- *We had clear hierarchy for decision making and a model for collaborative leadership. The pandemic strained our system, to be sure, but we were primed to respond well.*
- *We are always crisis prepared and we have closed the district down in November 2019 for norovirus outbreak. This was just unique.*
- *As a virtual school that has to set up and tear down learning centers each week, cleaning protocols were already in place. Also, leasing church facilities means many other systems were already in place.*
- *We had PPE, social distancing, masks, and other measures in place. We are also in a new building with adequate HVAC systems.*
- *We are one-to-one Chromebooks and our curriculum has online components, so we were able to pass out Chromebooks by appointment and teachers taught virtually from their classrooms. We were able to get exposure limiting procedures in place during the initial closure period.*
- *My special education background means I must be prepared for multiple emergencies. After many years of working with a medically fragile population, I had a heightened awareness.*
- *The constantly changing requirements and varied information made it difficult to feel highly prepared.*

- *I did my own research and knew that Covid was not as dangerous as our health dept. was saying. I felt fully prepared for the response that SHOULD have taken place.*
- *We had health protocols in place for other infectious diseases.*
- *We currently have a safety plan and position dedicated to the planning and implementation of the safety regulations. We train staff and practice our protocols with the students.*
- *COVID caught us all off guard. The training couldn't have come fast enough.*
- *Everything was new for me and it was a new time for many processes.*
- *I think everyone did the best they could based on the circumstances. It was hard to manage at the school level and we tried to roll with the many changes (daily) as best we could.*
- *I don't think anyone was more than moderately prepared. I was more prepared for the pandemic, but less prepared for our state governments decisions surrounding the pandemic*
- *We have strong collaboration across our District and with healthcare providers in the community, so I always felt like we were one step ahead of the curve.*
- *Our district responded quickly and appropriately. something in between moderately and highly prepared is where we were at.*
- *I was aware of tech apps and involved with teg integration. Our school was already one-to-one devices. I was also very aware with google classroom.*
- *Our district had a pretty good response and communication system to keep me up to date.*

Minimally prepared:

- *Our county was not prepared for the technology challenges of the pandemic, but I feel the health side was handled well.*
- *Our emergency preparedness focuses more on school shooter, emergency evacs and reunification, earthquakes. Things that in the past were much more likely.*
- *The emergency communication from the nation kept changing. No plans for PPE, hand sanitizer, etc... out of many needed things from the nation.*
- *Have never experienced anything like this.*
- *I was nearly completely unaware of how a pandemic could happen and the massive disruption to typical society it could cause.*
- *We had never experienced an emergency closure for any reason, so "Not at all prepared" may be more accurate. I selected "minimally prepared" due to the fact that I am fluent in educational technology and was able to adapt more quickly than some others.*
- *School I worked at was in Grant County, small county and small community. Health Department did their best as the process started but hard to be prepared for what eventually unfolded.*
- *No prior training on public health issues, but training on general crisis response as part of the admin job.*
- *I had basic training and experience in emergency preparedness, but zero in pandemic response.*
- *With all of the medicine and planning didn't think we'd ever get to a pandemic state.*
- *Information was being provided at an incredibly rapid rate, changing constantly. It made it nearly impossible to be prepared in any way for the constant guidance changing.*
- *This was unlike any situation we'd ever experienced.*

- *We have an excellent School Nurse and a School Business Manager and both have strong organizational skills. Without these two staff members we would have been not at all prepared.*
- *Only an issue because the regulations kept changing, so it was had to stay prepared.*
- *It is the first time in my professional career of 20ish years, that there was a need on this scale.*
- *To just say emergency preparedness is different than what we had to do to prepare for Covid. Emergency preparedness in general yes. To live in a pandemic long term is not the same. In looking at the questions below, there was so much more to Covid than having a Communicable Disease Plan. The long term planning for Covid is way different. Our plan helped support the process, but it required more to prepare for and stay in Comprehensive Distance learning.*
- *There was a lot that I and my colleagues had to learn regarding protocols, prevention, adapting educational instruction, seeing to social and emotional learning, etc.*
- *I had no awareness of the scale, potential duration and impact of the situation.*
- *I had an old binder that referred to response to SARS. Before being advised by the district, I knew to have science teachers give handwashing lessons to students and I cancelled evening events before the district started canceling events.*
- *I was aware of the history of some previous epidemics and pandemics, but did not have direct experience with them, nor did I have any training to do so.*
- *I had read about various pandemics, but was unclear how we, as a school or district should respond.*
- *We had never thought that something of this magnitude would ever happen, so why would I have prepared for this?*
- *I have basic training from years in working in schools, but it wasn't pandemic specific.*
- *Such an event was unprecedented for our generation of professional educators. Furthermore, it felt that the nature of the pandemic was consistently changing and mutating, thus making it very difficult to respond to. What was true in one training, changed in the next version.*
- *This type of pandemic was new for all of us and I did not have a background in responding to emergencies like this one.*
- *I knew we had a plan and knowledgeable of the district plan. Also, was working district wide on working through severe flu bug in the Fall. But the COVID response was so different and specific I was not ready for that.*
- *I received some training on emergency response protocols in a previous role.*
- *We had prepared for natural disasters.*
- *Pandemic prep was not really addressed before COVID.*
- *Some knowledge of what to do with a flu outbreak, etc...*
- *We had prior plans in place for contagious disease management in public schools - so there was some template for exclusion, etc.*
- *We did not have any PPE and had almost no experience with working with our county health department.*
- *Was anyone really ready?*
- *Had no idea what it would look like in the stages of the pandemic in terms of leadership and logistics.*
- *Although we had emergency preparedness plans - they did not include plans around a pandemic and everything included in that with masking, quarantine, distance learning, etc.*

- *I have a background in medicine and health education. I have advanced training in leadership and trauma.*
- *This was all new to everyone but I read everything that came out so I felt more prepared than others.*
- *No training.*
- *I was a microbiologist before becoming a science teacher. I have worked emergency response in the past.*
- *Some general health knowledge that made sense was utilized.*
- *Prior to the pandemic, as a district we practiced a handful of scenarios throughout the years. Fortunately, we had practiced response to communicable diseases and pandemics months prior and had a strong communication system.*
- *The state did not provide adequate time for our school to prepare. We did not have technology ready to teach in a distance format. Also, our staff was not prepared upon return for what we encountered (return to school).*
- *We had ideas of how online school might look, but found that we were not prepared for how complex that would be.*
- *My degree is in English and Education. I have training in emergency response, but it was for things like fire and reunification. I also have minimal training in conflict resolution, which was helpful.*
- *We didn't teach, love, or move this way in elementary. Many practices were meant to bring kids together and to be pandemic prepared we needed to rethink it all. Keeping them safe meant isolating and separating.*
- *We had never prepared for a pandemic. Other school safety yes, small disease outbreaks yes, not this.*
- *We are asked to think through all kinds of emergency response, and while pandemic wasn't on the list we normally think of, some of the response tools and ways of problem solving were in place.*
- *I had some basic necessities, but didn't have masks readily available*
- *Can you really be prepared? Plus the rules kept changing.*
- *I have experience working with public health in a different setting, but I needed training and guidance on disease mitigation in a school setting.*
- *Minimal training for a health pandemic.*
- *Guidance was changing frequently and communication was overwhelming.*
- *We never thought pandemic.*
- *Was anyone prepared for that?*
- *We had never experienced a pandemic.*
- *Basic Pandemic protocols were in place*
- *We had an understanding that the pandemic had started and was expected in the US. We canceled an international trip, and a cross-country trip that were traditions, but we were expecting a 4 week shut down and a return to school in April.*
- *This was something very new. We learned a lot of information in a short period of time.*
- *Working in trauma informed practices before COVID.*

Not at all prepared:

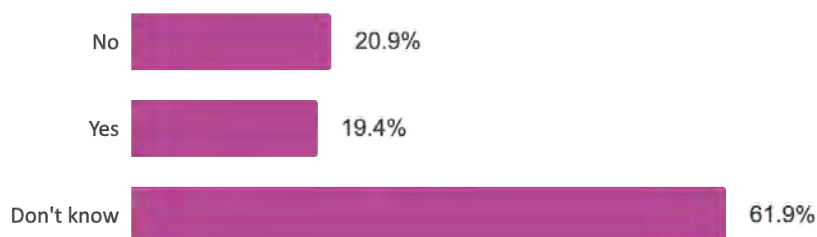
- *Shutting down a school and everything that comes with it was beyond my wildest imagination. I don't think anyone could say they were highly prepared for what we all went through.*
- *I was new to the position and had limited knowledge/experience related to the school response systems.*
- *We had no idea how to respond to a global pandemic. There was no amount of readiness as a building leader.*
- *Had never been involved in a pandemic, and lots of changing information.*
- *I felt like we had never seen anything like the response to the pandemic in March 2020 and were not well prepared to transition to online learning*
- *Was anyone prepared to the extent that we learned was needed? We have learned so much since the beginning!*
- *This was a brand new health crisis that really no one had experience in knowing how to manage.*
- *The thought that this could really happen never crossed my mind.*
- *Not prepared for a pandemic in my coursework or educational experience.*
- *I am a trained educator, not a public health professional.*
- *I don't think anyone was prepared for what COVID confronted us with.*
- *I've never been in a pandemic so I had no idea what to do.*
- *We shutdown prior to Spring Break and never returned that school year.*
- *A global pandemic that shuts down business and school nationwide is not something we routinely plan and prepare for.*
- *The significant shift from in person to virtual to hybrid had never been discussed*
- *I didn't worry about such things in the past, so hadn't prepared for this event.*
- *We were doing the best with what we had and knew but had to scramble for students and families.*
- *Never have dealt with an outbreak before. We have our emergency plans for when something happens at school.*
- *There was no knowledge of how to handle Covid 19.*
- *We came up with a plan to continue education within days of the beginning of the pandemic. But I don't think any of us actually understood the depth of the problem.*
- *The pandemic began during my first year as a principal. I felt totally lost and unsure of what to do. I felt like our district leadership communicated, but they were also unsure of what to do.*
- *I had minimal public health training, and no training at the level of the pandemic response.*
- *I was not prepared as I had no prior experience of dealing with something like this.*
- *They made stuff up as they went along and just followed other states that had the same party in leadership.*
- *Who ever thought we would close schools for an "epidemic"*
- *We were not prepared for distance learning or access to technology for students.*
- *This was a new pandemic and experience for all of us.*
- *In my lifetime, we have never gone through such a crazy time. Being prepared for a national pandemic was not on my radar, nor anyone else's in the field of education.*
- *It was not something that I had been asked to do prior in my work, short of forwarding the county recommendations and HR notifications regarding the measles vaccine. I don't think the idea of school closing down as a response to a global issue had even occurred to me.*

- *This was not an experience any of us had been through before in public education.*
- *This was not something we had ever prepared for as it wasn't part of our plans or something we had experienced in school setting.*
- *barely knew what a pandemic was- from a history book.*
- *Because we were at the will of our Gov. leaders with no idea what was next.*
- *I have never had experience with dealing with a pandemic.*
- *Pandemic preparedness was nonexistent, seasonal flu was the norm.*
- *Our Superintendent essentially disappeared within the first few months of the pandemic closing schools and our district was without established leadership.*
- *There were too many unknowns and changes from the state to effectively know what to do*
- *I never experienced anything like this before.*
- *I was not prepared*
- *While I was comfortable with ICS, I have never operated during a public health emergency.*
- *Didn't see it coming.*
- *Something like this had never occurred and so everything felt like learning on the fly. Medical info was conflicting and due to the political climate it became hard to tell fact from fiction. What was happening with the government at a national level was infuriating and added to the complications of reacting in timely fashion.*

Funding

The majority of respondents didn't know if they received funding from any entities besides ODE. Approximately twenty percent of respondents (n=26) reported affirmatively that their district received COVID-19 funding from entities other than OHA, and 20.9% (n=28) reported that they did not (Figure 5). Other sources of funding reported included ESSER, Federal dollars, Donations from local churches and organizations, SIA funds, funds for PPE and additional staffing, vaccine clinics and support from Neighborhood Health Center, and Local education foundation. A couple respondents reported that funding was handled at their district level, so they do not know.

Figure 5: School received funding for COVID-19 response from entities other than ODE (N=129)

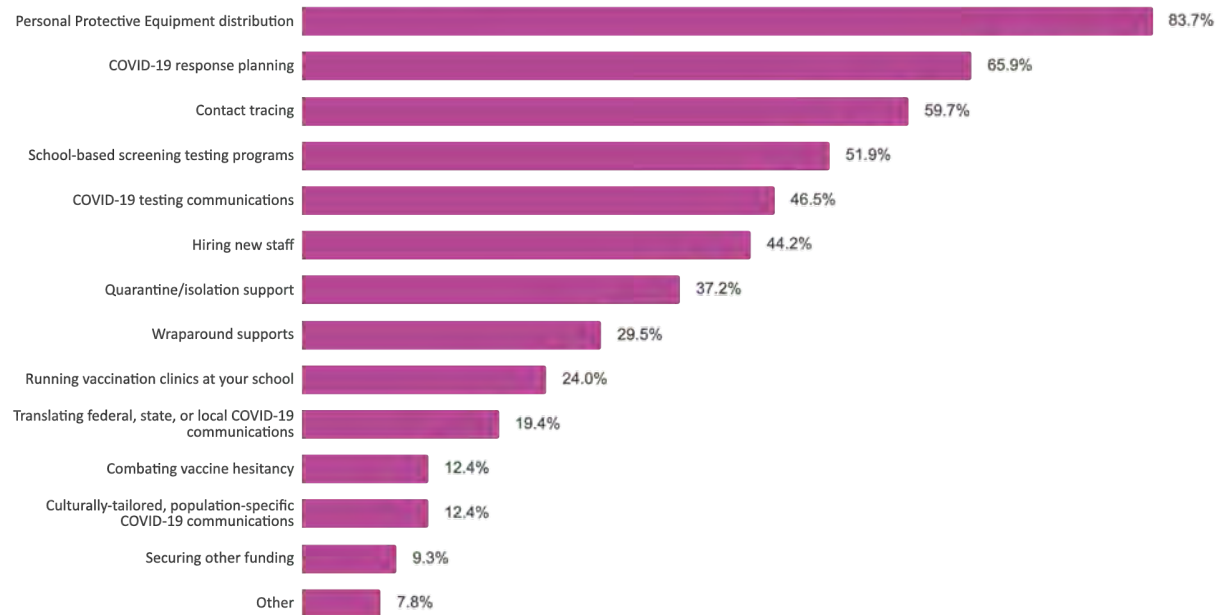


Funded activities

Survey respondents were asked to report on what types of activities they used their COVID-19 funding for, see Figure 6. Almost all respondents, 83.7%, reported spending funding on Personal Protective Equipment distribution (n=108). Two-thirds 65.9% (n=85) reported spending on COVID-19 response

planning. A little over half, 59.7% (n=77%) reported spending funds on contact tracing, and about half, 51.9% (n=67), reported spending on school-based screening programs.

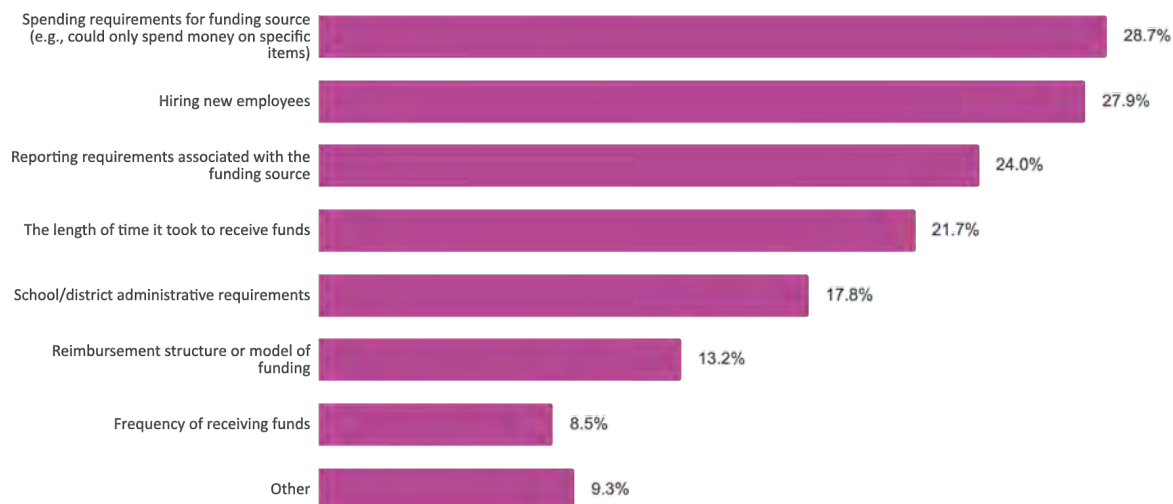
Figure 6: Areas funding was used by schools (N=129)



Barriers to use of funding

Respondents reported that their district experienced barriers to the efficient use of COVID-19 funds. The top three responses were spending requirements for the funding source (28.7%, n=37), hiring new employees (27.9%, n=36), and reporting requirements (24%, n=31). Seven respondents selected “other” and indicated they did not know because funding decisions were made at the district level. Additional “other” responses included clarity about deadlines, and needed funding to hire staff.

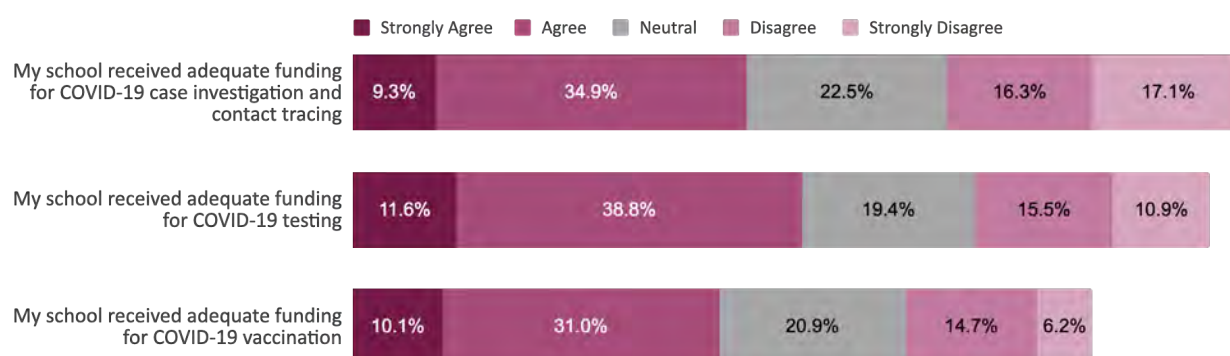
Figure 7: Barriers to efficient use of COVID-19 funds (N=129)



Adequate funding

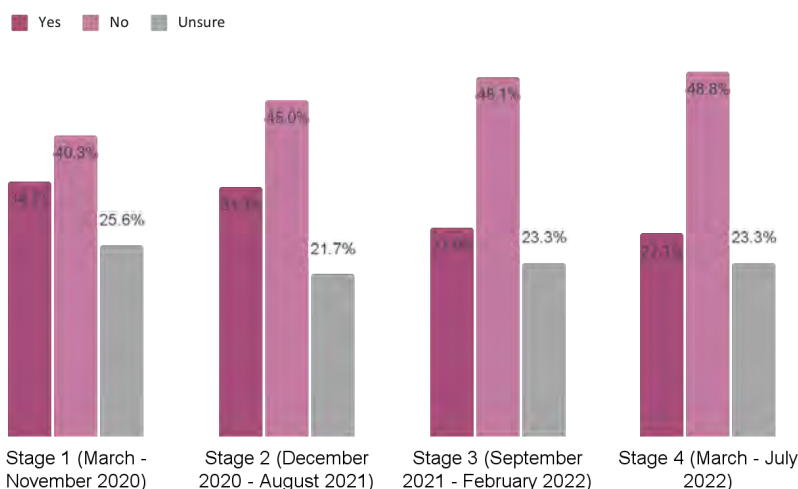
School principals were asked if they received adequate funding for a variety of COVID-19 response activities, see Figure 8 for all responses. Approximately 44.2% (n=57) respondents agreed or strongly agreed that their school received adequate funding for case investigation and contact tracing and a third (33.3%, n= 43) disagreed or strongly disagreed. Half of respondents (50.4%, n=65) agreed or strongly agreed that their school received adequate funding for testing and 26.4% (n=34) disagreed or strongly disagreed. Less than half of respondents (41.1%, n=53) agreed or strongly agreed that they had enough funding for vaccinations, and 20.9% (n=27) disagreed or strongly disagreed- and 17% (n=22) said they did not engage in vaccinations. Note that responses to each activity do not equal 100% because these represent all responses except for “N/A, My school did not engage in these activities.”

Figure 8: Adequate funding for COVID-19 response activities (School Principal respondents, N=129)



Respondents were also asked if they ever felt their district did not have adequate funding to support their community in managing the pandemic. Less than a quarter of respondents did not know the answer to this question across all stages (17%, n=22) (Figure 9). About a quarter of respondents were worried across all stages that they would run out of funding (21%, n=27).

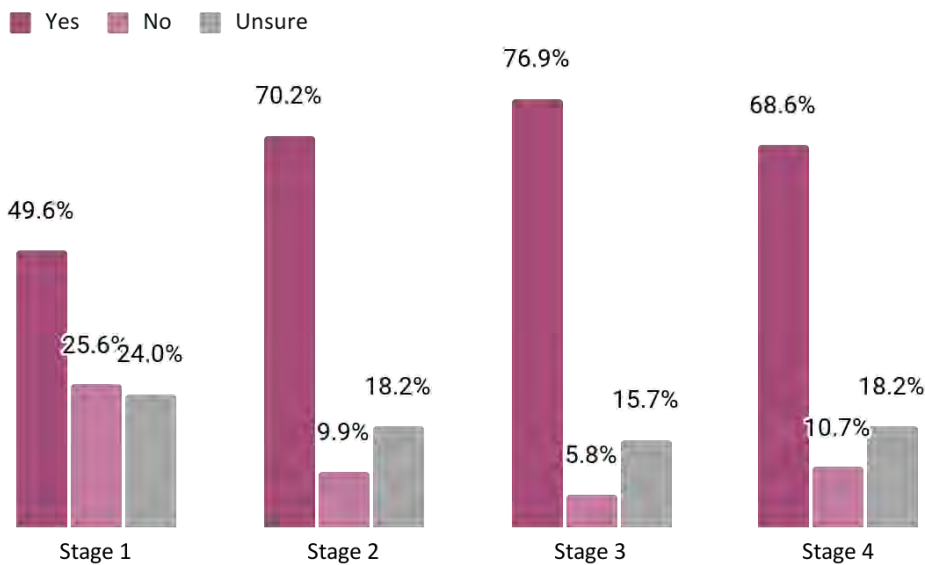
Figure 9: Did school worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (School Principal respondents, N=12)



Epidemiology Data Access

Survey respondents were asked if they had access to local epidemiological data to guide their COVID-19 decision making. Between 50-75% of respondents felt they had access to data across stages. The highest number of respondents reporting they did not have access to local epi data was in Stage 1 (25.6%, n=31) . The highest number of respondents reporting they had access to local data was in Stage 4 (76.9%, n=93).

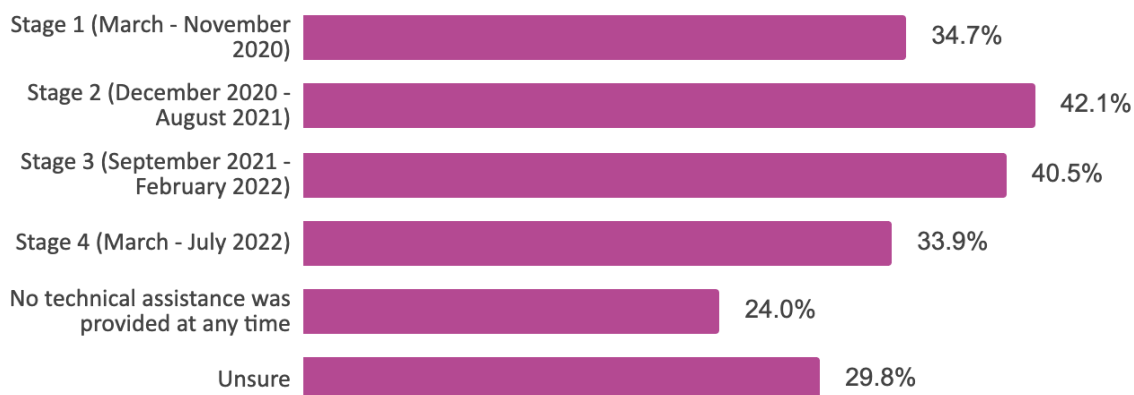
Figure 10: Access to local epidemiological data to guide COVID-19 decision making by stage (Principal respondents, N=123)



Data TA

Respondents were also asked if they received technical assistance (TA) to access, understand, or use epidemiological data. About a quarter (n=29) reported not receiving any TA at any time, and about a third did not know (n=36). Thirty-three respondents reported receiving TA during every stage of the pandemic.

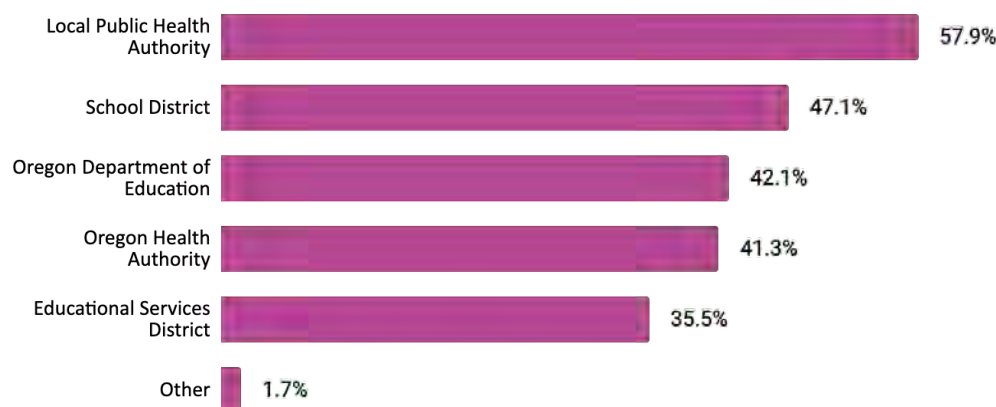
Figure 11: Stages during which schools received TA to access, understand, or use epidemiological data (N=59)



Organizations providing TA

Respondents who reported receiving TA were also asked what entities they received support from. TA was provided by local public health authorities, school districts, ODE, OHA, and Educational Service Districts (Figure 12). One respondent included a comment in “other,” indicating they received TA from OHSU.

Figure 12: Entities that provided TA to school to access, understand, or use epidemiological data (Principal respondents, N=121)

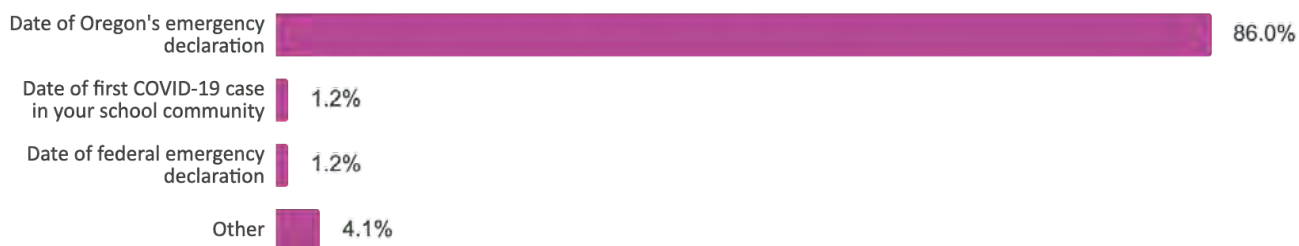


COVID-19 Response Activities

Formal Pandemic Response:

Respondents were asked when their school began their formal COVID-19 response. The majority of respondents (86%, n=147) reported that they began their response the date of Oregon's emergency declaration (Figure 13). Two respondents said they began emergency response when there were cases in their school community, and two respondents reported starting the date of the federal emergency declaration. Thirteen respondents said they did not know. Seven respondents selected “other,” their write-in responses are included below.

Figure 13: When school began formal COVID-19 response (N=171)



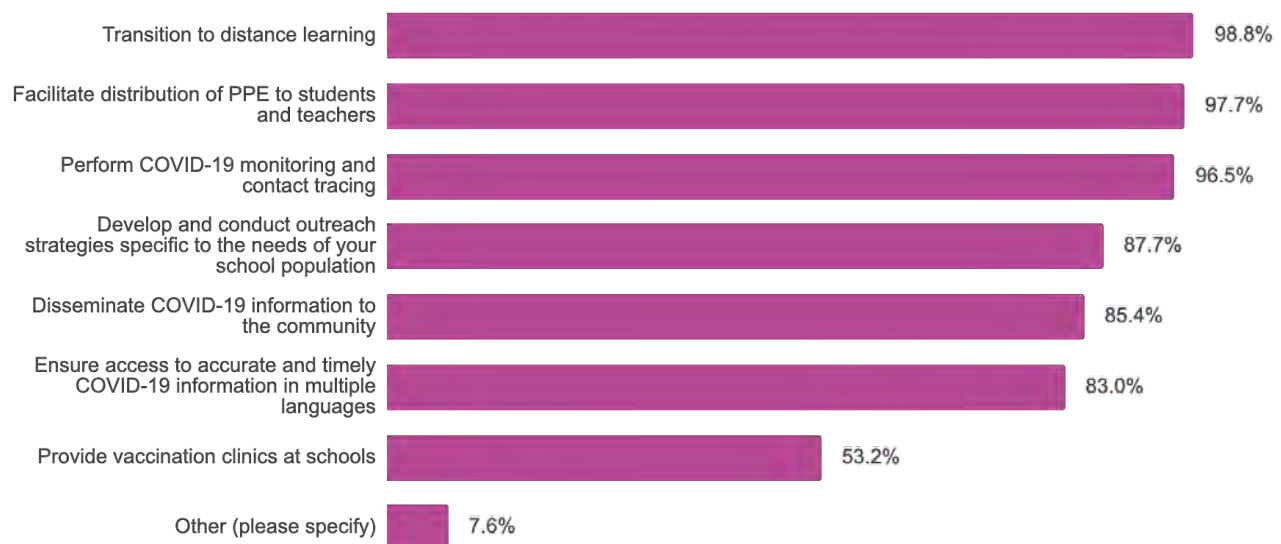
- *March 13, 2020 was the first day I was involved. I don't remember what the date of Oregon's emergency declaration.*
- *Our district staff had one of the first cases in Oregon which kick started our response.*
- *Two weeks after Oregon's emergency declaration.*

- *We initially chose to extend Spring Break for an additional week before any cases in our school community.*
- *We moved in unison with our district and state, but started considering options prior to the March closure.*
- *We were two weeks later from Oregon's emergency declaration, as we were gaining information from the state.*
- *When it became apparent that this could develop into a pandemic. Before any government declaration.*

Overall Response:

Respondents shared ways their school responded to the pandemic, see Figure 14. Nearly all respondents (98.7%,169) reported transitioning to distance learning and facilitating the distribution of PPE (97.7%, n=167). Most respondents (n=72) also reported performing contract tracing and monitoring (96.5%, n=165).

Figure 14: Ways that school responded to the COVID-19 pandemic (N=171)



Thirteen respondents selected “other,” their responses are listed below.

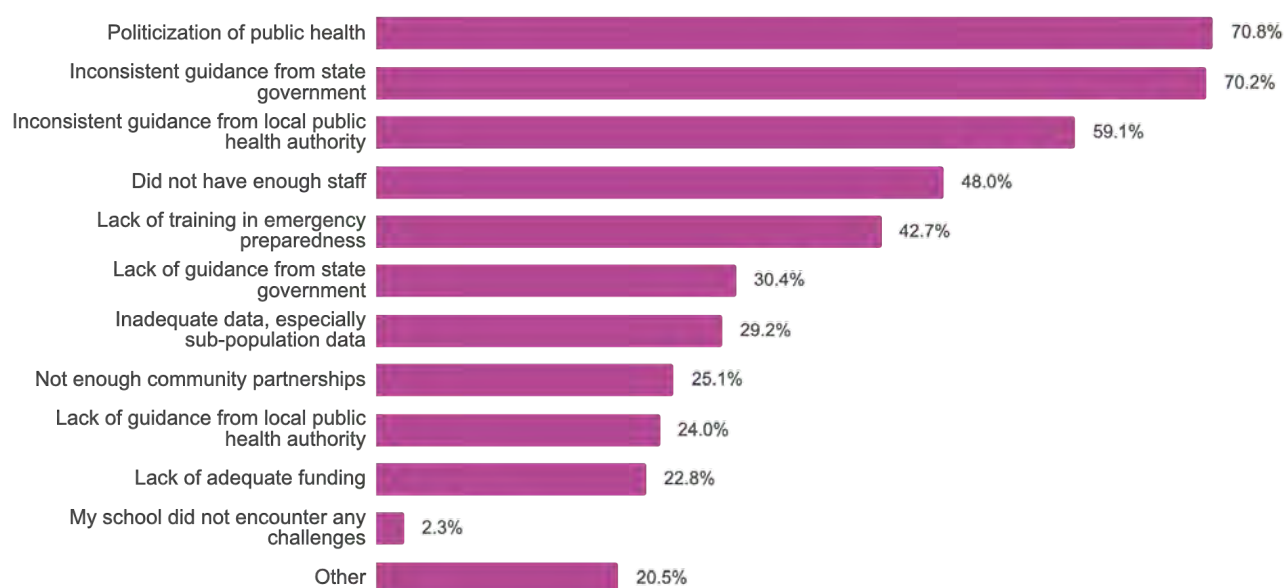
- *conduct covid testing at school, delivered emergency food supplies and meals*
- *Family outreach nights on zoom. PD for teachers and parents on distance learning.*
- *meals to students even when not in-person*
- *Met ongoing nutritional needs*
- *numerous video updates and Q/A sessions*
- *Pathetic leadership at the state level.*
- *Provide a ton of support to the community that also endured a major wildfire in 9/2020, had students in the building 11/20 to receive distance learning as there was no internet infrastructure in the area. We used hot spots.*
- *Provided communication support and guidance to many smaller districts.*

- *Provided food assistance, school supplies and school packets at the beginning, internet access, hotspots etc*
- *Provided the opportunity to all district employees to have access to vaccination during work hours.*
- *purchased wi-fi hotspots for families to insure students had access to education.*
- *Reformatted in person instruction, athletics, activities, professional development, etc, once back in person.*
- *You name it.*

Challenges and Barriers to COVID-19 response

Principals were asked to select which challenges that hindered the effectiveness, scale, or quality of their school's response. The top response selected was the politicization of public health (70.8%, n=121), followed by inconsistent guidance from state government (70.2%, n=120), and then inconsistent guidance from local public authority (59.1%, n=101) (Figure 15).

Figure 15: Challenges that hindered the effectiveness, scale, or quality of COVID-19 response (N=171)



“Other” responses included:

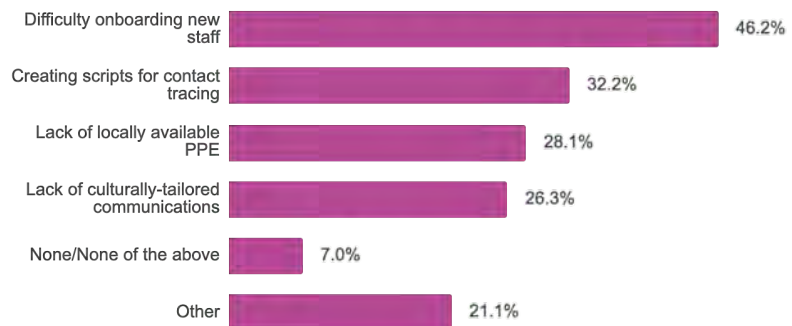
- *Beyond inconsistent guidance, the guidance changed so frequently that we were in the midst of one plan and then had to "pivot" with little to no notice.*
- *Closing schools was amongst the worst decision Oregon's government has made since 1859. Everyone involved in this move needs to admit their fault and be held accountable as a first step to restoring public trust.*
- *Community frustration that Oregon took a harder line than neighbors to the East of us. "How can they be back at school but we cant?", "How can that state be pretty much open but we still have restriction?" "Our numbers are not any better than states with more relaxed rules."*
- *Community response to the use of masks and move to online learning.*

- *Contract Tracing was confusing and often contradictor between the schools and health department. I believe they just did not have enough people for the demands.*
- *Did not have staff with the correct skill sets, i.e. social workers, public health professionals, nurses, communications managers, data analysts, contact tracers. Also, just time, there was not enough time to respond adequately.*
- *Feeding students in rural areas*
- *I selected "inconsistent" but the biggest problem was the rapidly changing environment and changes to protocols*
- *Inconsistency would describe any challenges that we faced. Inconsistency is what I believe made a divide in many communities and politics was the main theme.*
- *inconsistent Federal guidance*
- *inconsistent implementation of guidance at a district level*
- *It became political and data did not matter*
- *Lack of anyone willing to say this is the rule...lack of overall leadership to FORCE action.*
- *Lack of internet access to every student's home.*
- *Lack of local control*
- *Mandates created lack of trust in public education*
- *Many changes had to be made on really short notice.*
- *Mis-information and issues at the federal level.*
- *Needed greater guidance around technology and rural schools.*
- *Our rural location hindered some of our responses.*
- *Our school district is in Linn County and my school is in Benton County. There were inconsistencies between counties that were difficult to navigate at times.*
- *Our state's response was horrible. We essentially prevented students from education. It didn't matter how well we did distance learning, it was wholly inadequate for our most vulnerable students.*
- *Reaching students and families who did not want to be reached. Mental health of staff, students, and parents.*
- *So many challenges, but not necessarily related to the challenges listed above.*
- *Staff training / preparedness on technology platforms*
- *The burden of contact tracing fell entirely on extremely limited admin staff. We needed a FT contact tracer but did not receive one.*
- *The local health dept appeared overwhelmed in the earliest stages, though likely through no fault of their own.*
- *The rate at which adjustments were made at both the state and county levels was hard to manage. The frequency of adjustments in RSSLs was a challenge.*
- *The rules changed frequently making it hard to communicate and enforce. Each time a new rule happened, the information would get to us before we got official guidance from local public health and then district office so we sometimes felt we were following old guidance while waiting for everyone else to catch up.*
- *The way the county was used to measure increase or decrease of Covid19 was difficult to believe as we had little issues in our community but were held to the County numbers.*
- *There was never enough time to feel like we were doing a good job and very little feedback that we were (even when we were doing our best)*

- *Trying to invent processes and procedures on the fly.*
- *Wildfire of 9/2020 was the biggest issue*

The top barrier identified to being able to respond to the pandemic was difficulty onboarding new staff (46.2%, n=79), followed by creating scripts for contact tracing (32.2%, n=55). About a third of principal survey respondents also identified a lack of locally available PPE (28.1%, n=48). Additional “Other” barriers written by respondents included:

Figure 16: Barriers to response to the COVID-19 pandemic (N=171)



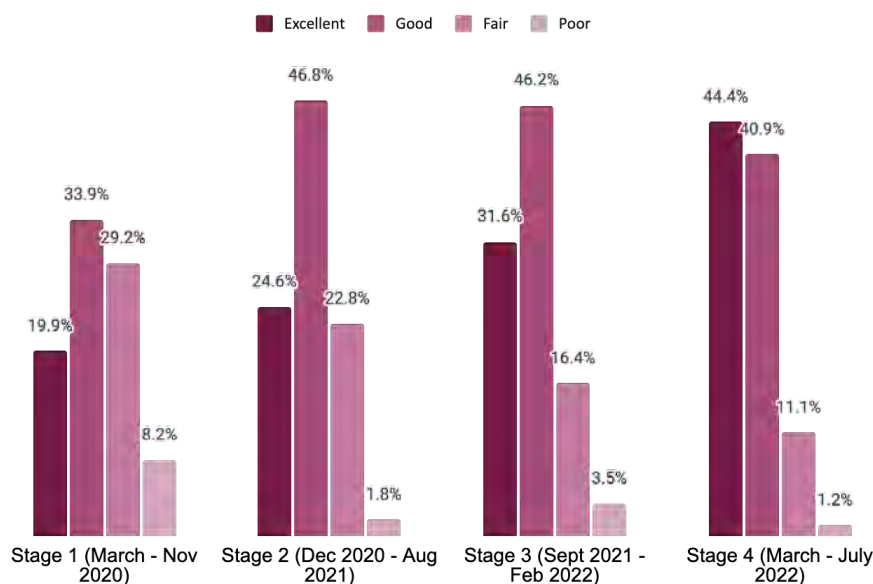
- *At the start PPE was an issue. When we returned I felt prepared with PPE.*
- *Changing scripts for contact tracing, isolation, and quarantine.*
- *Community buy in. Split political stances.*
- *Constant change in rules and regulations causing us to pivot constantly on our plan.*
- *Contact tracing and tracking in schools was a challenge at first. I would be on the phone for hours communicating close contacts and receiving information from families about their exposure. Not until we created a system did I feel we were managing the pandemic.*
- *Difficulty supporting families who were absent from online school*
- *Enough Physical space to distance, lack of staffing*
- *extremely difficult to secure substitutes*
- *Following the constantly changing decision making of state leadership that was implemented based on political party affiliation.*
- *Inconsistent and ever-changing communication*
- *inconsistent enforcement of current regulations in order to maintain instruction (in a pandemic don't use words like "to the best of your ability" either we need to do it or not.*
- *inconsistent implementation of guidance at a district level*
- *Increased distrust of public schooling*
- *Lack of a general level of staff. Negative impacts of the pressures of the pandemic.*
- *Lack of covid tests, see response to previous question, lack of availability of mental health professionals, lack of training in digital learning*
- *lack of time and staff to create new plans for every process*
- *Mis-information; unwillingness on staff and community part to follow guidelines;*
- *No functioning local health care*
- *Our town was split 50/50 with believing in covid/mask wearing*
- *Public and social turmoil with mistrust of others*
- *public buy-in by parents and some staff*
- *Spanish speaking translation and staff*
- *Staff exclusion due to vaccination policy at district level (strict interpretation of state guidance)*

- Staff not willing to come to work/ afraid/ wanting to stay home
- Staff shortages
- Staff to handle the sheer volume especially when students were involved in activities/athletics/and back in person. Tracing all the potential contacts was time consuming and we needed an added FT staff to do this well.
- State mandates that did not consider/prioritize the long-term harm done to children.
- Stress management for staff
- Student access to all the other services that schools provide- Mental health, food, community, in person learning.
- Students scattered across the west coast as a result of wildfire
- Supplies for community members and parents trusting that nothing bad would happen if they admitted their family had contracted COVID, but the stigma outweigh being honest.
- Teachers familiarity with technology
- testing accessibility
- We live in an area that had strong thoughts about Covid 19 that did not align to what the State was doing. Thus, our families were barriers.
- we reduced the barriers ourselves
- Willingness of teachers to be engaged and effective in executing mandates.

Rating of school response to COVID-19:

Respondents were asked to evaluate how well they felt their school's response to the COVID-19 pandemic was during each stage. Respondents felt their school did better as they progressed through each stage. At Stage 1, 53.8% (n=92) of respondents felt that their school did good or excellent, and by Stage 4, 85.4% (n=146) felt that their school did good or excellent (Figure 17). Note that responses in each stage do not equal 100% as respondents could also select "I was not involved in COVID-19 response in my school during this stage."

Figure 17: Rating of school's response to COVID-19 during each stage (N=171)



When asked to expand on why they rated as their school as they did, the following comments were provided:

- *Again, we were prepared, but struggled through the many changes that occurred during the pandemic. There was often no script for anyone to follow.*
- *As an admin team we were making the decision with the most upto date information provided and were very supportive of one another. Our staff was also very supportive and would give us input as they they were able to at staff meetings.*
- *As we adjusted to this new reality, we became more effective. The challenges was when we returned to full person school in Sept. 2021. The guidance from the state and county seemingly changed on a daily basis. We would make plans to have lunch inside, and then receive guidance from the county that our plan was not allowed, so we had to pivot on a moment's notice. The only seemingly consistent thing was the inconsistency of the days.*
- *At every stage, our district was slow to create opportunities for access that were allowable under state law (ex: limited in-person instruction, flexibility in non-vaccination accommodation, etc.). The impact was significant restrictions in access that students at-risk needed.*
- *Because we survived.*
- *By stage 3 and 4, we had had enough time to prepare. However, by late sate 3 and stage 4, our community was actively rebelling against our health measures and it became extremely difficult if not impossible to enforce the mask mandate, amongst other measures (eg. social distancing, not coming to school when COVID positive, etc.)*
- *Can you really be great when people are dying but students need to be educated?*
- *During each stage we spent considerable time and energy to engage families and students.*
- *Education professionals in my school rose to the challenge given the constraints presented that included contradicting policies across various levels of government and jurisdictions.*
- *Every school did their best. No school was good at this. Even though the district I was in was likely ahead of the game when it came to working with local public health, many barriers and the lack of willingness to understand decisions were being made as a result of science resulted in school response challenges.*
- *Given the circumstances, early in the pandemic I think our team had an exceptional response to the constant changes that were taking place during the process.*
- *Good enough, I guess.*
- *Had some gaps in our systems we needed to address.*
- *I believe our school did a wonderful job overall in how we handled the pandemic, with what we were given. Policies and regulations were cumbersome, inconsistent, and very frustrating to work with. Creating more time away from the real work of connecting with kids and making sure that they were being taken care of. Inconsistent rules and policies, also led to wasted money and resources. Rules and policies also seemed to be very divisive creating HUGE divides within our communities, school officials were forced to inforce poor policies and left them hanging to deal with the public. This was evident in school board meetings that were divided.*
- *I believe we did the best we could in the situation. Our staff stayed positive and were available for students and families.*
- *I feel as a district we did above and beyond expectations to serve our students and families.*
- *I feel we did a fine job.*

- *I feel we did as good of a job as possible and better than most of our in district surrounding schools. We provided extensive support and guidance to our staff at every stage despite the often inconsistent and evolving guidance from ODE and the state.*
- *I feel we followed advice and dictates from the state and county leadership. The rough part was being attacked locally for decisions made at higher levels.*
- *I felt like at each stage, once we got our feet under us, we handled the stage to the best of our abilities.*
- *I felt like our school did well at each stage. Living in a rural area, we continued to struggle with internet.*
- *I think we did a good job throughout the pandemic, given the circumstances.*
- *I think we did a really good job at my school and we actually followed what was expected and mandated by us to do and there were no protests or opposition to our COVID responses at my high school.*
- *I think we did really well. We followed state and local guideline and updated policies and procedures to respond appropriately.*
- *I think we did the best we could given the circumstances.*
- *In the beginning, we literally was learning on the fly. It was not easy.*
- *It felt like we were always one step ahead, thanks to our District leadership and collaboration with community partners.*
- *It took us all a while to feel confident being around a large number of people. We were not always prepared to support contingencies.*
- *It was fair because it felt like we shuffled kids back into schools like nothing had occurred. Sure we had safety measures in place but little to address mental health of students and staff. We pushed standardized tests back on people and had*
- *It was very challenging, but overall we met the varying needs of most families.*
- *Lots of changes to make with short notice; sub shortage when we reopened and cases were still high*
- *Many of our students come from families who choose not to wear masks or vaccinate, and many chose to exit public education. Once mandates lifted and choice was restored, we increased enrollment without incident of increased disease.*
- *Most staff stepped up and did their very best and more. It was also done carefully, thoughtfully and with as much transparency as possible.*
- *Once we got staff and students rolling we just kept on going*
- *Once we went through Stage 1, if felt like my job became making and revising plans, information was changing monthly and procedures were being rewritten and revised constantly*
- *Our district was listening to the most up to date information from scientist and doctors.*
- *Our school and district leadership team did a good job responding to the health requirements and recommendations while still maintaining structures and systems that supported students and their education - as well as activities (such as graduation)*
- *Our school community quickly formed teams to address the needs of students and families. We adopted new policies to monitor the health of our students and staff and center equity in academic policy decisions.*
- *Our school's response was the same as others in Oregon but not due to our control. We had no control. So, this is not reflective of our school, but the state.*

- *Our staff did an absolutely amazing job with what we had to work with.*
- *our superintendent at Umatilla SD was a super star!*
- *plans developed by group to include major stakeholder perspectives*
- *PPS led the way in regard to creating processes and policies for the rest of the state. We worked with national experts, OHSU, OHA, MESD, CDC and many others to help lend voice from the education perspective and was able to pivot quickly when changes occurred.*
- *Public health became an effort to balance politics with actual safety. OHA and local health department*
- *Public schools do not have the expertise or capacity to manage pandemics. This should be the responsibility of the health care system.*
- *Rural Oregon had completely different guidelines that would go into effect, or that the area did not deem appropriate because of location.*
- *Speaking with other schools and their issues, I feel like our community and school handled it quite well.*
- *Staff were prepared and supported all along the way. District communication was clear and appropriate at each stage.*
- *Stage 1 felt like total chaos, stages 2 and 3 felt like we were making pivots often and it felt like whiplash.*
- *Stage 1: no pre-planning occurred, to my knowledge. We were in complete "reaction" and design as we go mode but did the best we could. Stage 2: same as stage one. Stage 3: completely unprepared and unsupported in the politicalization of the pandemic and the vitriol we received from many families while trying to enforce guidelines. Additionally, the surge of variants affected our staff so deeply that we could barely cover classes. This scrambling and inconsistency caused significant learning loss. It seemed as though our district was fully committed to remaining open for in person learning despite the insanely impactful challenges of having so many staff out ill without available substitutes. Stage four: we continue to be underprepared and understaffed for the emotional and behavioral concerns students are exhibiting like due (at least in part) to the learning and socialization loss of remote and hybrid learning.*
- *Stage 1: our school did not have a plan; nor did we do much to immediately adopt a sustainable educational model.*
- *Stage 2 was a challenge because of the enforcement of specific rules in RSSLs (at the middle level).*
- *Stage everyone was scrambling due to the constant change in regulations. Stage 2-4 We were able to develop a plan that enabled all students equal access..*
- *Sweet Home just was in a constant state of reaction, very frustrating as a staff member.*
- *The most challenging year was when we were back in school full time, but had to enforce social distancing, and contact trace in a high school.*
- *Updated information and learned many things along the process*
- *We adjusted to each stage and made our school fit the regulations.*
- *We all did the best we could.*
- *We all improved over time. Our school district ensured that everyone worked together through each stage.*
- *We aren't big enough to have a centralized response and much of the work fell on a few.*

- *We became more knowledgeable as we progressed through the various stages.*
- *We developed a plan in accordance with state guidelines, implemented that plan, and adjusted as needed.*
- *We did our best and most all staff participated in getting things out to our students and families and took care of them the best we could.*
- *We did the best we could do with the resources and the information. Distance Learning was a challenge but it was for all involved. .*
- *We did the best we could to follow guidance of ODE. Not a lot of room for decision-making on our part.*
- *We did the best we could with the information and data we had at that moment.*
- *We did the best we could with the resources we had and based on what we knew. Our students and staff stayed healthy.*
- *We did the best we could!*
- *We did the best we could.*
- *We did the very best we could, given the circumstances.*
- *We followed and implemented guidance as directed by ODE and the state; there was sometimes conflicting information.*
- *We got better as time went on and restrictions were lifted. At the beginning it was murky and we weren't sure we were following guidance. We were learning everything on the fly and it was a slog.*
- *We got better over time. I think the contact tracing was a whole job for school staff on top of the newly hired employees. At times I felt like a contact tracer more than an instructional leader.*
- *We had a clear plan and followed it. We were supported throughout.*
- *We had clear direction and were focused on getting students back in the classroom as soon as possible.*
- *We had district guidance on what to do.*
- *We had many changes to our SOPs, but we implemented all of them*
- *We had the BEST school nurse and business manager.*
- *We had the resources. We burnt out our staff*
- *We had tremendous community pushback to enforcing the health regulations, and that presented many problems.*
- *We had weekly meetings all year long to update the needs of our school and students.*
- *We have a great staff who work together.*
- *We have a small school and everyone was "on board" for doing whatever was necessary to keep educating students.*
- *We have continued to display initiative, partnership, creativity, resiliency, and resolve for our students and families.*
- *We learned a lot about how to manage and operate our school as the pandemic went on. We improved our response and communication*
- *We used a common sense approach and put kids first while following all the guidelines*
- *We were able to have in-school instruction throughout the pandemic and we were some of the first to reopen in person instruction fully.*
- *We were able to provide academics to our students and did not see an outbreak within our building that caused a disruption to services provided to students. aa*

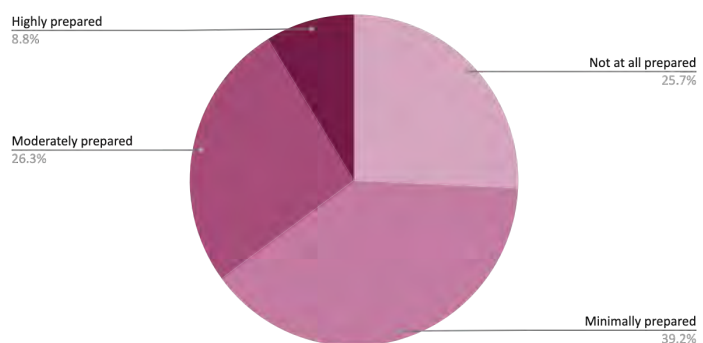
- *we were already using online learning*
- *We were initially quite unprepared and didn't know what we didn't know. As the pandemic progressed we got much better and more prepared in dealing with the numerous issues we were confronted with.*
- *We were kind but clear. We pulled together to create a consistent message from district office, to each building, and to our staff. It has to be done together or it is impossible.*
- *We were more in a position to react than strategically respond.*
- *We were not prepared for the emotional and social damage that was created*
- *We were the first school in Multnomah County to bring students back in March of 2021. We did have students on campus in January of 2021 for LIPI. In March we used a hybrid model to operate.*
- *We were totally ill-equipped to respond to student mental health needs in State 3 and 4, and also unequipped to build the systems for the contact tracing that was being required of us.*
- *We work as a team to ensure understanding and clarity for each stage.*
- *We worked hard to stay with in the expectations handed down from ODE while providing the best opportunities for student learning, mental health, etc.*
- *We worked very hard with our local health department, families and district employees.*
- *While our initial response was slightly delayed due to our rural location, my district/school was able to develop a plan which allowed us to serve our students in our buildings very early. This helped us communicate with our stakeholders early in the response process.*
- *While we may not have known what to do at first- once we did have guidance we followed it exactly.*

Transition to Distance Learning

Preparedness for distance learning

Survey respondents were asked to reflect on how prepared their district was to transition to distance learning (Figure 18). About a third of respondents (35.1%, n=60) felt their district was moderately or highly prepared, and about two-thirds (65%, n=111) felt they were minimally or not at all prepared.

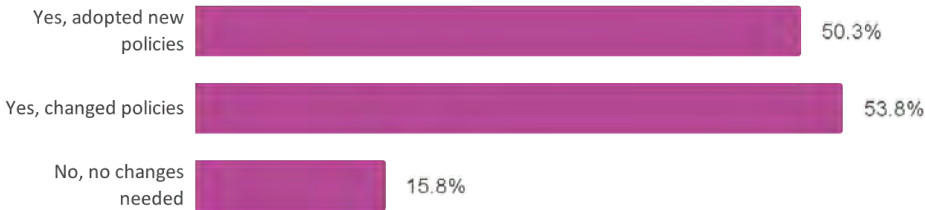
Figure 18: School preparedness to transition to distance learning for educational instruction delivery (School Principal respondents, N=171)



Distance learning policies

When asked if they had to update policies to transition to distance learning, almost half of respondents said they changed policies, and one third said they created new policies (Figure 19). Note that four respondents selected both options for yes, so the total equals more than 100%.

Figure 19: Abrupt closure of schools and resulting transition to distance



Respondents were asked to rank aspects of the transition to distance learning from most challenging to least challenging (Figure 20). Technology infrastructure was identified as the most challenging aspect, followed by platforms or systems to manage distance learning. Training and preparedness of teachers in distance learning methods and delivery, and training and preparedness of students in using distance learning technology was pretty evening ranked as the 3rd and 4th most challenging aspects.

Figure 20: Ranking of most to least challenging aspects of transitioning to distance learning (N=171)



Survey respondents were also asked to evaluate the effectiveness of their school’s delivery of distance learning (Figure 21). About three-fifths of respondents (59.5%, n=72) evaluated their delivery of distance learning as fair or poor, with the remaining two-fifths (40.5%, n=49) evaluated it as good or excellent.

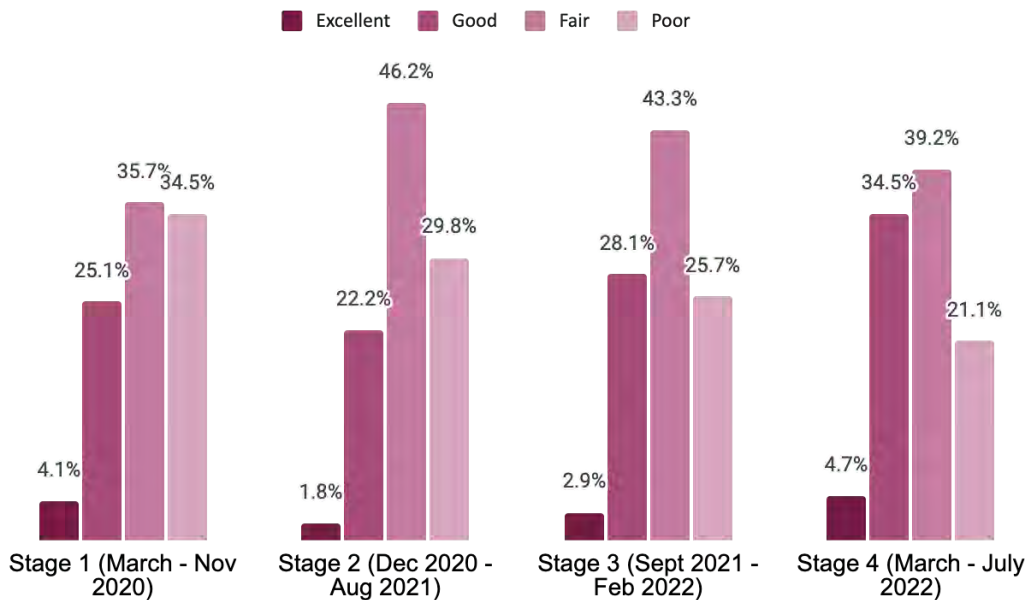
Figure 21: Effectiveness of school's delivery of distance learning (N= 121)



Public health system response

Survey respondents were asked to rate the state of Oregon's management of the pandemic response to COVID-19 in schools during each stage. The majority of respondents rated Oregon as poor or fair in all four stages. The state of Oregon was rated worst in Stage 1, with over two-thirds of respondents selected poor or fair (68.6%, 48) (Figure 22).

Figure 22: Rating of state of Oregon's management of the COVID-19 response in schools during each stage (N=171)



When asked to expand on why they rated as Oregon as they did, the following comments were provided:

- *A lot of moving pieces.*
- *Adequate and timely communication*
- *Again it became political and we stopped focusing on data to support the issues.*
- *Again, I don't think anyone could prepare for what we went through. Nobody did it well, but we all learned as we were going. It was also frustrating that throughout the US, we were hearing different things and different states were handling their schools way different than Oregon. My school is high poverty, so having them at home was not a positive thing. And, many did not have internet, and our hotspots were recalled. So, it was very hard and frustrating.*
- *All part of the state were directed differently based on percentage on cases. This left several rural communities students out of the building for a much longer time period than heavier populated area of the state.*
- *As more information became available, better guidelines were published and shared with the community.*
- *As time progressed, I believe OR did the best possible with regards to the shifting statistics and community spread. Communication was clear, although dynamic, during this time.*

- *At each stage, there were challenges with information constantly changing. I appreciated the ODE meetings so administrators would have the most up-to-date information that would impact our schools.*
- *At times it seemed we were being overly cautious and extended the closure longer than it needed to be. With that said, hindsight is 20/20 and at the time it was difficult to predict how the pandemic was going to impact our future.*
- *Based on the negative impact on student learning we should have reopened sooner.*
- *Closing schools disproportionately harmed our most vulnerable student populations, exacerbated achievement gaps, caused massive increases in teen depression, anxiety and suicidality and irreparably harmed a generation of kids. Shame on everyone behind these decisions.*
- *Confusing and changing guidelines. Lack of centralized resources that were helpful.*
- *Don't believe the state was fully transparent with the data and how it affected kids. Unions had too much say in whether schools opened or not.*
- *Every changing direction was difficult to keep up with. The HUGE amounts of paperwork for tracing was challenging to manage. Policies were not clear and concise. Policies did not seem to take into consideration barriers some districts have with technology and internet access for district learning. Policies pushed forward with a generalized agenda around SEL that seemed like a one size fits all direction instead of understanding what districts were already doing for student well being. Re-opening was much too slow especially at the secondary level.*
- *From my perspective, it never felt like a firm decision was made--the goalposts were constantly moving.*
- *From my perspective, Oregon (and many other states) response focused largely on flattening the curve and curbing hospitalizations (which are both important), but did not give adequate weight to the well-being of children. Higher priority should have been given to keeping schools open and allowing the virus to run its course with reasonable accommodations to those most vulnerable.*
- *Hindsight is 20/20*
- *Hindsight is 2020 but I don't feel like the impact of policy was considered prior to policy changes.*
- *I appreciated the response to a real threat to our health and to think that by July of 22' everything was fine is asinine. We need and continue to need more money for mental health and food/shelter insecurity.*
- *I believe everyone did the best they could with the information and knowledge at the time. I do believe as a state we could have returned to in-person school at an earlier and not be controlled by fear.*
- *I believe in each stage there were decisions made out of haste and with political agendas. At no point, did it feel like decisions/mandates made sense or worked in unison. This created inconsistencies and lead to lack of confidence in District leaders for our communities.*
- *I believe inconsistent messaging and political divides created undue barriers. Oregon seemed to take further precautions, extend the pandemic requirements, and over step mandates in many areas compared to other states across the nation.*
- *I believe our state handled this pandemic too tightly and it contributed to the high stress of politics.*

- *I don't know what I don't know. Things could have been clearer or more timely. I think everyone did the best they could.*
- *I don't now what to say. We were asked to be the social distance police, but students weren't doing that on their own. It was just a tough position for all.*
- *I give the state credit for its initial response. I can't imagine how difficult it must've been to decide to not only close schools, but the majority of businesses. However, the longer into the pandemic we went the more the state made ambiguous, illogical, hypocritical, and untenable rules and policies. Forcing school leaders to play rule enforcer for the state created a lot of hostility with community members. Partnerships that took a long time to curate were destroyed quickly. Living in a smaller community and being forced to follow the same rules as a location with much denser population and quicker disease spread never made sense.*
- *I know we were doing the best we could with the information we had at the time. But shutting down schools totally was a huge mistake.*
- *I put good on stage one in that no one knew what was going on when COVID first hit, and nationwide we had no choice with what information we had but to shut down, but as we moved into stage two and three, it became apparent that our response was tied to political lines and we took way extreme levels, which at times were very inconsistent, and with little notice for schools to make the adjustments. Even as districts/states across America and Oregon showed that we could come back safely Oregon still took extreme measures keeping kids away from schools. We talked heavy about equity, but keeping kids away from schools only created more of an educational gap between the haves and have nots. People with money hired teachers, or created learning pods. Parents with no money or had to work, were not able to do so. What we see now are the haves and have nots. My little country school did well with the kids that we had, but what I see from other schools, and kids moving in are huge holes in their education. I am vaccinated, but how Oregon rolled out the mandatory vaccination hurt the workforce, and I believe violated a person's personal medical rights thus creating a more tense climate on an already hard situation. Oregon talks about being bipartisan, but their response only created more of a divide. I am very pro schools and unions, and like to be very optimistic and supported every policy that came my way, but to say that Oregon handled this well, I can not in good conscience say we did. No one in ODE, COSA and OEA showed leadership to protect kids from the emotional damage that was brought by the very most extreme measures taken and rolled out by OHA. As someone who does not vote party lines, felt that Oregon lawmakers made this political and about them and in the meantime divided our communities and districts. Next time try listening to ALL/both sides of the aisle, not just the one that has the majority by 2%. The state was divided and instead of finding the middle you chose to go extreme left. SAD.*
- *I question vaccinating school staff before the elderly.*
- *I realize everyone was doing the best they could, and also felt the information was contradictory, mandates changed frequently, solutions were mandated with little to no support to actual implement the mandates (a disconnect with what the state felt was best with the logistics required in school) and a polarization that continues to disrupt learning today.*
- *I think everyone was doing the best they could given an unfortunate political climate.*
- *I think everyone was doing the best they could. It was very difficult to enforce the mandates that were coming down. I am not sure the people making the mandates understood what actually happens in a high school.*

- *I think that politics got in the way at a federal level and it made decision-making hard at the state level.*
- *I think that we could have had at least K-5 students back in school a lot sooner than we did. The guidance was inconsistent and often didn't make any sense. It still doesn't make sense to have a vaccine requirement for our volunteers. Both vaccinated and unvaccinated contract COVID. It would be better to just screen for illness.*
- *I think the State of Oregon should have given schools more local control. And, many of the rules that were coming down from the State, did not make common sense. There were so many things that were conflicting. It was very frustrating!*
- *I thought the investigation was poor at the beginning. However, I do believe the political issues got in the way from beginning to to the reopening.*
- *I wish we had let students return to school, and for longer periods of time, sooner.*
- *In general dissemination of information was poor. It felt indecisive and ambiguous. As an administrator who was on a steep learning curve with everything that was occurring and working in an area where my school was the center for everything - food, tech distribution, vaccination site, etc there was a lot put on me. It felt like every big decision came out right before a break - winter break, spring break, so in essence giving admin who were working around the clock, NO BREAK, and adding an intense amount of pressure to us. As a public emergency the things we had to do were not things that could be added to a list. They were things that needed to get done right away. So the timing of new directives felt like little consideration was given to the folks to had to lead those directives. On top of that, I am educator. So much of what I was asked to do should fell in the laps of health professionals. We always get asked to go above and beyond but this was really pushing it.*
- *In reflection, I think we went too far, for too long and were too slow to come back to normal. We still have restrictions on volunteers. Local districts were purported to have autonomy to make local decisions but this wasn't really the case.*
- *Inconsistent guidance ranged from "the state decides everything" to "the local community decides everything" which increased the politicization of education during the pandemic and encouraged inconsistent use of resources*
- *Information was different from day to day and often contradictory, we had to make abrupt changes from day to day with little guidance, etc. It was unrealistic to have school staff "police" parents and other adults with compliance - including masks, distancing, sanitation, etc. It was also unrealistic to expect staff to keep adapting and adjusting to new guidelines. The state's response unnecessarily burdened families, staff, students - the entire community.*
- *Initially the response was decisive, but over time, their seemed to be inconsistent guidance.*
- *It felt like the expectations were written by someone who hadn't ever run a school.*
- *It felt like the state got tired of being the "bad" guy, and just pushed things off to districts to handle. Leaving us all to fend for ourselves. In small communities, there is a lot of comparing one district to another, as leaders chose different methods.*
- *It was an emergency. You can't be perfect doing anything for the first time. Under the circumstances, it was not bad.*
- *It was difficult to find out where we could get tested and vaccinated. There were very few options at the beginning of the pandemic.*

- *It was unprecedented. Everyone was doing the best they could. But everyone was unprepared. Too much was put on school leaders during the 21-22 school year. We were not public health professionals but were forced to be anyway.*
- *It was very frustrating getting inconsistent messages across counties in Oregon - depending on the local health authority, etc. Especially in relation to required (and recommended) health protocols for class and athletics. The fact that we still require 5 day quarantine and vaccinations for employment are ridiculous*
- *Its difficult to adopt policies state wide with out being authoritative.*
- *Looking back and comparing states that did not shut down, I believe the state kept us in lock down to long. The effects on students will take years to overcome.*
- *Looking back, it is hard to believe how restrictive things were. I always felt the state was looking out for our best interests and made the best decisions they could at the time.*
- *multiple changes that did not consider where schools were in the year, abrupt, seemed at times responsive to outside pressure rather than actual safety for students and staff*
- *No one knew what was happening and Oregon was ridiculous in their mandates and responses. I disagree with the majority of the way Oregon handled this entire situation.*
- *No one was prepared for the situation. It was difficult to know (even now) what was the correct decision and what was not. The constant changing of rules and guidelines was ineffective and generated distrust.*
- *not prepared for shut downs. this community did not buy the hype and was not supportive of our requirements*
- *Not sure what else could have been done to alleviate all of the stressors that came up (staff shortages, lack of physical space in schools, etc.)*
- *ODE clearly spent substantial time to provide clear and thorough guidance to districts and schools. While it wasn't always clear, it usually was.*
- *Once the relatively low risk to children was apparent, the mandates (including teacher vaccinations) should have been lifted immediately.*
- *Oregon seems to have been among the most strident of state governments in their commitment to keeping students out of schools and/or imposing unrealistic mask mandates that drove a wedge through the community. It may be hindsight, but it appears to be the case that keeping kids out of school for as long as we did has caused irreparable harm to their educational and socio-emotional development and the spread/infection/death rates in Oregon were not significantly better than states that took a flexible approach.*
- *Oregon's response was criminal. Never have we done more to harm our most vulnerable learners.*
- *Oregon's response was far too restrictive. The damage done to our students (and families) not being in regular school with regular activities was far worse than any damages done by the virus to our communities. When you look around the country, being shut down as long as we were compared to other states did not significantly produce any greater protection from the virus or lower the risk of death. Unfortunately, Oregon's desire to lead the country in these restrictions will have dire consequences for youth and communities for years to come.*
- *Politicized, socioeconomically insensitive to poor, rural, politically conservative communities.*
- *Same as before: excellent communication and resources.*
- *Schools were closed too long.*

- See above
- *The expectations to partially reopen were too difficult to follow and this led to a lot of absences in students.*
- *The further we got into the pandemic, the more political the issues became and the less we "followed the science". My favorite example is allowing athletes to wrestle in the 20-21 school year, but not allowing them to shake hands after the match. Really? Show me science behind that decision.*
- *The initial response seemed excessive. Yet, I do acknowledge that there were many unknowns at that time.*
- *The initial response was warranted and understandable. The following response was a detriment to our students and our communities. We will be recovering for years to come.*
- *The number of changes made to the guidelines (and the initial lack of guidance for remote learning) made it extremely difficult to implement. If guidance changes every few months, the school system is put under intense stress to create new plans, schedules, and systems to implement those guidelines. The mandates passed nearly broke our staff and our system in those early stages. Later, when the guidance stopped changing so frequently, we went back to in person instruction, and unenforceable mandates (e.g. indoor masking) were relaxed, it became more manageable.*
- *The state came out as decisive and clear on the importance of shut-down. As the pandemic evolved, inconsistent and misaligned policies at the state level undermined that message. In addition, lack of local community engagement by state officials caused significant polarization at the community level and left local districts and ground level administrators and staff in the cross-hairs.*
- *The state had a lot on their plate to try and manage response in schools along with everything else.*
- *The State of Oregon overreacted to this. School should have continued as usual.*
- *The State of Oregon placed zero importance on the daily interactions of children. For a state that is so focused on social justice and programs for the underprivileged, they failed to see that this is the population that was most negatively effected by sending them home everyday.*
- *The state of Oregon's role was too large. Local decisions should prevail on opening or closing schools. The state can provide information and offer guidance. We were operating under a state of emergency for too long.*
- *The state provided the guidance and support, from which each District had the opportunity to develop their local plan.*
- *The state put the school system in a difficult position politically. It will take years to rebound from the repercussions.*
- *The state refused to look at the mental health impact on everyone and shut down quickly. It was too long and didn't differ from states that stayed open.*
- *The state was similar to the nation - we didn't have all of the information we needed in order to act quickly. We got better over time and continued to act in a conservative manner, which I believe helped us weather COVID better than other states.*
- *The state was trying to figure things out and making continuous changes as needed and as we all learned more about what needed to be done: Fair to Good over time.*

- *There was little leadership or direction from the state in the early stages. It got progressively better, but there continued to be challenges. I think ODE did a relatively good job in providing guidelines and leadership, but other agencies weren't as coordinated.*
- *There was too much inconsistencies in what we were supposed to do. Things were changing daily based on complaints. There was too much "One size fits all" mentality at the beginning and then all of a sudden it was "well if you are a county this size..." Too much state control, not enough local.*
- *There were constant changes that often times put schools in the middle of a politically charged climate.*
- *There were times we felt we didn't understand why we were implement various rules such as the color system for closure, when we never followed the rule and remained open.*
- *They did the best they could with the information they had available at the time.*
- *This was an unprecedented time. There were things the state did well by getting information out and taking action, but over time there were mixed messages that were not received well in our community which made it difficult to enforce unpopular policies. I felt schools took a hard hit for having to be the face of the response for many people.*
- *Timely, but then we had to wait for how it would be interpreted by our district*
- *Too many inconsistencies. There was no warning. Many times we found out what was going on when the public did. Causing stress on the schools. It was too chaotic.*
- *Too many mixed messages, we'd get something you'd asked for in place only to get new requirements shortly thereafter. We were never able to get something in place to see how well it worked before we had to change it.*
- *unclear and shifting guidance at the start, things got better as we all developed protocols*
- *Way too much flip flopping, changing procedures and requirements.*
- *We all struggled to lead in a time of struggle, deep fear, emotional distress and stress.*
- *We are all so different in our school situations that closures should have been handed over for local control.*
- *We are still unpacking the damage to our youth. The emotional, social set backs. The dysregulation, challenges with interpersonal skills, deficits in grit, knowledge. We needed our students all back on campus much sooner!*
- *We did not provide added staffing for contact tracing and communication. and we kept kids out of school and/or isolated from teams/activities/teachers/coaches way too long.*
- *We did our best and tried to improve and grow at each stage*
- *We do what we can with the information given. Hindsight is 20/20*
- *We were closed when there were virtually no cases in our communities locally for too long, then opened back up with many cases instead of preparing schools and allowing those that wanted to be in person, do so. Our children were traumatized and we will be living with these consequences for years to come.*
- *Where were the adjustments when the numbers were taking out 30-50% of our students and staff? We were so careful before and then when we had TONS of people VERY sick...very poor response and support from state and local agencies.*
- *While I know everyone was doing their best, I feel as though the state was caught flat footed, changed protocols too quickly and without clear guidance, and left individual schools to dealing with the vitriol of the families who didn't agree with the mitigation strategies we were tasked with*

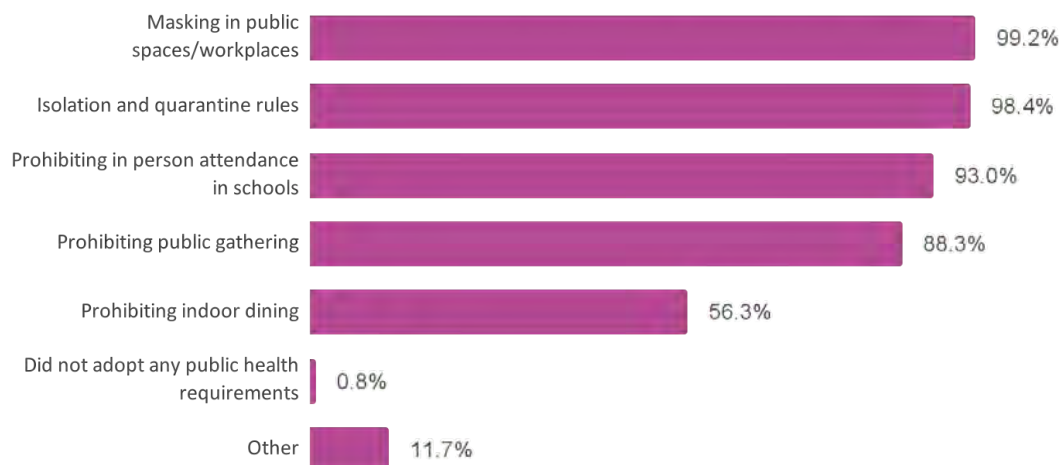
implementing and enforcing. Additionally, I don't believe schools were/are funded enough for staffing during all stages of the pandemic.

- *While I realize that it was an emergency management situation, some of the expectations that were set forth by the state of Oregon were very difficult to comply with in our rural setting. In addition, we are located near a state border and the "rules" were completely different across the border, which made it difficult to get our families on board with the restrictions early on.*
- *With what we know now we could have reopened sooner.*

Public health requirements

Survey respondents were asked if their school adopted any public health requirements to reduce the transmission of COVID-19. Nearly all respondents reported adopting masking requirements (99.2%, n=127) and isolation and quarantine rules (98.4%, n=126) (Figure 23). Many respondents also reported adopting requirements prohibiting in-person school attendance (90%, n=119), and prohibiting public gatherings (88.3%, n=113). One respondent reported that their school did not adopt any public health requirements.

Figure 23: Public health requirements that schools adopted (N=128)



“Other” responses included:

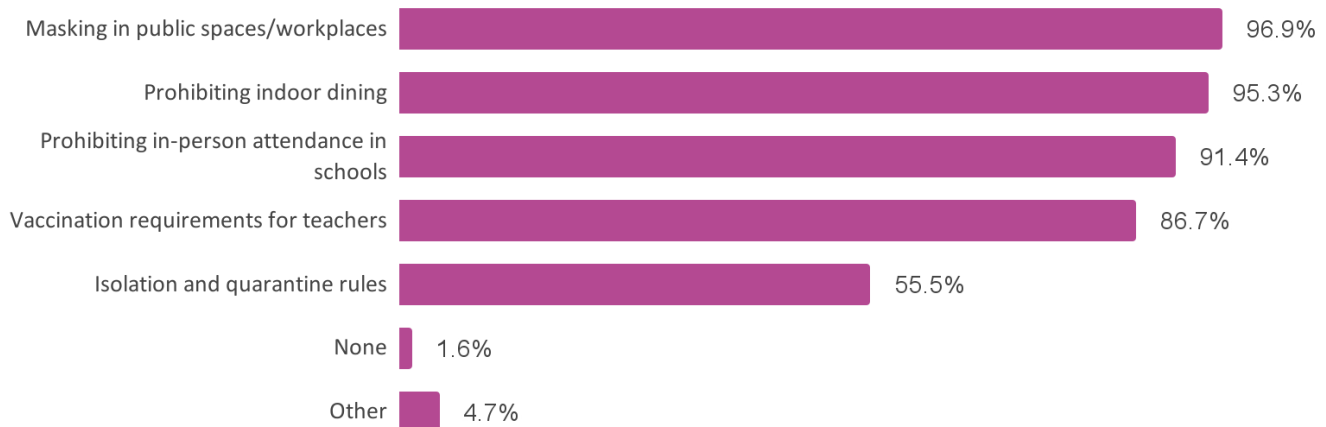
- *All OHA and ODE guidelines along with recommendations from LPHA*
- *As a district we followed all mandatory guidance put out in tool kits.*
- *Cohorting*
- *Dismissed unvaccinated workers*
- *Distancing requirements*
- *Limiting athletics/activities and then numbers of fans allowed at events.*
- *Physical Spacing, athletic and activity limitations/outdoors,*
- *School followed state guidance, could not enforce expectations of students and individuals outside of school*
- *Social Distancing*
- *Social distancing at all times indoor and outdoor.*
- *social distancing, cohorting, improved hygiene*

- *staff vaccination requirements*
- *using guidance for distancing indoors/outdoors was required*
- *vaccine mandates for employees*
- *We adjusted our dining to meet ODE requirements, but could not accommodate outdoor dining in our weather.*

Enforcement

Respondents were also asked to share what public health requirements they enforced. When asked which policies adopted by the school were enforced, nearly all respondents reported adopting masking requirements (96.9%, n=124), prohibiting indoor dining (95.3%, n=122), and prohibiting in-person attendance in schools (91.4%, n=117) (Figure 24).

Figure 24: Public health requirements that schools adopted that were enforced (N=128)



“Other” responses included:

- *dismissed unvaccinated workers*
- *Distancing requirements*
- *Limited in-person attendance*
- *Social distancing*
- *social distancing*
- *We did most of these - but only because ODE/OHA required it.*

When asked which policies adopted by local or state government were enforced by the school, nearly all respondents reported adopting masking requirements (99.2%, n=127) prohibiting public gatherings (98.4%, n=126) and prohibiting indoor dining (94.5%, n=121) (Figure 25). “Other” responses included:

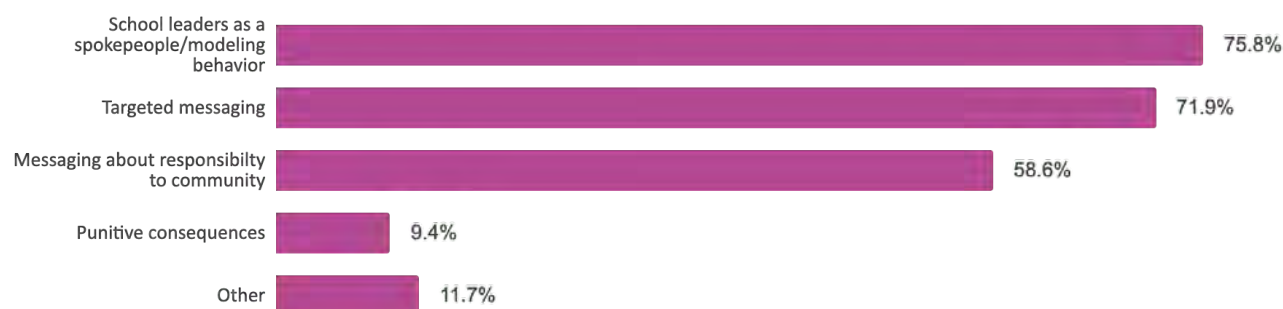
- *dismissed unvaccinated workers*
- *Distancing requirements*
- *Limited in-person attendance*
- *Social Distancing*
- *Social Distancing*

Figure 25: Public health requirements that local or state government adopted that were enforced by school (N=128)



Some strategies that were effective in increasing compliance with public health mandates included school leaders modeling behaviors (75.8%, n=97) and targeting messaging (71.9%, n=92) (Figure 26). Twelve respondents (9.4%) reported that punitive measures were effective at increasing compliance.

Figure 26: Strategies that were most effective for schools in enforcing public health mandates (N=128)



A few “other” responses included:

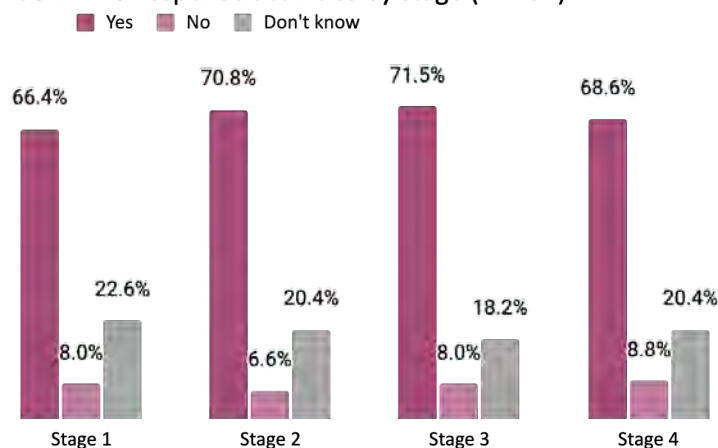
- *all of the above worked for some students/families, but nothing worked for students/families who disagreed with the public health mandates on political grounds*
- *Blamed requirements on the state; let people know that this was not a locally made decision*
- *Continually setting the expectation*
- *Educating families on the need*
- *extraordinary heavy lifting done by educators in the communication of masks = in person school*
- *Guest list at games*
- *having expectations that were not optional*
- *Isolation areas - parent pick up if students would not follow building guidance.*
- *Mask mandates were a nightmare to enforce*
- *Monitoring by all staff for student compliance - No persons allowed in buildings except students and staff.*
- *Must were not very effective. The majority of our community did not support the strategies or us as we tried to enforce the mandates.*
- *None. the entire response was an abject failure to students- the ones we are supposed to serve. Students were sacrificial lambs to the agenda of the NEA, OEA and state govt.*
- *Nothing was effective. It was too political drove a deep wedge in our community.*
- *Respecting and accommodating choice (home-based as option, face shields versus masks*

- The message was "We have to do this to return to in-person teaching." Which is what our community wanted.

Technical Assistance

More than two-thirds of respondents reported receiving technical assistance to inform their COVID-19 response activities, and less than ten percent saying they did not receive TA. See Figure 27, below.

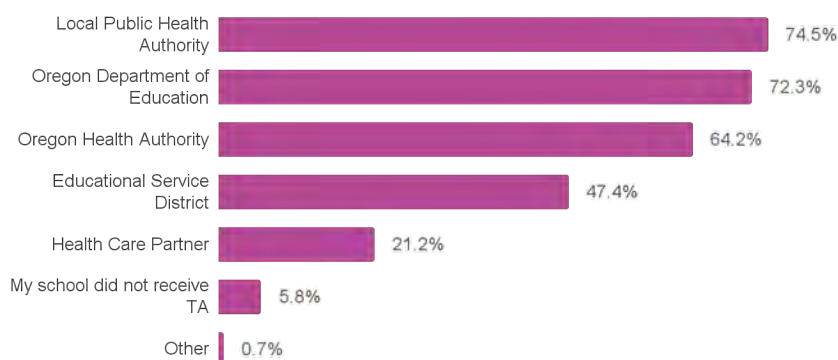
Figure 27: Percent of schools that received technical assistance to COVID-19 response activities by stage (N=137)



A variety of entities provided TA to schools to inform their COVID-19 response efforts. The top two agencies were local public health authorities (74.5%, n=102) and the ODE (72.3%, n=99). The one "other" response provided was:

- We also contracted with 2 national experts who helped provide guidance and consult on our COVID responses. We also partnered with OHSU.

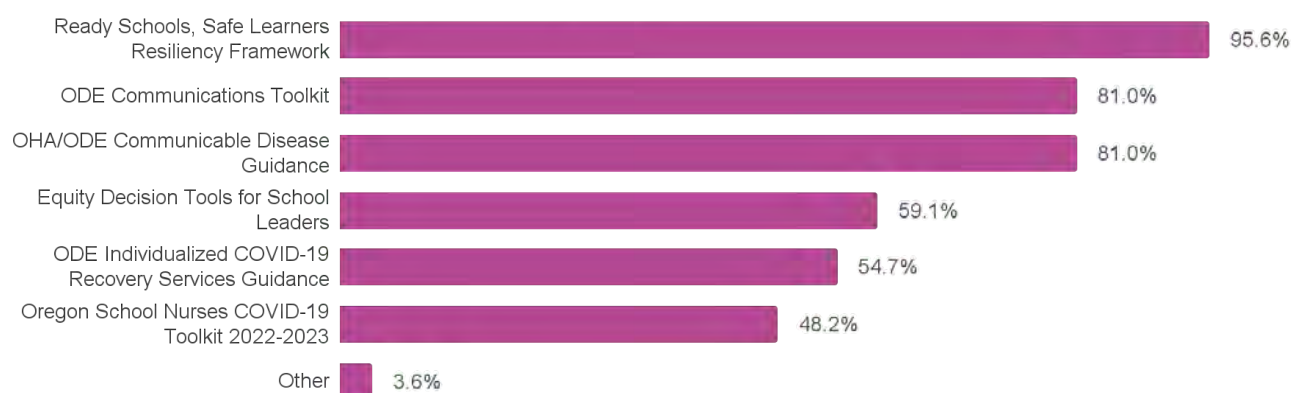
Figure 28: Entities that provided TA to school (N=137)



Respondents were also asked about their use of a variety of resources, listed in Figure 28. Nearly all respondents reported using ODE's Ready School, Safe Learners Resiliency Framework (95.6%, n=131) and the same number of respondents reported using the ODE Communications Toolkit (81%, n=111) and OHA/ODE Communicable Disease Guidance (81%, n=111). "Other" responses included:

- *One Community Health information*
- *OSAA Covid Protocols*
- *Our nurse was incredibly helpful.*
- *PPS developed our own processes for a large school district and contracted for services*
- *probably more, but typically used at the district level*
- *We used all the guidance from the ODE and OHA and tried to follow the best we could*

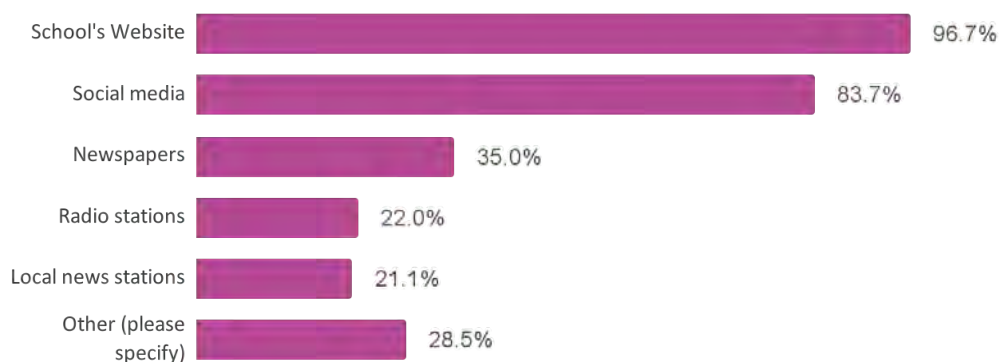
Figure 29: Resources utilized by schools (N=137)



Communications

All respondents reported providing public health messaging through mass media communication methods, see Figure 29. Most respondents provided information on the school's website (96.7%, n=119) and many provided info on social media (83.7%, n=103). "Other" mass media outlets include email, apps, mail, phone (voice and text), fliers, newsletters, webinars/zoom, ParentSquare, and Remind.

Figure 30: Mass-reach communication platforms utilized to communicate

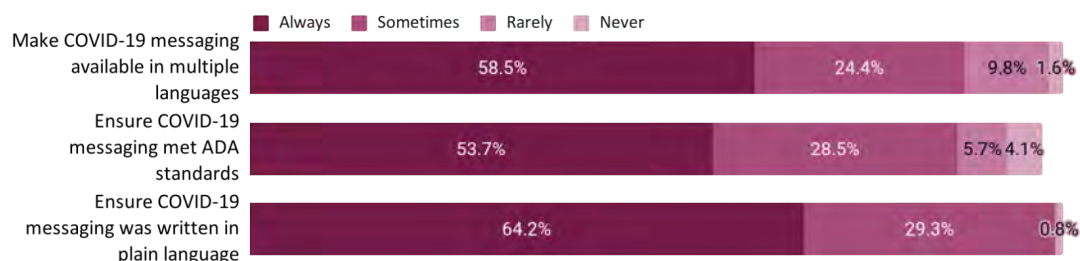


Accessibility in Communications

Respondents were also asked to reflect on how their district incorporated accessibility standards into their public health messaging. Nearly all reported that COVID-19 messaging was always or sometimes written in plain language (93.5%, n=115), and reported that messaging was always or sometimes available in multiple languages (82.9%, n=102) (Figure 31). Most respondents (82.1%, n=101) reported

that messaging always or sometimes met ADA standards. Five respondents reported never ensuring messages met ADA standards, two respondents reported never making messaging available in multiple languages, and one respondent reported never ensuring messaging was written in plain language. Note that rows do not equal 100% because respondents could select “My school did not develop public health messaging.”

Figure 31: When developing targeted public health messaging, schools did the following (N=123):



ODE Communications

Respondents rated the Oregon Department of Education's communication during pandemic response (Figure 32). The majority of respondents evaluated ODE favorably, with over 70% (n=44) selected good or excellent. Only three people rated ODE's communications as poor. Respondents rated the Oregon Department of Education's communication during pandemic response. A little over half of respondents evaluated ODE favorably, with 57.8% (n=71) who selected good or excellent. Twelve percent of respondents (n=15) rated ODE's communications as poor.

Figure 32: Evaluation of the Oregon Department of Education's communication during the COVID-19 response (N=123)



OHA Communications

Survey respondents were asked to rate OHA on their communication with the community about a variety of public health requirements that were implemented by stage. Note that respondents could select “Not applicable to stage” so totals won't always equal 100%. See Figures 33-36 for details.

Figure 33: Rating of OHA Communication with Community, Stage 1 (March - Nov 2020) (N=123)

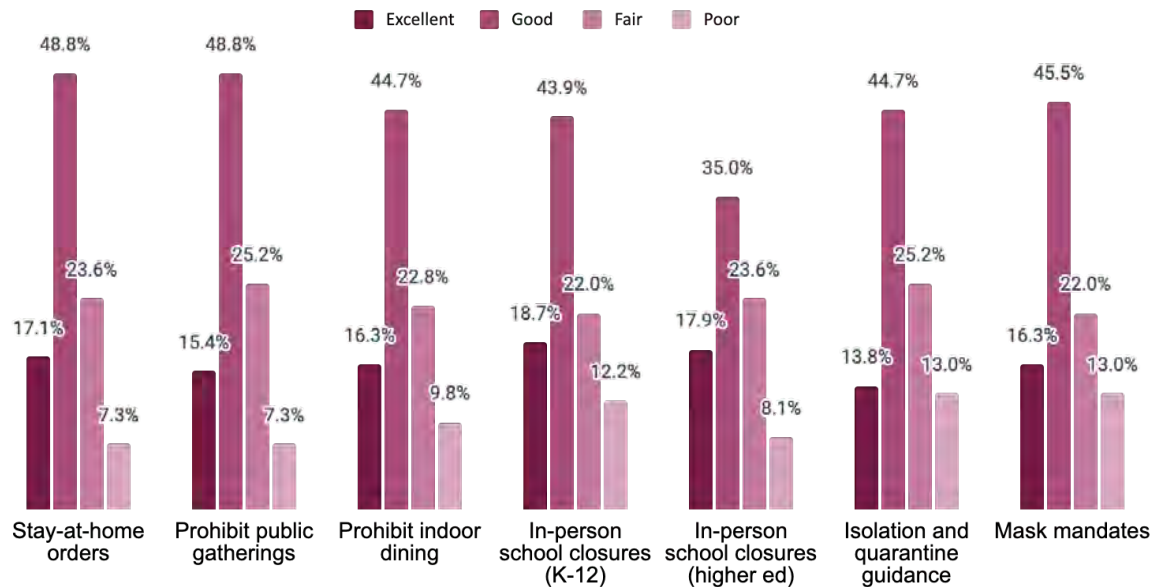


Figure 34: Rating of OHA Communication with Community, Stage 2 (December 2020 - August 2021) (N=123)

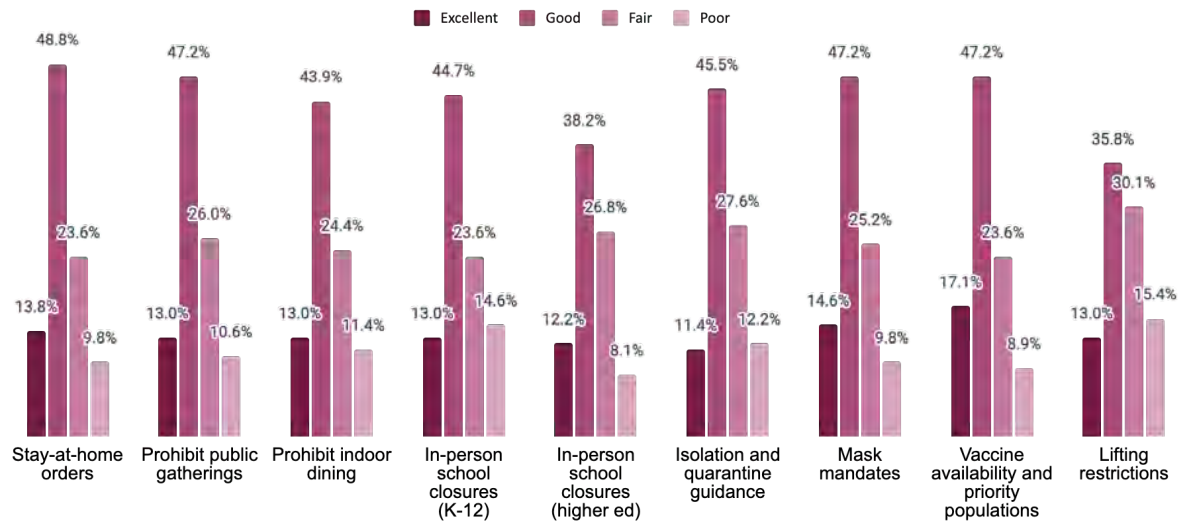


Figure 35: Rating of OHA Communication with Community, Stage 3 (September 2021 - February 2022) (N=123)

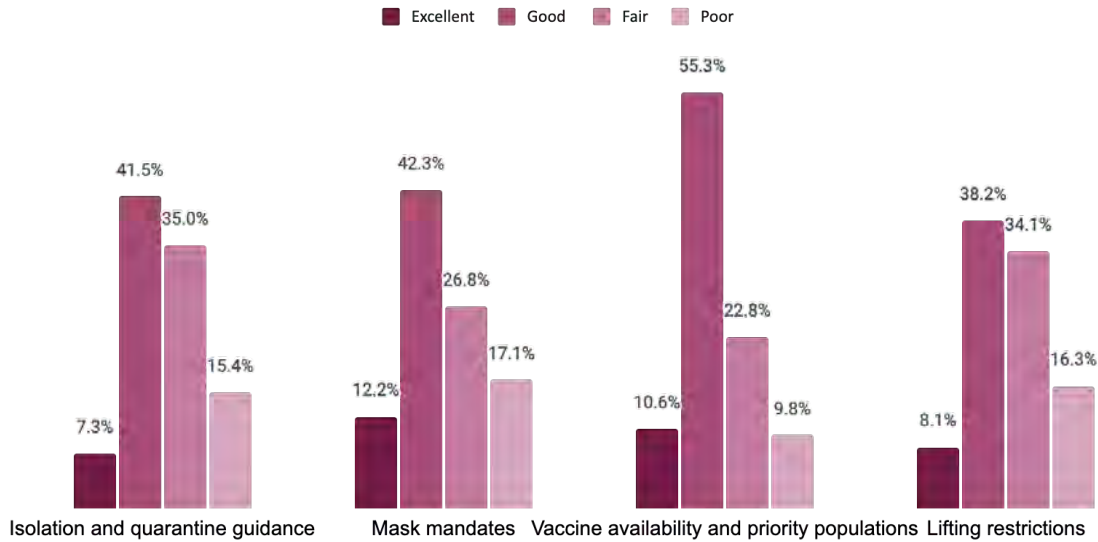
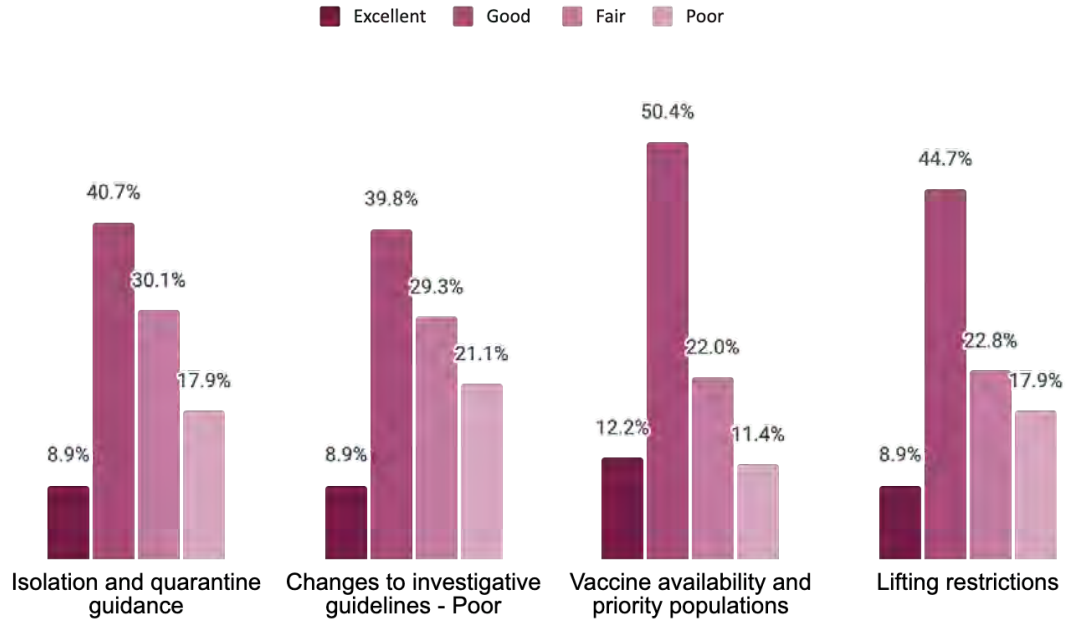


Figure 36: Rating of OHA Communication with Community, Stage 4 (March - July 2022) (N=123)



Partnerships

Respondents engaged in many COVID-19 public health response activities with partners, especially with LPHAs, OHA, ODE, ESDs, and CBOs. Very few respondents indicated that they engage in public health response activities with higher education, CCOs, long term care facilities, and Tribes. See Figures 37-39 for more details.

Figure 37: Types of activities schools partnered on with CBOs and health organizations (N=137)

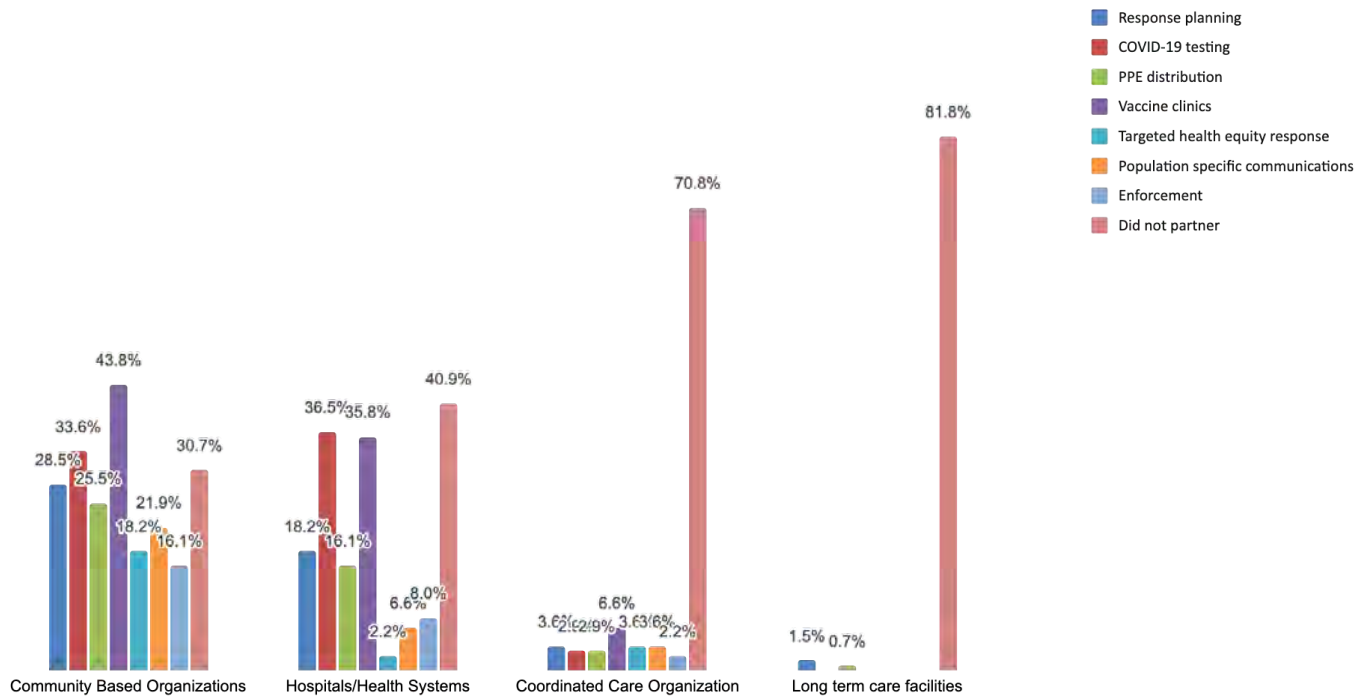


Figure 38: Types of activities schools partnered on with education organizations (N=137)

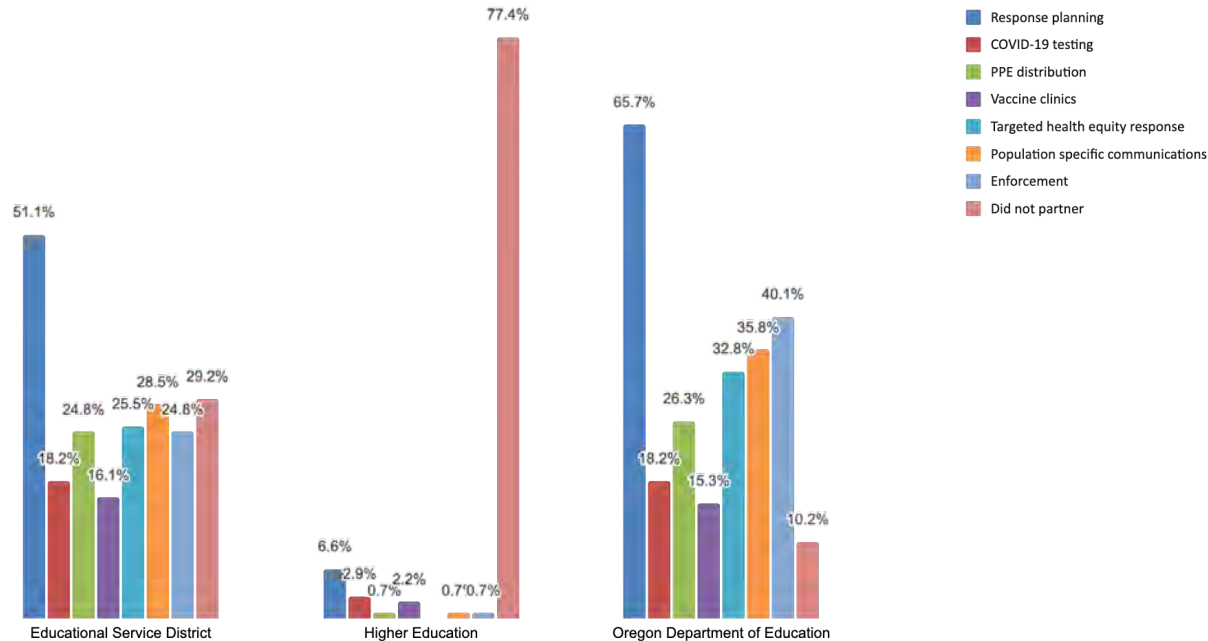
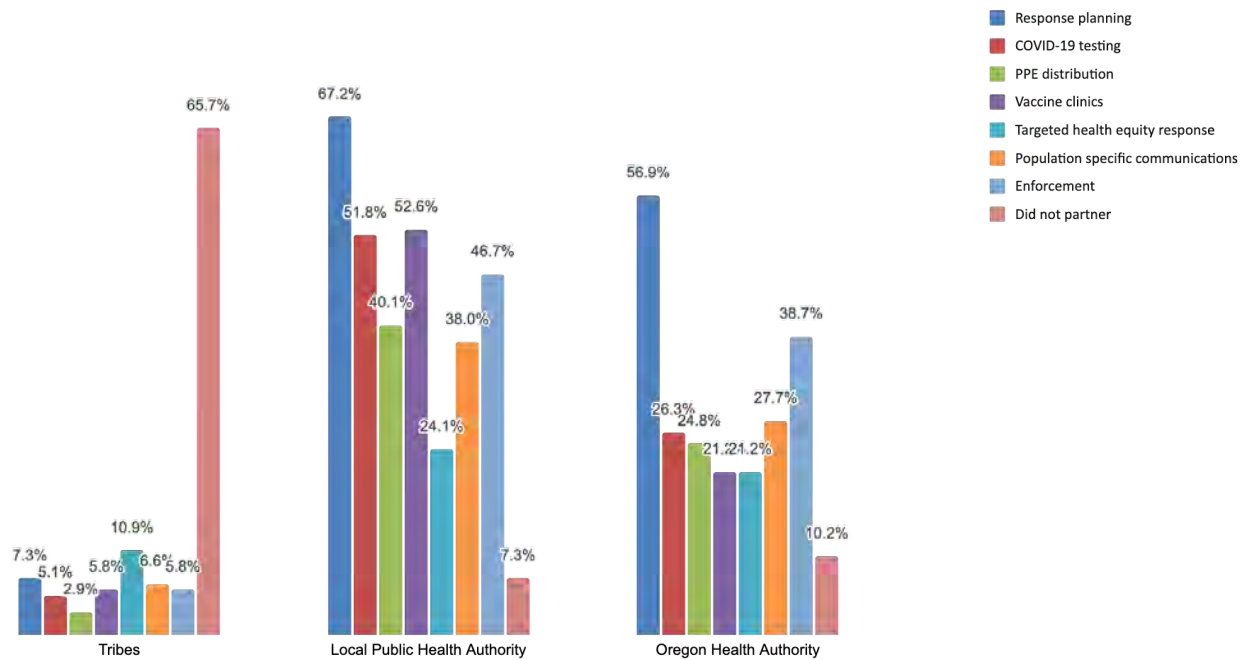
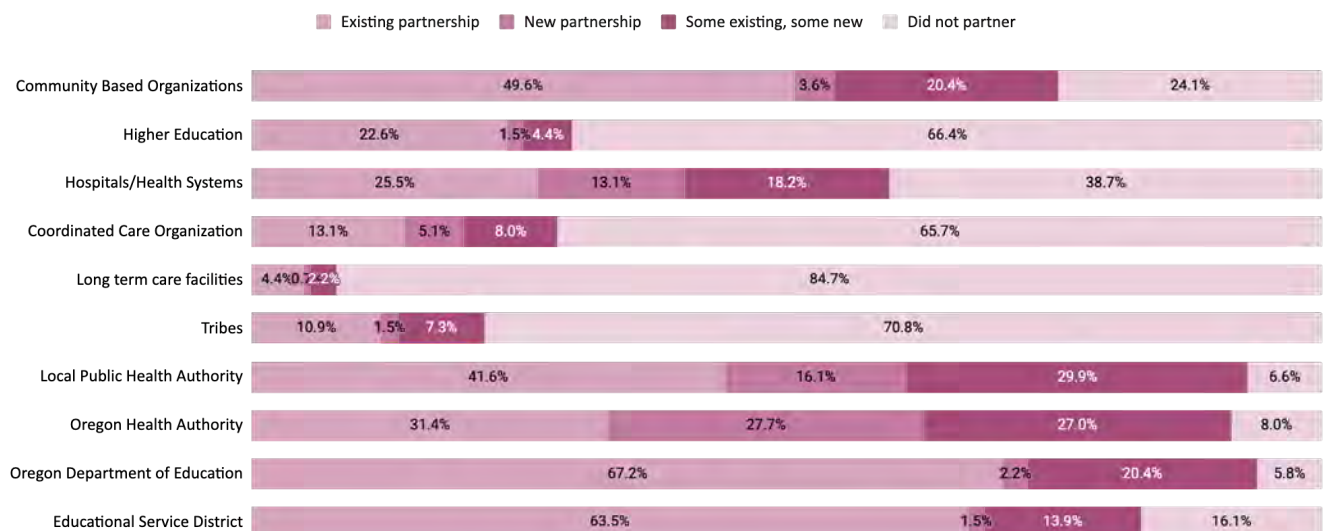


Figure 39: Types of activities schools partnered on with government agencies (N=137)



Respondents also shared if their relationships existed before pandemic response or if they were new. Most of their relationships were existing or a mix of existing and new (Figure 40). The partner types that the most respondents reported developing new relationships with were Oregon Health Authority (27.7%, n=38), local health authorities (16.1%, n=22), and hospitals/health systems (13.1%, n=18). The partner types that the most respondents had an existing relationship with were the ODE (67.2%, n=92) and ESDs (63.5%, n=87).

Figure 40: Types of school partnerships for COVID-19 Response (N=137)



Final thoughts

Respondents were provided an opportunity at the end of the survey to share any final thoughts they had about being a school administrator during the COVID-19 pandemic.

- *Although I thought the communication that went out was effective, the timing was not. Friday afternoon information just requires us to work all weekend to prepare. I'm sure that was not the intent, but we had to stay current or we had backlash from parents. It put us in a strange place. The absolute worst part of the pandemic for me was the inconsistent follow through on rules within our athletics across the state. I have never been cursed out as much as the athletic season for asking fans to wear masks. It was awful.*
- *Distance learning was rough on kids and families. I feel that, in hindsight, we would have been much better off if the state had allowed us to continue to hold in-person learning.*
- *Distance learning, even in its best form, could not be as good as face to face for the vast majority of students. The fact that state testing has resumed is holding students and teachers to impossible standards during challenging times.*
- *During my 30+ years in education, we have prided ourselves in the common mission of "doing what's best for students." Oregon's Education's response to covid quickly proved this a lie. It was apparent from early on (and still true) that covid was less a threat to students than the flu (cdc data), yet we closed schools to protect the adults. When it came down to choosing, we chose to sacrifice our students to protect adults (needlessly as statistically covid is not a threat to adults who are not obese or have underlying conditions). When we had a chance to prove that we "do things in the best interest of students," we ran and hid behind them. Until covid I was proud to say I was a public educator. Now I am embarrassed. We proved ourselves to be liars, cowards and frauds. Many schools around the country opened without issue in fall. In Oregon we followed politics instead of data and as a result we harmed the very ones we were supposed to protect. Pathetic and embarrassing. The harm done to a generation of underserved students may never be made up.*
- *Given the situation, Oregon did the best they could. I also felt they listened to the needs of districts that wanted to return to school as soon as possible.*
- *Guidance was changing regularly and central leadership had challenges navigating and communicating with building leaders.*
- *Hardest point in my career to date.*
- *I appreciate everyone's efforts.*
- *I don't ever want to do that again and yet we aren't done. We'll be supporting each other through this for years to come.*
- *I don't want to do distance learning again!*
- *I feel that Oregon went crazy and overstepped their authority. They put students, staff and our community in danger. The government did not think of the long term effects of what they were doing. This vaccine requirement (even though it isn't a true vaccine) isn't right and has caused more damage than good. I hate what has happened here due to Oregon's overreach in authority.*

- *I feel we did the best you could do under the circumstances. I do believe Oregon should learn from other states that did not lock down as much and for so long. Our students really suffered and continue to suffer from the extended lockdown and length of being out of in person instruction.*
- *I found it very frustrating to see such politicization, shaming/virtue-signaling, and unethical mandates passed without the proper process - especially considering the long term effects those choices have made on our children.*
- *I have never felt more like a political pawn than during the pandemic. While I acknowledge that hindsight is always 20/20, I think our state was way too cautious in the late stages of the pandemic. We KNEW that COVID had minimal effects on youth, but we were still hesitant to open schools.*
- *I hope the state will consider how profoundly negative the impact of keeping students home was, and that they will do everything in their power to look for other ways to mitigate pandemics in the future without resorting to measures that so disproportionately harm students on the margins.*
- *I learned a great deal that covers others situations besides a pandemic.*
- *I really appreciated the constant and updated information that we would receive sometimes daily. I thought that, all things considered, the pandemic was handled as well as could be expected. Thank you for giving us the opportunity to give feedback.*
- *I think I stated my comment earlier about Oregon's response. I just hope in the future, Oregon leadership takes in consideration that the state is split pretty even when it comes to politics and response. Oregon's choice to go extreme to one side left the other half angry and upset leaving the school district's to deal with that anger. I also would state that I felt the majority of people in my community were not extreme one way or the other, but just wanted to find a middle ground to get their kids back in school. But again, Oregon went extreme one way, forcing some middle of the road people to the other side. The sad part on my end and its hard for me not to think that this was politically driven(I cant even believe I am saying that, but I do feel that way). I want to frame that in I vote independent, sometimes I vote Democrat and sometimes I vote Republican depending on what I feel my community needs at the time, and for balance. I feel the political left took a power grab and forced an agenda down the public's throat. I also am currently wondering why we still have mandated vaccines for this in Oregon and employees. With a short fall in work force you think that this would be lifted. I also believe that a forced vaccine mandate was not ok, and I am vaccinated. What people put in their bodies is up to them, and they should not have to justify that with a religious reason, they can just say I do not want to do it. I know this is a ramble and the grammar and typos are a lot, but I am in a hurry and want to get this out. But I think Oregon's poor response to the pandemic will be and is currently shown in drop in public education enrollment and increase in private and home school. As a person that has dedicated my life to public education, this is hard to see people loose faith in public ed.*
- *I think we all need to remember that this experience was new for all of us. There were many new daily challenges we needed to learn to navigate and understand while the guidelines from federal and state organizations changed.*
- *I thought it went well overall. For being what it was, I think Oregon did a good job to communicate and implement a response.*
- *If we are going to require it from OHA we need to have the power to enforce.*

- *It felt, and still feels like schools shouldered so much of the public health burden of our young people and communities during this time. We became public health departments and that is not our jobs. As a principal my office was a testing center, I deferred all other responsibilities for weeks to run around contact tracing. I could go on and on about all the ways this has been disruptive and traumatizing for me as a professional. I am still untangling the mess that this has caused. I don't want to sound overly dramatic, but this is something we won't fully understand the impact of for a generation. It makes me so sad.*
- *It has had a lasting impact on student learning and the health of the educational workforce. It may be some time before we recover from the harmful effects we have experienced.*
- *It was a difficult time in education but thinking of the positive we learned so much from the experience. Our teachers were inundated with how to better communicate, and provided multiple forms of content in a digital format. Our students had to overcome social and emotional needs and learn how to become independent learners. We are still seeing the effects of the pandemic but the as a whole we are persevering through and finding new ways to support our students.*
- *It was a nightmare. We were out too long and our staff and students suffered. There was a spring where NOTHING got done, and we are paying for it in terms of learning. Thank God I already had a good relationship with my community and didn't have meetings that were interrupted, threatening phone calls, etc; otherwise I don't know if I would still be in the education field.*
- *It was awful, but our staff came together to educate kids well. I am proud of the work we did in a global pandemic!*
- *It was not good for the students, as a small district we were able to bring more at risk students back before others and that was very helpful to student achievement.*
- *It was terrible. Our students suffered way too long and we are still trying bring our community back together. It is going to take years to regain the trust of our community and see significant educational gains in our students.*
- *It was the most challenging time of my professional life. My partner administrator worked from home for 11 months, until the vaccine was developed, so I had to deal by myself with all the problems in the building: construction, staffing, lack of staff, contact tracing, fears etc etc.*
- *It was the worst time as an educator. There were extremely long hours, we did not have local control, and I was asked to enforce rules that my community did not believe in. It divided our staff and community, and the administrators took the brunt of it.*
- *Knowing what we now know about Covid and it's effects, the vaccination efficacy and it's side effects, Oregon's response was way out of line. The State of Oregon should have taken a much slower approach. The State of Oregon did irreparable harm to our young people, many may never recover. We should be ashamed of the approach that was taken. Government mandates are the wrong approach to a situation like this. Giving families and employees choice over how they themselves respond would have been the moral and ethical thing to do.*
- *Obviously there were many challenges in navigating the pandemic. Political polarization was a significant problem. Our technology infrastructure and proficiency were exposed as subpar at best. Instituting and maintaining restrictions in school such as masking, social distancing, and indoor eating restrictions were difficult in the beginning and wore people down toward the end. I believe that state organizations and leaders were truly doing the best they could with the*

information they had in each stage of the pandemic, but they were given a nearly impossible task.

- *Online platforms were expensive and if you could afford a high-quality learning platform it was accessible to some, but anyone with a disability was excluded. Not enough practice with online platforms and need assistive technology did not take place, because it was not a necessity in-person.*
- *Oregon was one of the last schools to open and I believe our students were the most effected by this. We should have opened much sooner if you looked at the data of Oregon compared to other states but the state, ODE and OHA were to scared to do so. When we finally were allowed to have kids in school we had to wear masks that everyone knew didn't help with this virus which caused more issues at school. A lot of this had to do with the unions having too much say in whether the schools remained closed or not. We definitely didn't put kids first which is what we should always do in every decision in schools.*
- *Our school worked hard to do what was best for kids and our community. The amount of time we were shut down has had a very negative impact on our students and the community.*
- *Positive school culture and climate is incredibly challenging to build and sustain during a pandemic that is creating a traumatic stress response across the entire system. School administrators are true leaders who took on a new challenge and led their schools through the unknown during an incredibly uncertain time. It is important to recognize the resiliency, strength, and leadership that our school administrators demonstrated throughout this time. They truly were the backbone of our communities.*
- *School personnel already have a full plate. It is not reasonable to add pandemic management and healthcare to their duties. We lost many talented educators due to changing roles and community dissent. Oregon's response to COVID damaged relationships between schools and families and polarized communities. It exacerbated an already unstable career pathway in the field of education.*
- *Shifting guidance - and school specific guidance that was more stringent than the public guidance (esp. re: bars, etc.) made the messaging and controls challenging. The clearer the expectation, the easier it was to help hold the line locally on the boundaries for enforcement.*
- *Small rural communities should have been handled differently/better. We are not Portland and do not have the same needs and population. being lumped into one category was detrimental to small communities*
- *Some of the questions in this survey were written as if schools were allowed to make choices. They were not. Ever-changing mandates in the form of ODE guidance was delivered without rationale or evidence supporting the draconian decisions. For months, schools could not consider in-person instruction if their county had more than 10 cases per 100,000. Without explanation, this eventually changed to 150 and increased from there. Kids were harmed due to these policies. Communities were divided. To this day there has never been an explanation offered for the original school closures and the constantly changing guidelines. Someone needs to step up and take accountability.*
- *The CBO's were crucial in communicating with families.*
- *The challenge was the shifting guidelines, and creating expectations for students that matched the guidelines.*
- *the early phases were confusing when the guidance was shifting rapidly*

- *the most difficult thing was the uncertainty we all faced in trying to make decisions and that guidance from the state was changing rapidly.*
- *The overall experience was not fun for anyone, and we're seeing the ongoing fallout with lack of people to support students continue. It has and continues to be a very disheartening time to be in education, but there are a few bright spots, and we did learn to shift priorities daily. The thing that bothered me the most was ODE consistently telling districts what was required, but never shouldering the responsibility for it causing those of us on the ground who were doing the most difficult work to get the brunt of the outrage from parents and community members. It hurt a lot of relationships that are still not yet mended. That should have been handled better by ODE. It felt like school personnel were made to be scape goats.*
- *The pandemic changed how students learned for over two years. We will be trying to rectify the learning loss for the next 12 years.*
- *The political pressure for individual school principals to reopen school was fierce and individual principal's had no authority to respond to these pressures. As a parent and as a principal I would have reopened earlier and offered more in person activities/lessons, especially for those struggling in distance learning. We are now seeing the predictable severe mental health issues from student isolation.*
- *There seemed to be a lack of awareness around how communities of poverty would be impacted by distance learning--including rural schools with little to no internet access.*
- *There were facets of this questionnaire that I may not have known everything that went on, but I provided the information based on my recollection of events. It was quite a blur, and one I feel everyone is ready to move past.*
- *This community thought it was all a hoax and refused masking. the student's did a pretty good job to stay within our rules and stayed masked as did our staff.*
- *This pandemic has made the job more difficult. Many of my friends and professionals in the field have left. This is a tough job and there is a lot of distrust for our government. Folks have been very disrespectful and we have become a punching bag for the public. Things are getting better, but they are still very tough.... There are lots of things to elaborate on, but I am sure you will get many of the same comments.*
- *This was a very challenging time that required everyone to just do more. While that is the case, I know we worked to the best of our ability and provided the best systems we could for our students and community.*
- *This was an extremely difficult situation for Oregon to manage, however, I do not know if those in the decision-making positions truly understand the impact this pandemic continues to play on the educational system in Oregon. Students are still struggling to recover both academically and socially/emotionally. Just because the pandemic is over does not mean that we are not continuing to respond to the impact it had on our schools.*
- *Though this was a very challenging time, I think most people came together and worked to do what was best for our communities and state.*
- *We are feeling the after effects of students being extremely isolated and it is very difficult to get students and families engaged in learning and regular attendance. Socially, emotionally and academically we took many steps back for making progress with our students and it shows. Guidelines were much too stringent and seemed to not take into consideration the emotional and mental health of students and staff.*

- *We did our best. It was often messy and usually inadequate, but it was the nature of the situation we were in.*
- *We needed more guidance in the area of technology. So many districts implementing, but lack of sharing of knowledge unless you knew someone from that district. We needed to be able to learn from each other.*
- *We needed more options for students traditionally struggling in school.*
- *We were criticized for following ODE and OHA guidelines. There was little help for administrators who were constantly changing and creating new schedules, etc. We had protesters outside of our building telling student NOT to wear masks and had a great deal of controversy with parents who did not want to wear masks. It caused a divide with little to no help for schools.*
- *While our initial response to "emergency distance learning" was very difficult (Stage 1), given time and resources, we were able to create an adequate distance learning program beginning in the fall (Stage 2) that worked for most students.*

OR Public Health Response to COVID-19: School District Superintendents Survey Preliminary Analysis

Introduction

For this study, a survey was administered to Oregon School District Superintendents between January 23 and February 7, 2023. Eight-four surveys were started, with thirteen respondents removed due to only completing the demographics section and a few questions. Including eight partial surveys with at least 25% of questions completed, a total of 71 surveys are included in the sample representing.

Demographics of survey respondents

Characteristics	n (%)
Region*	
Region 1	17 (24%)
Region 2	21 (30%)
Region 3	15 (21%)
Region 4	11 (16%)
Region 5	9 (13%)
Stage Involvement	
Stage 1 Only	1 (1%)
Stages 1, 2 & 3	1 (1%)
Stages 2, 3 & 4	3 (4%)
Stage 3	1 (1%)
Stages 3 & 4	4 (6%)
All 4 Stages	61 (86%)
Current Role	
Superintendent	68 (96%)
Other (Retired superintendent, Senior Analyst, Deputy Superintendent)	3 (4%)

*Two respondents selected multiple regions so the total equals more than 100%

Emergency Management preparedness

School district preparedness

When respondents were asked to evaluate their district's overall level of preparedness to respond to the COVID-19 pandemic, 40.8% (n=29) felt that their district was highly prepared, and another 28.2% (n=20) felt their district was moderately prepared. A third of respondents (31% or n=22) felt that their district was minimally or not at all prepared (Figure 1).

Figure 1: District preparedness for COVID-19 pandemic (N=71)

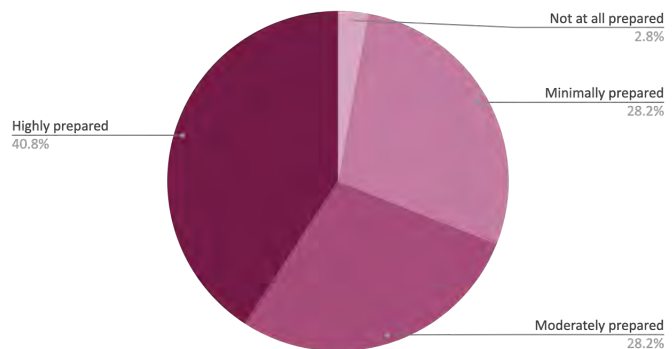
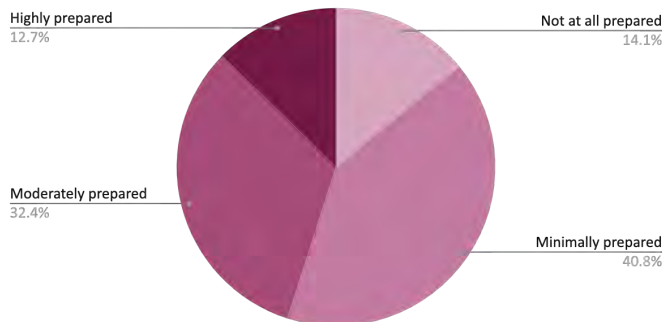


Figure 2: District preparedness to transition to distance learning for educational instruction delivery (N=71)

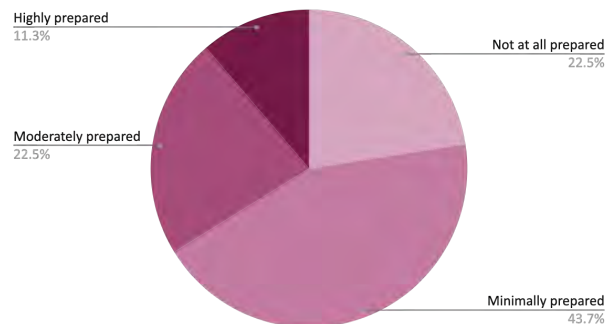


Survey respondents were also asked to reflect on how prepared their district was to transition to distance learning (Figure 2). A little under half of respondents (45.1%, n=32) felt their district was moderately or highly prepared, and a little over half (55%, n=39) felt they were minimally or not at all prepared.

Self-preparedness

When asked about their individual level of emergency preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise), about two-thirds of respondents felt that they were not at all prepared or minimally prepared (66.2%, n=47) (Figure 3). Respondents reported the following as reasons for their self-assessment:

Figure 3: Self-preparedness for COVID-19 pandemic (N=71)



Highly prepared:

"We are trained in communicable disease response as a part of our job. This was the same training."
"I was a trauma and public health nurse prior to becoming a teacher and administrator with experience dealing with Tuberculosis, Measles and HIV outbreaks."

"I advised our LPH director that Covid was not a good reason to keep kids out of school, that they were not at risk and that given the exaggeration of Covid-related health problems ("with Covid rather than from Covid"), it really shouldn't be a major concern for healthy adults. I argued that the damage done to

our children would be far greater by keeping them out of school. I was right on all counts and the LPH was wrong because they followed the political science rather than actual science.”

“I had just transferred from another state/district and had extensive training and knowledge.”

“I sought out answers and researched at every opportunity. Participated on a lot of group meetings.”

“have a ph.d in public health, have worked in health services, and have taught communicable disease courses, etc.”

“We were well trained in Texas in the Spring of 2020”

“I have 30 years of experience with developing emergency response plans and was prepared. I was working with our local public health department for weeks before the shut down happened.”

Moderately prepared:

“I was working for ODE at the time. I helped prepare RSSL and prepare school leaders.”

“We didn't know that much about COVID-19 in the beginning, but we have had to monitor season flu rates and things that cause widespread absences for staff and students. We always enhance sanitation of the buildings in the winter. It didn't take long to figure out that COVID-19 was similar.”

“We had some plans for a pandemic but really expected most of the response to fall at the county level and not at the school district level. We were more involved than we thought we would be.”

“Outside of a few calls with public health about potential flu outbreaks, norovirus, hand-foot-mouth, etc. our local engagement with public health had been very limited.”

“Previous experience with contagious disease protocol and our district plan helped provide a basic understanding of how to implement the ever changing guidance in a school setting.”

“I have a degree in Community Health education.”

“supply chain issues for masks and hand sanitizer.”

“Trainings from H1N1 pandemic preparation. Also been trained in Incident Command System.

Steep learning curve. The question asks about initial contact. The state did a good job of ramping up protocols, so I felt I was moderately prepared.”

“We worked closely with the Oregon Health Authority, Coalition of Oregon School Administrators, Multnomah County Health Department, and the Oregon Department of Education.”

“Felt we as a district stayed up to date on ODE's uneven and varying directives as well as balancing what the OHS had to say. We also kept inclose communication with Dr. Dannenhoffer, to make sure we were staying up to date with latest expectations.”

“[My district] already had procedures for school closure due to the mass transmission of things like the flu. Plus we had already developed a communicable disease plan.”

“My background in education was as a health and science teacher prior to becoming an administrator. “

“The COVID-19 Pandemic was the first Pandemic I had worked through.”

“I'm a good leader, so I knew how to communicate with my board, staff, and community, but a pandemic was just brand new.”

“I have worked in some capacity in school district operations for the past decade so have extensive experience and preparation in responding to emergencies.”

Minimally prepared:

“ICS does cover some pandemic topics, but not COVID!”

"This is my first supt position and while I was experienced preparing for an emergency response at a building level, it was very different at a district level."

"We were not prepared for the school closure for such a lengthy period of time."

"I felt confident in organizing our system to respond to the school closures and many aspects of the pandemic, but the overall knowledge needed to be an expert in all areas was overwhelming."

"I'm not a public health official"

"Nobody was prepared but I had a background in virtual education which helped somewhat."

"The mandates changed our role significantly and nearly overnight. We shifted nearly everything we do and how we do it, with little room for local decision making."

"Early on, the response was equated to closures due to inclement weather, we have a lot of experience in that."

"I believe it came from some of the discrepancies of how serious the infection was/is. A lot of mis information."

"It wasn't on our radar. Compared to what we all went through, I am not sure how we could have been prepared for that?"

"I had been involved in some emergency planning and response, but nothing quite like the pandemic."

"At the onset of the pandemic, March 20, 2020, I never realized the extreme impacts it could have on schools, the staff, students and families. The polarization of district and community went far beyond my expectation."

"We had a communicable disease policy; however, using it is a whole other issue."

"I had preparation regarding infectious disease protocols having been a principal and working with the school nurse, student services department, and county public health. However, I was not prepared for a public health crisis this significant."

"We were prepared for emergency safety response protocols, but not the rapid pace of the pandemic. We were unprepared with how to educate students virtually."

"Wasn't aware Covid 19 existed"

"Was not well prepared to look at delivering instruction in a different way."

"I had only minimal contact with local county public health officials prior to the pandemic."

"We predicted COVID-19 would have a substantial impact on school operations as it crossed the globe but were unprepared for the true impact of the pandemic."

"We had the technology in place to serve all students. No teachers were online. We didn't have PPE and processes. We did have a plan, but not for shutting down and going online."

"I had prior experience with school-level outbreaks in cooperation with and our LPHA."

"I knew we had a communicable disease plan that I thought would help guide our initial work as the pandemic began. I soon became aware that this was bigger than a communicable disease that in the past may shut down a district for a few days to up to a week. The communicable plan we had, although good, didn't address what we were undertaking. Plus, the infrastructure for full closure and continued closure of K-12 public schools was not in place."

"This was not something any could have fully prepared for as our country/world had not ever experienced anything like it."

"No one is prepared for such an event... was a global pandemic and there wasn't clarity from anyone how to respond"

"We didn't have systems in place at all levels, so we were using our own experiential knowledge to navigate the issues."

Not at all prepared:

"No one outside of the medical community could have possibly foreseen to what extent covid would impact K-12 education."

"School superintendents had no previous experience with an issue like this. Although there were some plans in writing, we had nothing in our careers to lean on as a prerequisite."

"I did not have any preparation for responding to such a significant health crisis."

"I had no knowledge about health care protocols or best practices. We didn't even have laptops for teachers or chromebooks for students. We didn't have enough textbooks for everyone to take a book home. It was implementation and logistics that were really overwhelming."

"Because I was not at all prepared. . ."

"We were 2nd school district impacted with community outbreak in our middle school....no knowledge or prep was in place."

"In my 20+ years in education, I had never experienced anything like what was asked of educators during the pandemic."

"I had never been through a similar situation"

"We had a system built for in-person learning. We were prepared to respond to guidance, but not to teach under those evolving conditions."

"I was a MS/HS principal of a small school and AD. The pandemic was not in my wheelhouse. Was it truly in anybody's wheelhouse??"

"This was the district's first response to a pandemic. We had to move from an in person model to an online model over spring break. At the time, we only had a .5FTE district nurse who did not have experience with how to deal with a pandemic."

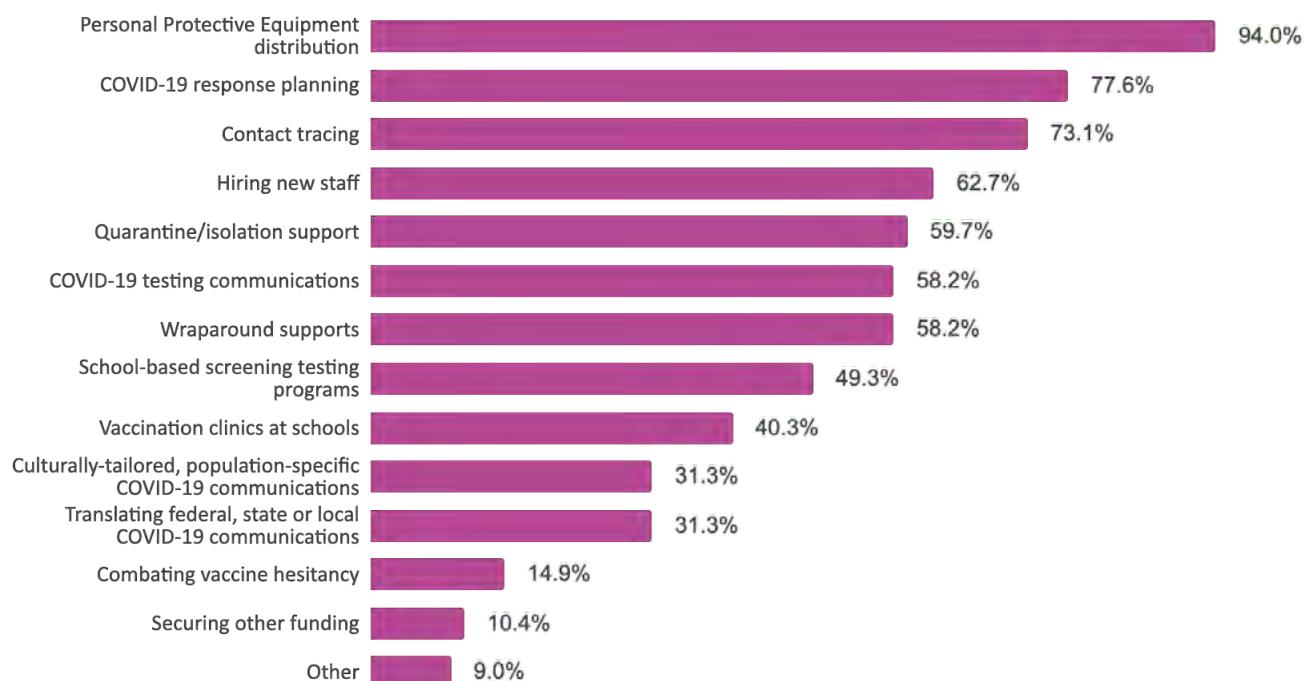
"It was unknown to everyone."

Funding

Fourteen respondents reported affirmatively that their district received COVID-19 funding from entities other than OHA, 45 reported that they did not, and eight did not know. Other sources of funding reported by respondents included federal, foundation grants, local COVID grants, Chamber of Commerce and Business Oregon, ESSER funds, donations of PPE from other agencies in the county, and Governor's office funding.

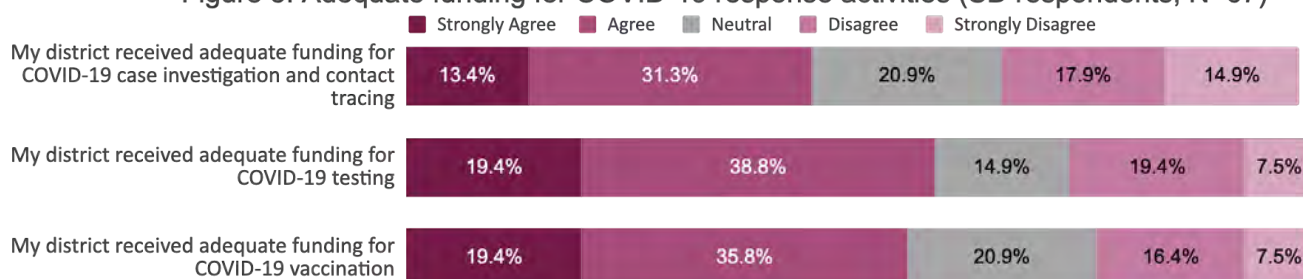
Survey respondents were asked to report on what types of activities they used their COVID-19 funding for. Almost everyone reported spending funding on Personal Protective Equipment distribution (n=63) (See Figure 4). Over three-quarters of respondents (n=52) reported spending on COVID-19 response planning and nearly three-quarters (n=49) reported spending on contact tracing.

Figure 4: Areas COVID-19 funding was used by district (N=67)



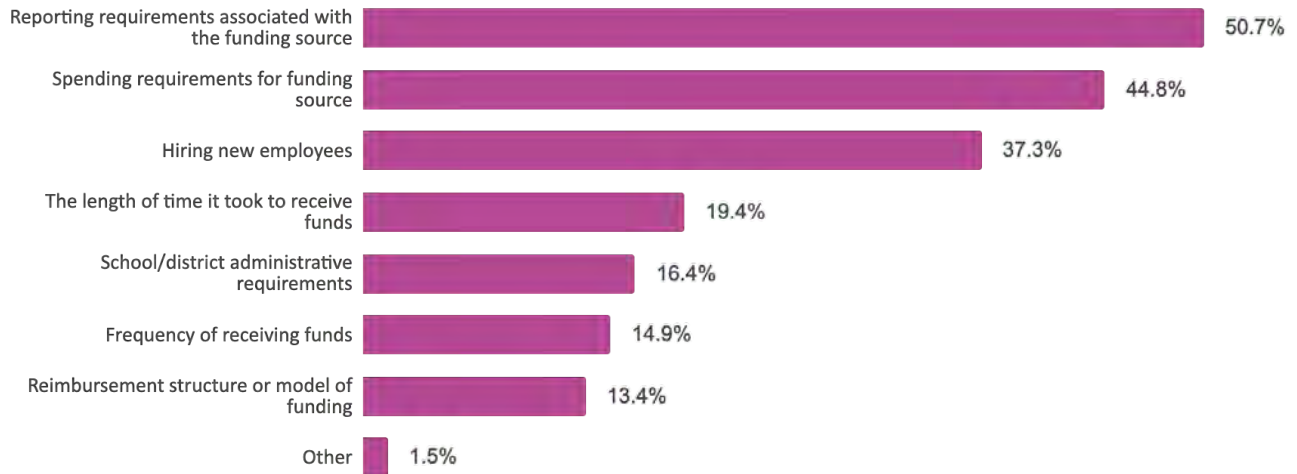
Almost half of respondents agreed or strongly agreed that their district received adequate funding for case investigation and contact tracing (n=30) and about a third (n= 22) disagreed or strongly disagreed (Figure 5). Over half of respondents agreed or strongly agreed that they received adequate funding for testing (n=39), and vaccinations (n=37), and approximately a quarter of respondents disagreed or strongly disagreed.

Figure 5: Adequate funding for COVID-19 response activities (SD respondents, N=67)



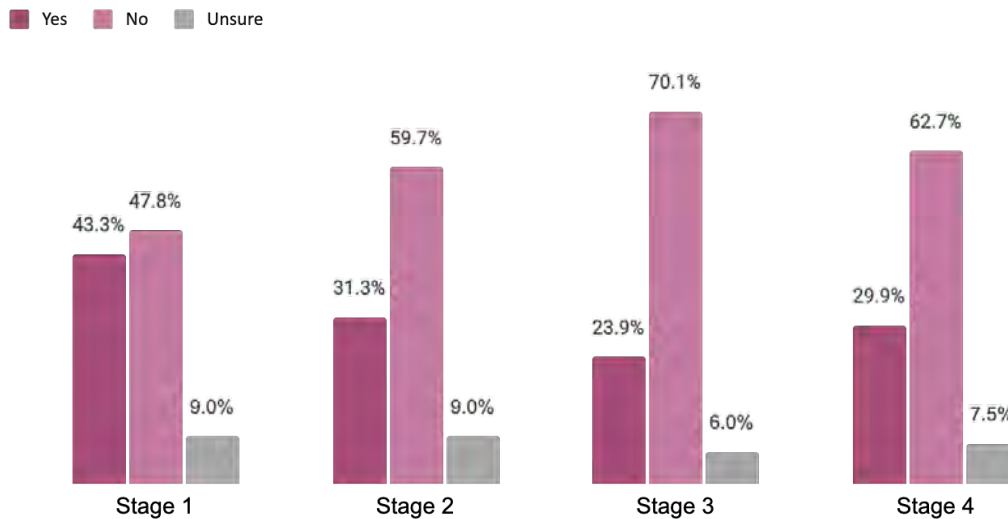
Respondents reported that their district experienced barriers to the efficient use of COVID-19 funds, see Figure 6. Half of respondents (n=34) identified reporting requirements and 45% (n=30) identified spending requirements as challenges. Over one-third of respondents (n=42) reported hiring staff as a barrier. One respondent selected “other” and wrote, “*Spending timelines, we were learning as we adjusted to the changing dynamics.*”

Figure 6: Barrier to efficient use of COVID-19 funds? (N=67)



Respondents were also asked if they ever felt their district did not have adequate funding to support their community in managing the pandemic. During stage one, almost 50% were concerned they did not have enough funding, and that reduced slightly during subsequent stages, but nearly a third of respondents were concerned about funding throughout the study period (Figure 7).

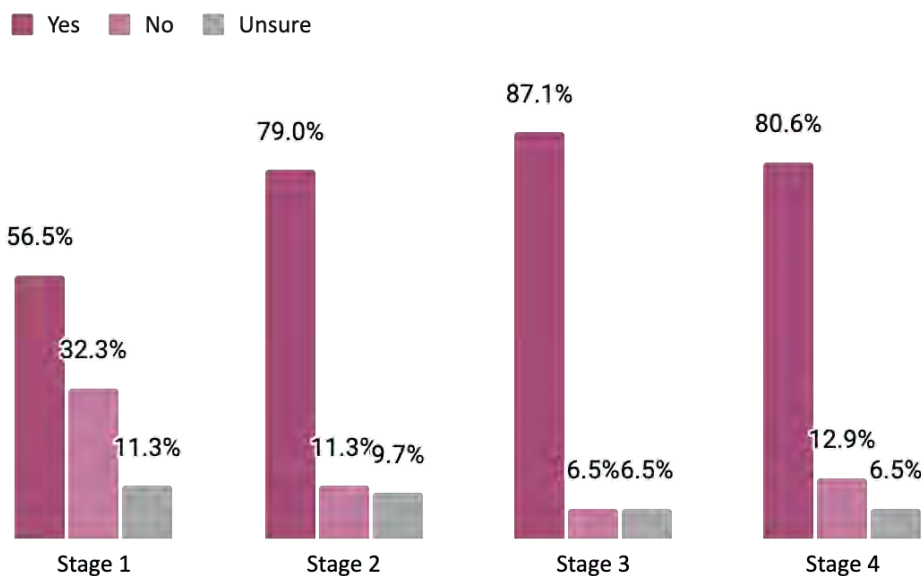
Figure 7: Did district worry if they would continue to have enough funds to support communi in managing the COVID-19 pandemic (SD respondents, N=67)



Epidemiology Data Access

Survey respondents were asked if they had access to local epidemiological data to guide their COVID-19 decision making. In Stage 1, only about half respondents and one-third reported that they did not have access to local data. But for Stages 2-4, the vast majority felt they did have access to local data to guide decision making.

Figure 8: Access to local epidemiological data to guide COVID-19 decision making by stage (SD respondents, N=62)



Respondents were also asked if they received technical assistance (TA) to access, understand, or use epidemiological data. Ten percent (n=6) reported not receiving any TA at any time (Figure 9). Twenty-eight respondents reported receiving TA during every stage of the pandemic.

Figure 9: Stages during which district received TA to access, understand, or use epidemiological data (N=62)



Respondents who reported receiving TA were also asked what entities they received support from. TA was provided by local health departments, ODE, Educational Service Districts, and OHA (See Figure 10).

Figure 10: Entities that provided TA to superintendents to access, understand, or use epidemiological data (N=44)



Two respondents included comments to this question.

“My ESD was invaluable and coordinated all our regional agencies and our responses”

“I would say that the local health authority was the least helpful during all of the pandemic. They were too understaffed and not able to provide timely assistance.”

COVID-19 Response Activities

Formal Pandemic Response:

Respondents were asked when their school district began their formal COVID-19 response. The majority of respondents (75.7%, n=53) reported that they began their response the date of Oregon's emergency declaration. Three respondents said they began emergency response when there were cases in their community, and two respondents reported starting the date of the federal emergency declaration. Two respondents said they did not know. Ten respondents selected “other,” their write-in responses are included below.

“Not sure this is a great question. Schools were shut down in March so there was not a lot of response to be had other than don't come to school. The early days of were not as challenging as September of 2021.”

“The first case in our area was in Weston Oregon at the School that is 10 miles away and we have shared student and staff. At that point we started to work with health providers.”

“When the NBA cancelled their season. That is when it became real.”

“We began to look at “what if” scenario's as the cases began to increase across the world in late January/early February. It was beginning planning, but true planning began when the Oregon emergency was declared.”

“March 13th when Governor Brown shut down our schools - with no notice given to district admins”

“A small team of us had started planning about a week before the governor closed schools; one of our board members works in cybersecurity and we had been tracking chatter since January.”

“We had made the decision to close school just prior to the Governor's announcement for closure.”

“March 12, 2020 based on Governor's first executive order requiring no more than 250 people in one space.”

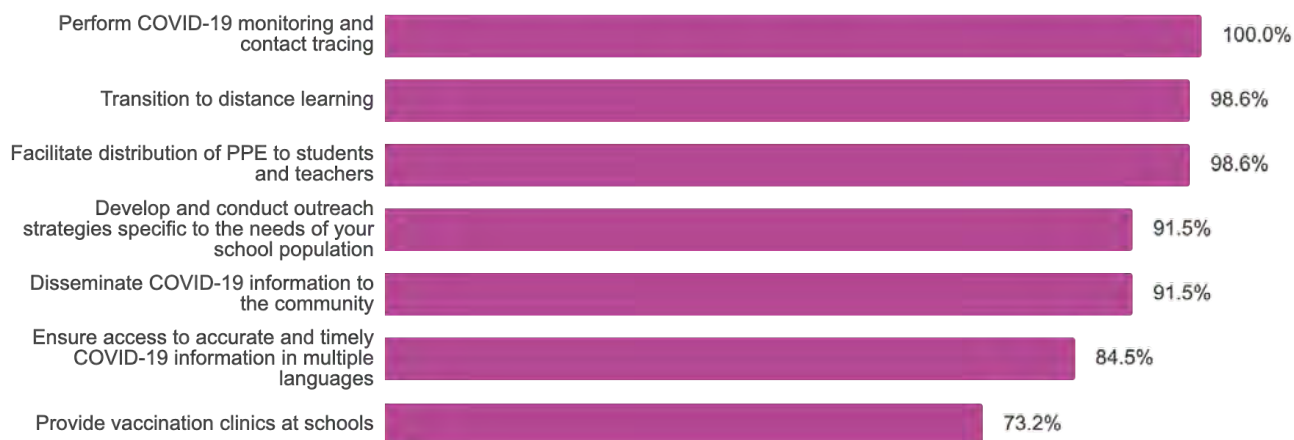
“When we were required to. Otherwise we treated it like any other contagious illness.”

“Feb. 12 when I requested a meeting with our local public health and with the county commissioners.”

Overall Response:

Respondents shared ways their school district responded to the pandemic. All respondents reported performing contact tracing and monitoring, and all but one reported transitioning to distance learning, and facilitating the distribution of PPE to their school community.

Figure 11: Ways that school district's responded to the COVID-19 pandemic (N=71)



When asked if they had to update policies to transition to distance learning, almost half of respondents said they changed policies, and about one third said they created new policies (Figure 12). Please note that four respondents selected both options for yes, so the total equals more than 100%.

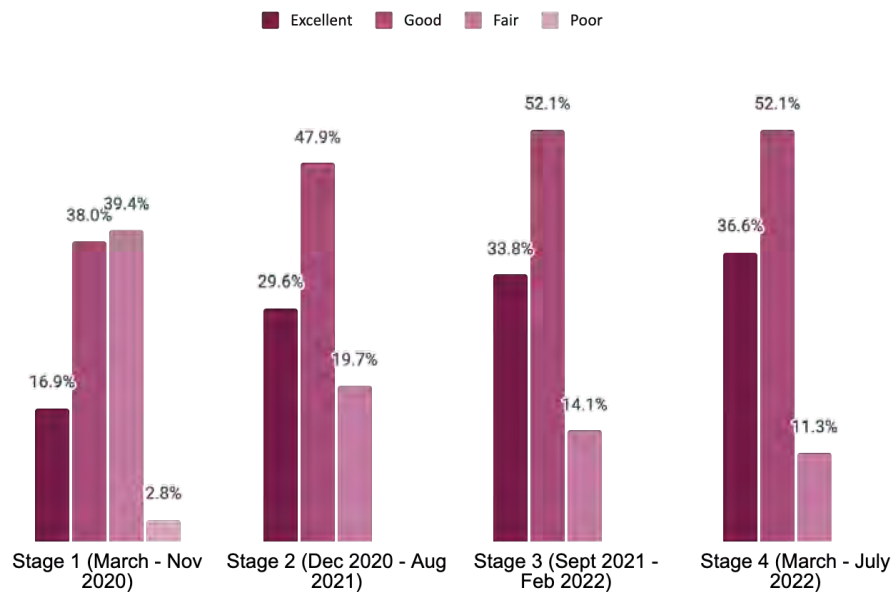
Figure 12: Abrupt closure of schools and resulting transition to distance learning required changes to existing policies (SD respondents, N=71)



Rating of school districts response to COVID-19:

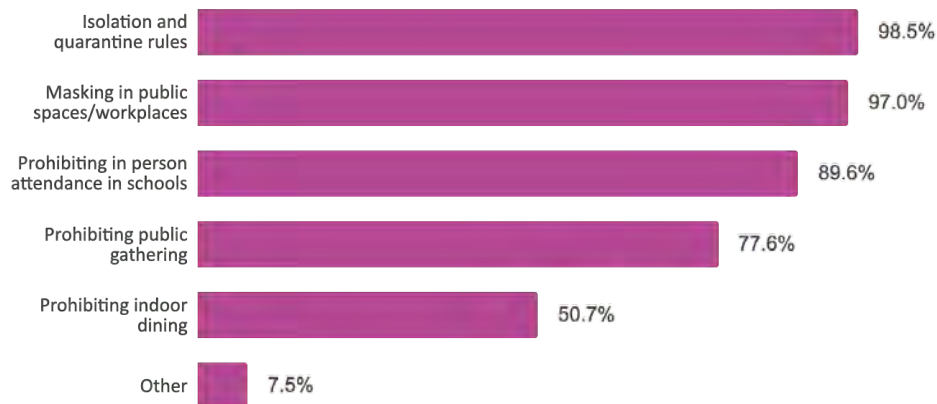
Respondents were asked to evaluate how well they felt their district's response to the COVID-19 pandemic was during each stage. In the first stage more respondents felt that their district did poor or fair (42.3%, n=30) compared to subsequent stages, and by stage 4, the majority of respondents felt their school district's response was good or excellent (88.7%, n=63) (Figure 13).

Figure 13: Rating of school district's response to COVID-19 during each stage (N=71)



Survey respondents were asked to share what types of public health requirements, if any, their School District adopted. All respondents reported at least one public health requirement was adopted, and twenty-nine respondents indicated their district adopted all requirements listed.

Figure 14: Public health requirements adopted by school districts (SD respondents, N=67)



Other requirements written in by respondents as "other" include:

"Hand washing, sending staff/students home that were not sure if they were feeling well."

"We followed all of the rules that were applicable to schools"

"Temperature checks upon arrival to class"

"Required to not have in person learning"

"social distancing while eating, SD in halls, cohorting, etc."

Public health system response

Survey respondents were asked to rate the state of Oregon’s management of the pandemic response to COVID-19 in schools during each stage. The majority of respondents rated Oregon as poor or fair in all four stages (Figure 15). The state of Oregon was rated worst in Stage 1, with over two-thirds of respondents selected poor or fair (69%, 49).

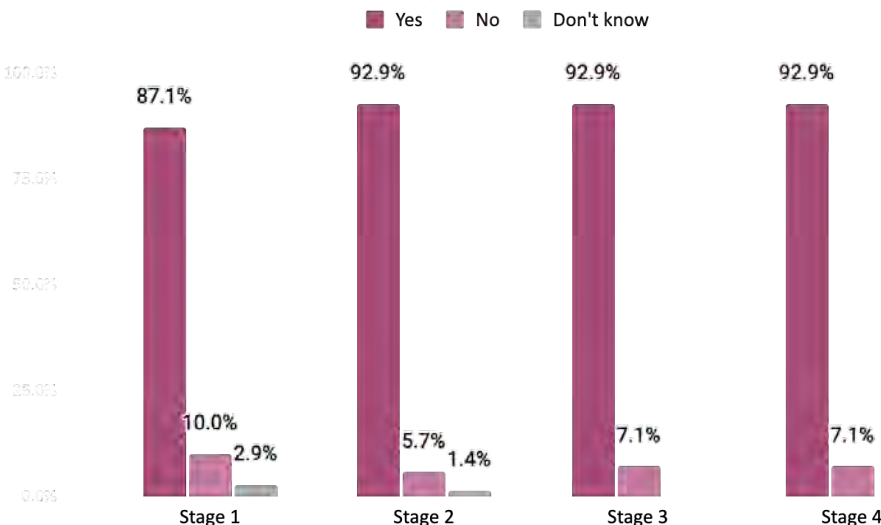
Figure 15: Rating of state of Oregon's management of the COVID-19 response in schools during each stage (N=71)



Technical Assistance

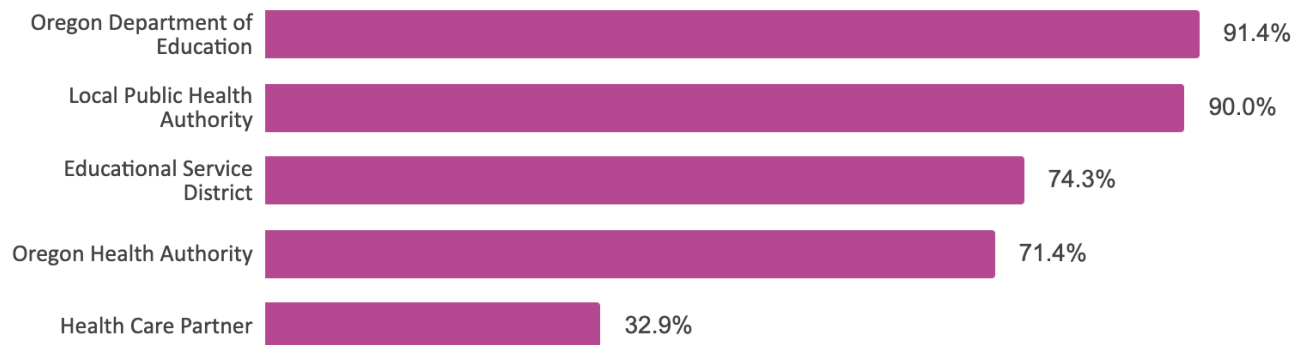
Nearly all respondents reported receiving technical assistance to inform their COVID-19 response activities. Throughout the study period, nearly all respondents received TA (Figure 16).

Figure 16: Percent of districts that received technical assistance to inform COVID-19 response activities by stage (N=70)



A variety of entities provided TA to school districts to inform their COVID-19 response efforts. The top two agencies were the Oregon Department of Education (n=64), and Local Public Health Authority (n=63) (Figure 17).

Figure 17: Entities that provided technical assistance (TA) to districts (N=70)



Respondents were also asked about their use of a variety of resources. All respondents reported using ODE's Ready School, Safe Learners Resiliency Framework.

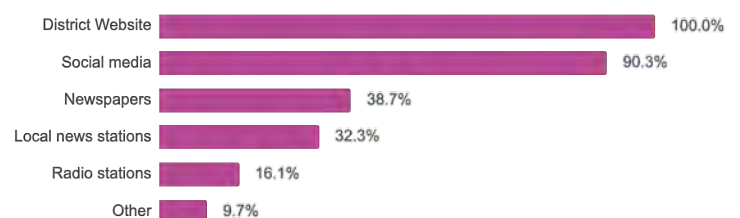
Figure 18: Resources utilized for COVID-19 pandemic response(N=70)



Communications

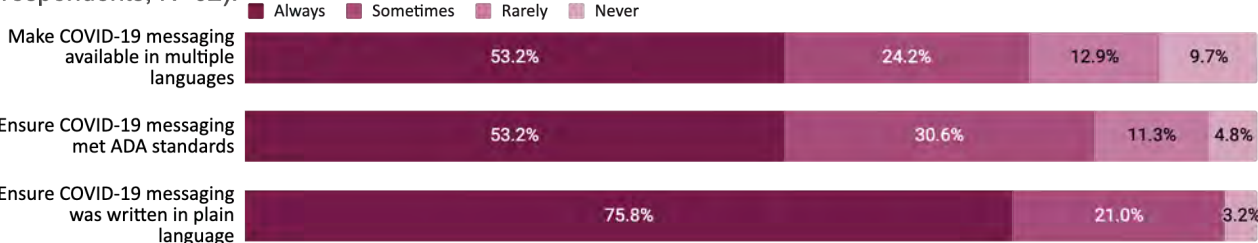
All respondents reported providing public health messaging through mass media communication methods (Figure 19). All respondents provided information on their websites and nearly all on social media. Roughly a third reported utilizing local news stations and newspapers. “Other” mass media outlets included podcast, direct email, Parent Square, newsletters, Blackboard Notification System, and phone (text, voice).

Figure 19: Mass-reach communication platforms utilized to communicate COVID-19 information (N=62)



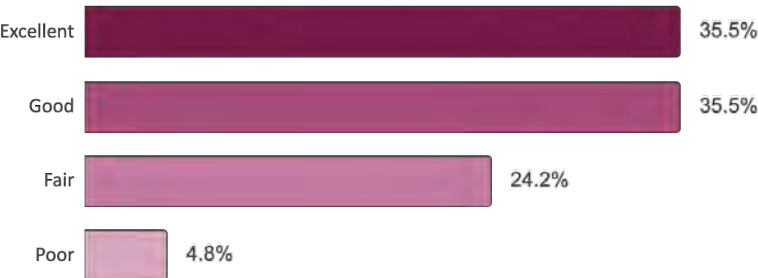
Respondents were also asked to reflect on how their district incorporated accessibility standards into their public health messaging. Nearly all (97.8%, n=60) reported that COVID-19 messaging was always or sometimes written in plain language, most respondents (83.9%, n=52) reported that messaging always or sometimes met ADA standards, and 77.4% (n=48) reported that messaging was always or sometimes available in multiple languages (Figure 20). Six respondents reported never making material available in multiple languages, three respondents reported not meeting ADA standards, and two respondents reported that they never ensured messaging was in plain language.

Figure 20: When developing targeted public health messaging, school districts did the following (SD respondents, N=62):



Respondents rated the Oregon Department of Education’s communication during pandemic response. The majority of respondents evaluated ODE favorably, with over 70% (n=44) selected good or excellent. Only three people rated ODE’s communications as poor (Figure 21).

Figure 21: Evaluation of the Oregon Department of Education's communication during the COVID-19 response (N=62)



Survey respondents were asked to rate OHA on their communication with the community about a variety of public health requirements that were implemented by stage. Note that for in-person school closure (higher ed) in stage 1, 20 respondents selected “Not applicable to stage.” See Figures 22-25.

Figure 22: Rating of OHA Communication with Community, Stage 1 (March - Nov 2020) (N=62)

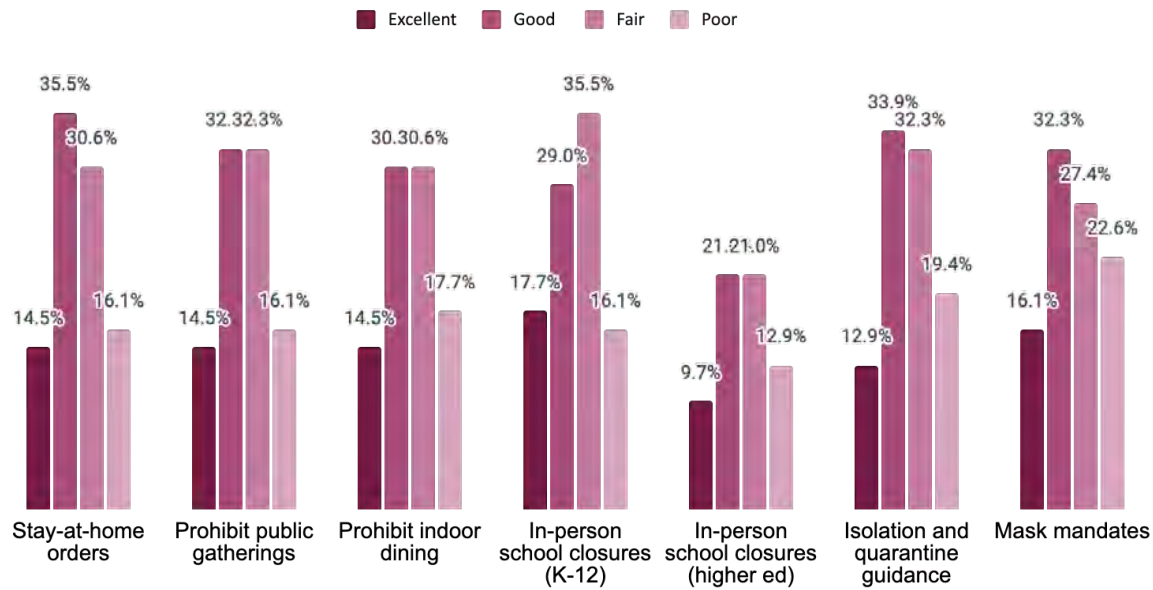


Figure 23: Rating of OHA Communication with Community, Stage 2 (December 2020 - August 2021) (N=62)

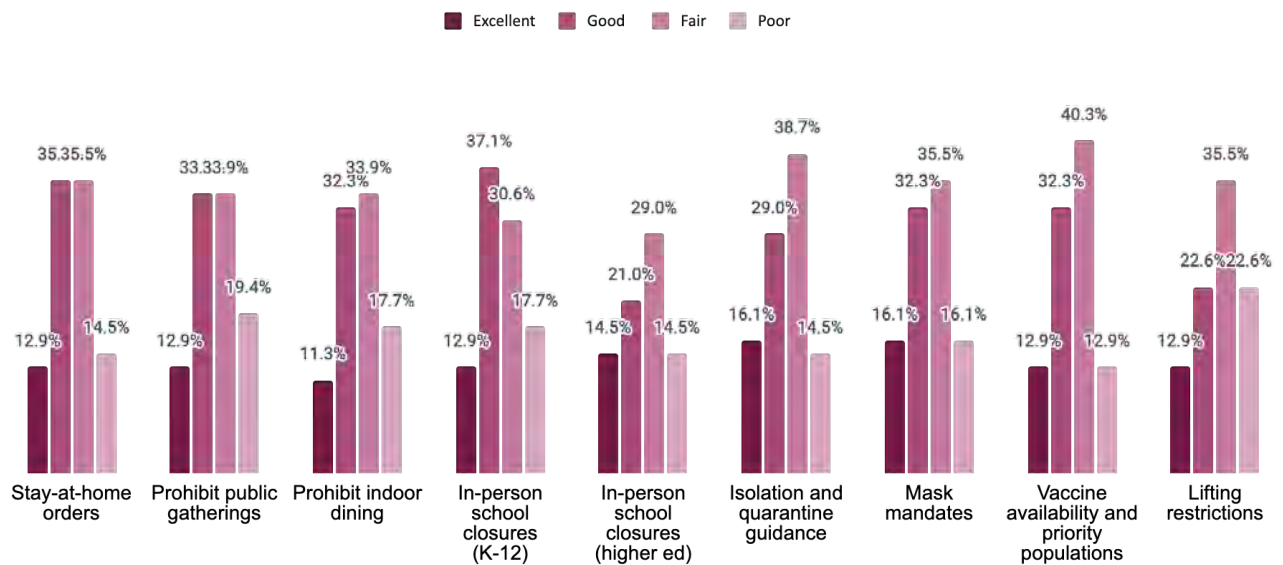


Figure 24: Rating of OHA Communication with Community, Stage 3 (September 2021 - February 2022) (N=62)

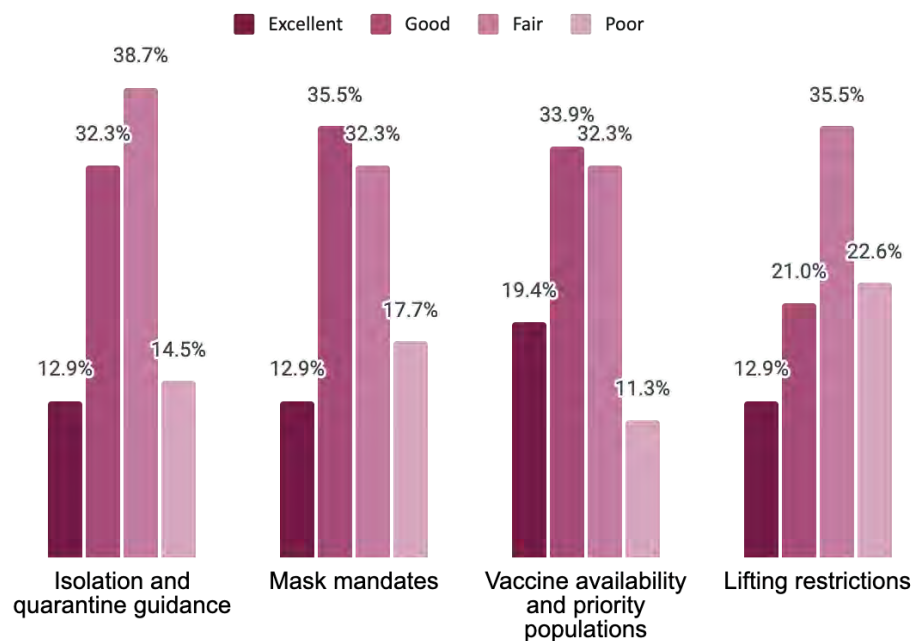
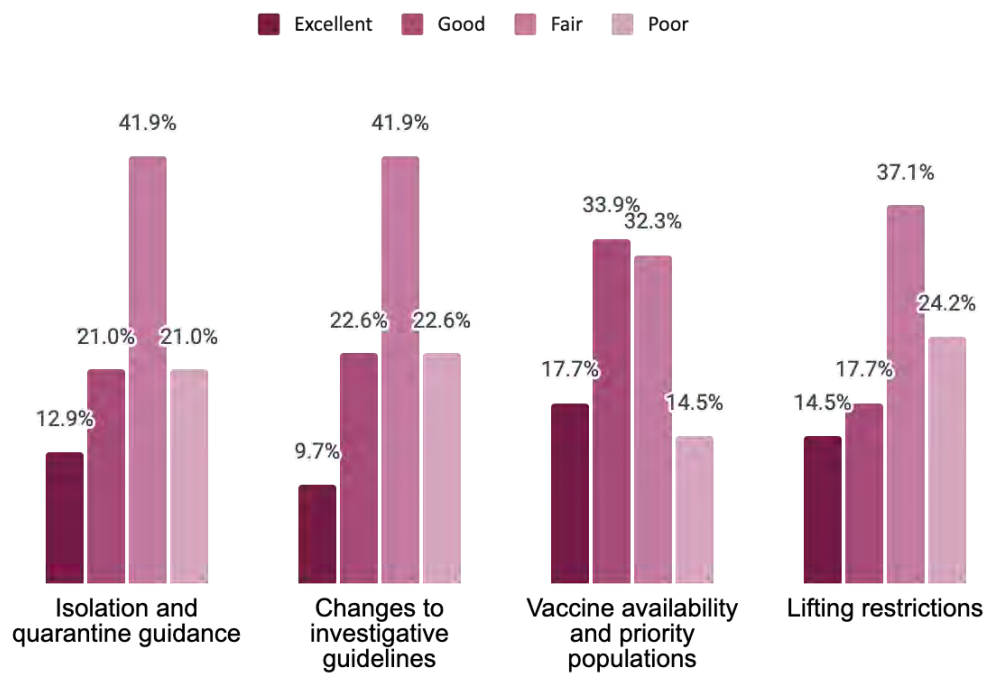


Figure 25: Rating of OHA Communication with Community, Stage 4 (March - July 2022) (N=62)



OR Public Health Response to COVID-19: School Nurse Survey Preliminary Analysis

Introduction

For this study, a survey was administered to Oregon School Nurses between January 23 and February 3, 2023. Ninety surveys were recorded, 16 respondents were removed due to only completing 25% of the questions. Including 11 partial surveys (at least 25% complete), a total of 74 surveys are included in the data set.

Characteristics of survey respondents (N=74)

Characteristics	n(%)
Region	
Region 1	32 (43%)
Region 2	22 (30%)
Region 3	10 (14%)
Region 4	5 (7%)
Region 5	5 (7%)
Grades served*	
K-5	39 (53%)
K-8	24 (32%)
6-8	29 (39%)
9-12	40 (54%)
Other	15 (20%)
Type of school	
Public school	72 (97.3%)
Other (Head start, charter and online school)	2 (2.7%)
Role	
School nurse	68 (92%)
Other	6 (8%)

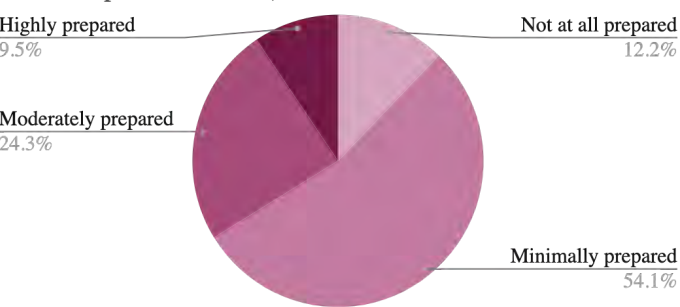
*Respondents selected multiple options so the total equals more than 100%

Emergency Management preparedness

School preparedness

When respondents were asked to evaluate their school's overall level of preparedness to respond to the COVID-19 pandemic, 9.5% (n=7) felt that their school was highly prepared, and another 24.3% (n=18) felt their school was moderately prepared. Two-thirds of respondents (66.3%, n=49) felt that their school was minimally or not at all prepared.

Figure 1: School preparedness for COVID-19 pandemic (School Nurse respondents, N=74)



Survey respondents were also asked if their school had an Emergency Operations Plan (EOP) and/or a Communicable Disease Management Plan. Almost half of respondents (n=35) said that their school did not have an EOP before the pandemic but developed one, and a little over a quarter (n=20) said their school already had one. A quarter of respondents (n=19) did not know about the existence of an EOP. About half of respondents (n=38) said there was a Communicable Disease Management Plan in existence prior to the pandemic, and about a third (n=26) created one once the pandemic began. Notable, one respondent stated that their school did not have a Communicable Disease Management Plan.

Figure 2: Which of the following best describes the existence of a School Emergency Operations Plan (EOP) at your school? (N=74)

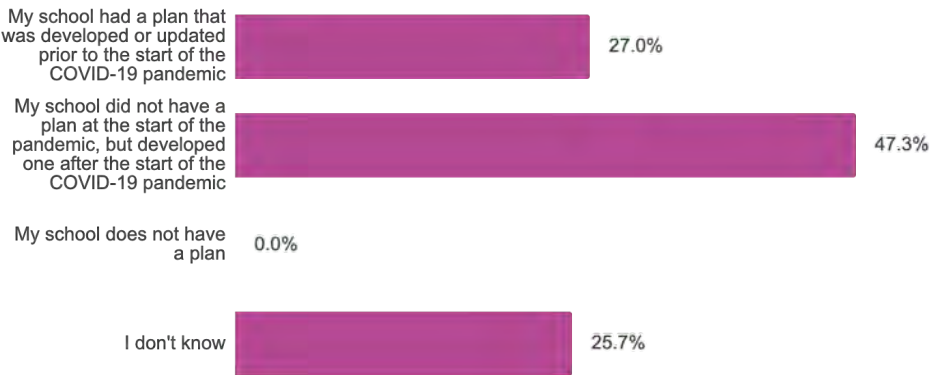
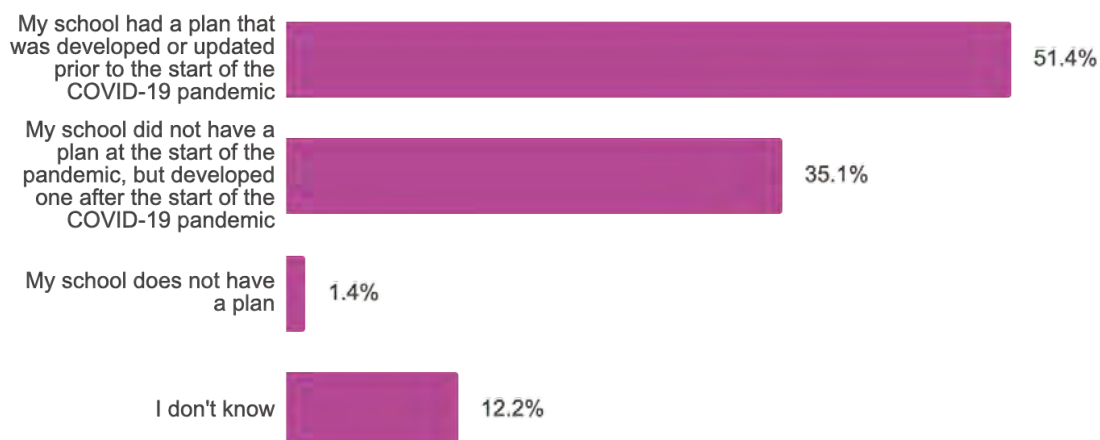


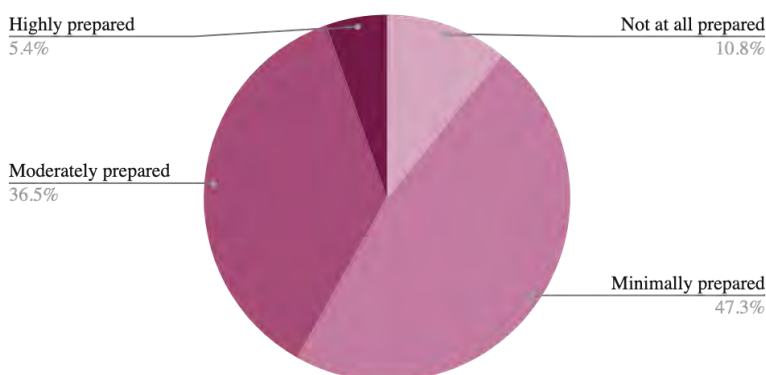
Figure 3: Which of the following best describes the existence of a School Communicable Disease Management Plan at your school? (N=74)



Self-preparedness

When asked about their individual level of emergency preparedness to respond to the pandemic (e.g., knowledge, training, experience, expertise), over half of respondents felt that they were not at all prepared or minimally prepared (58.1%, n=43). Only four respondents felt highly prepared. Respondents reported the following as reasons for their self-assessment:

Figure 4: Self-preparedness for COVID-19 pandemic (School Nurse respondents, N=74)



Highly prepared:

"Before working in the schools, I was a triage/advice nurse for a pediatric clinic. We fielded many calls about Covid, gave guidance, and scheduled appointments for testing at the clinic. It prepared me well for the role in the schools."

"I served as a county public health nurse from 2018-2021, lead COVID response nurse from 2020-2021 so I brought a lot of that experience with me when I transitioned into school nursing"

"Research and develop of response for H1N1"

Moderately prepared:

"I've been a school district nurse for a long time, so lots of experience with the district and communicable disease, however never a pandemic and the level of leadership in process that was required of me."

"Rules kept changing every few months. Systems needed to be put in place and adjust as needed for in school testing and exclusions."

"Nursing services in the school district deals with communicable disease response on a daily basis. Whether it is more than 20 % of a class or school sick with the same illness, Noro outbreak, measles outbreak, or chicken pox. The nurses for our district treated COVID as any other communicable disease outbreak."

"12 years public health nurse experience"

"I came into the Oregon School District in 2021. I was a school nurse in another state prior to that since 2019. I don't think any of us were adequately prepared for the COVID-19 pandemic and how it would affect our schools. Coming into the schools in Oregon though, I had the benefit of having been part of the response in Arizona where we had already opened schools back up, so I felt more prepared for were things were in the process in Oregon."

"Experience in hospital nursing, infectious disease, etc. but not at the school district level. Had experienced a significant norovirus outbreak in the school district a few months prior to COVID which also provided experience."

"Because of the type of emergency it was I felt more prepared because of my medical background, ability to do effective research and work with other public health figures."

"I have a personal interest in global health, having grown up in the third world, and I keep abreast of outbreaks around the world. I went through the H1N1 outbreak while a school nurse and was familiar with symptom tracking and mass vaccination efforts."

"Having had years of school nursing experience which included communicable disease management, I feel I had skills to deal with those types of problems."

"Trained nurses on the protocols for tracking and tracing."

"I had worked on emergency response planning as a nurse for public health for 5 years I have been an RN since 2002. I was competent in managing Avian flu, SAR-Cov-1, and Ebola based on previous experience/employment."

"Have years of communicable disease experience, policy writing, and planning. Was not versed in state mandates the changed on a dime and the anger and confusion it caused."

"I have been involved in crisis management for 29 years of my nursing career."

"Although new to school nursing, I had been living in the pandemic times and assisting my community and other businesses on Covid response so it was not new information to me at the time."

"The pandemic was being covered by the news so I did personal research"

"My previous experience as a nurse in a different type of setting."

"Processes were changing as information was learned about Covid"

"Nurse for 18 years at that time in many different areas"

"I came from the hospital setting and had a good basic knowledge of testing, resources, public policy but no community experience."

"I had come fresh out of nursing school, and this was a main topic of research, so we had been well versed on COVID-19."

"I have past work experience roles as a disease investigator in county public health communicable disease departments"

"I believe everyone was attempting to figure it out in real time and so many questions did not have answers"

"Our district worked closely with Jackson County Public Health and they were a great resource for us."

“Significant amount of direction from OHA”

Minimally prepared:

“There was a lot of confusion about guidelines”

“This was the first time I worked as a school nurse during a pandemic. I had some training, but no experience.”

“Basic knowledge of how to break the chain of transmission, and public health interventions...no practical experience in a community setting”

“No amount of nursing experience, unless it had been specifically in public health perhaps, would have prepared me for a worldwide pandemic.”

“Other than a semester course of public health in nursing school, there had not really been much discussion, instruction, or practice for a public health crisis of this degree. (Especially at the start of the pandemic)”

“I came from a great BSN program that provided foundational preparedness, but I had no clinical experience in that area.”

“I knew of the ODE communicable disease guidelines & exclusion & PPE use, but nothing about contact tracing, covid testing, county guidelines, air filtration requirements, creating health policies for schools & large scale staff trainings on healthcare issues to non-healthcare personnel.”

“Public health work was limited to chicken pox outbreak. And consultation on a couple of other minimally complex situations.”

“I had learned about pandemic preparation in nursing school, but have not had any previous experience helping to lead a school district through pandemic management and response.

With the inadequate staffing for school nurses in Oregon, school nurses have to focus on day to day issues and often don't have the luxury of preparing or planning.”

“At the beginning of the pandemic I didn't have collaboration with our county public health. As well as our county school nurses had previously only met in person once a year. I felt like I was on my own at the beginning with some basic infection control knowledge.”

“My only training to prepare for a pandemic or endemic was in nursing school. I never had an employer with an existing plan in place as a policy or procedure.”

I became a school nurse in Feb. 2020. Prior to this, I had extensive hospital nursing experience. “My prior experience prepared me to be flexible, respond to emergencies, etc. But I had no prior public health experience, and no preparedness for a global pandemic response.”

“I believe that, as a nurse, we are trained for infectious disease management. But no one was really prepared for what was encountered with COVID.”

“I honestly did not think I would see a global pandemic of this scale in my lifetime, and I was under the impression that LPH would take the leadership role and handle everything with some assistance from us, not the other way around”

“We had previous communicable disease guidelines and procedures, but it was not entirely applicable or sustainable for a pandemic response.”

“I had a low level of knowledge on pandemic response from some seminars I attended.”

“Know disease prevention basics & how to set up a plan, but no experience or knowledge about Covid severity”

"First pandemic situation. Information about the disease was not clear. Information changing very rapidly."

"Lack of experience in a situation such as a pandemic. There was very little understanding of COVID in the beginning stages, and information was constantly evolving. I found it difficult to stay up to date on communicable disease guidance."

"I wanted to say not at all prepared, but realized I did have basic public health training in nursing school."

"We had some information to base our response upon, but not much. We were often left confused as district nurses."

"I was new to school nursing and had dealt with Covid in the hospital setting, but school setting was new to me."

"I was fresh out of nursing school so I was completely new to the work force. Then I found myself basically in charge of the response at my 3 schools with minimal training or overhead."

Not at all prepared:

"I was new to nursing. Nothing in nursing school taught us about pandemic management."

"No formal training and no personal experience with emergency preparedness"

"I am new to nursing profession and also new to public health nursing"

"Very minimal training. Untrained staff training new staff"

"I had never before worked as a school district nurse. My prior experience was in acute care. Our district was struggling to interpret, communicate, and implement policy, to understand testing options, and to keep up with quarantine demands (calls with angry parents, frightened families, etc.)"

"I felt prepared having worked in the public health in another state, but my advice as new school health nurse in the district was not heard or believed."

"I became a school nurse SY 21-22. Hit the ground running and thanks to the Oregon School Nurses Association, I was able to learn quickly and be an effective leader in my schools."

"As a nurse in the district we were the last to know of policies and procedures. We had no role in decision making and found it very frustrating."

Funding

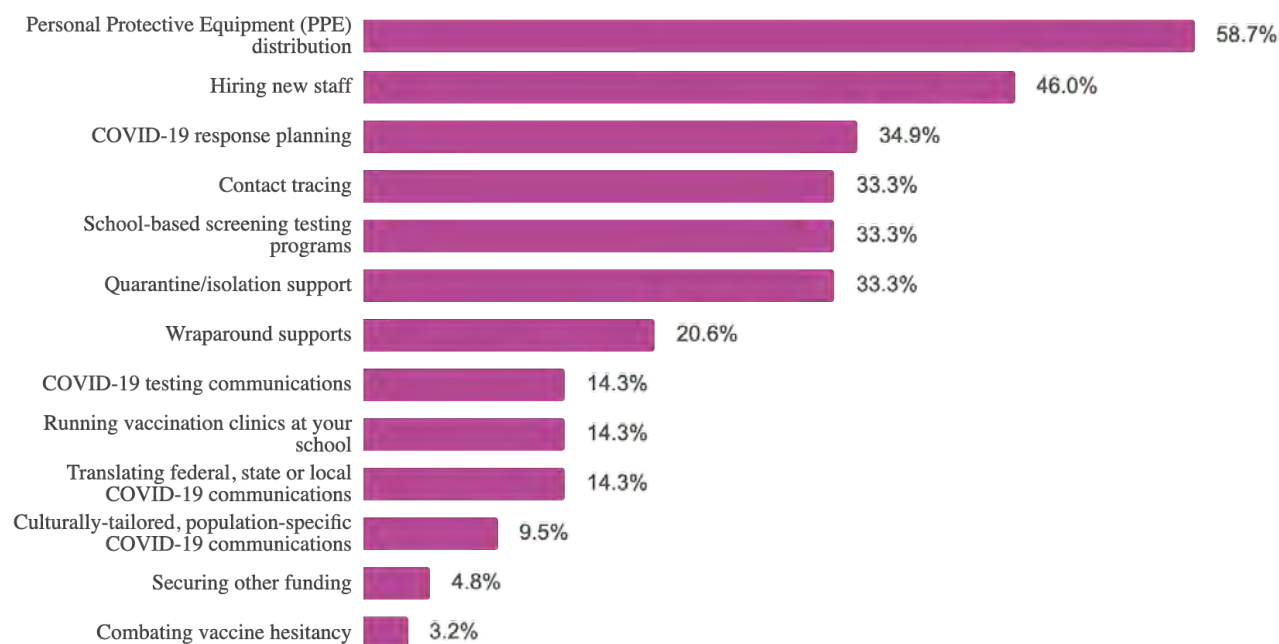
Nine respondents reported affirmatively that their district received COVID-19 funding from entities other than OHA, 4 reported that they did not, and the majority of respondents (79.7%, n=51) did not know. Other sources of funding reported by respondents included Head Start federal funding, employment department, Federal government, and CDC/OHA COVID grant.

Funded activities

Survey respondents were asked to report on what types of activities they used their COVID-19 funding for. A little over half of respondents reported spending funding on Personal Protective Equipment distribution (n=37). A little less than half of respondents (n=29) reported spending on hiring new staff

and roughly a quarter (n=22) reported spending on COVID-19 response planning.

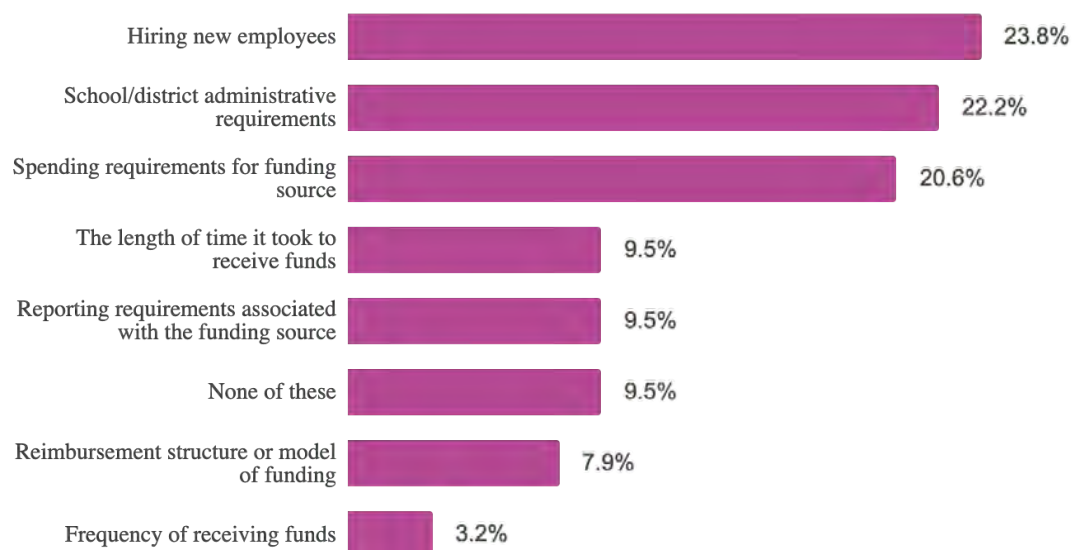
Figure 5: Areas funding was used by schools (N=63)



Barriers to use of funding

Respondents reported that their district experienced barriers to the efficient use of COVID-19 funds. The top three responses were hiring new employees (23.8%, n=15), school/district administrative requirements (22.2%, n=14), and spending requirements for the funding source (20.6%, n=13). Multiple respondents selected “other” and indicated they did not know, and one respondent wrote, “*Lack of response of district to hire contact tracers.*”

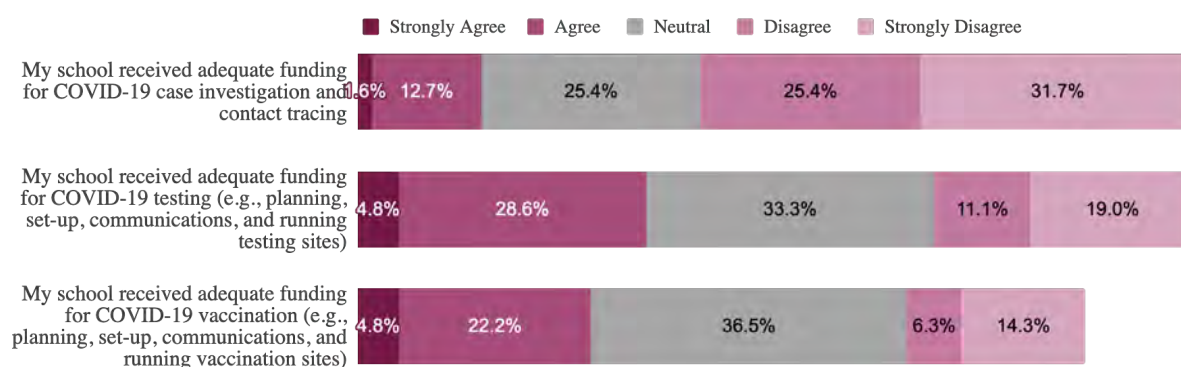
Figure 6: Barriers to efficient use of COVID-19 funds (N=63)



Adequate funding

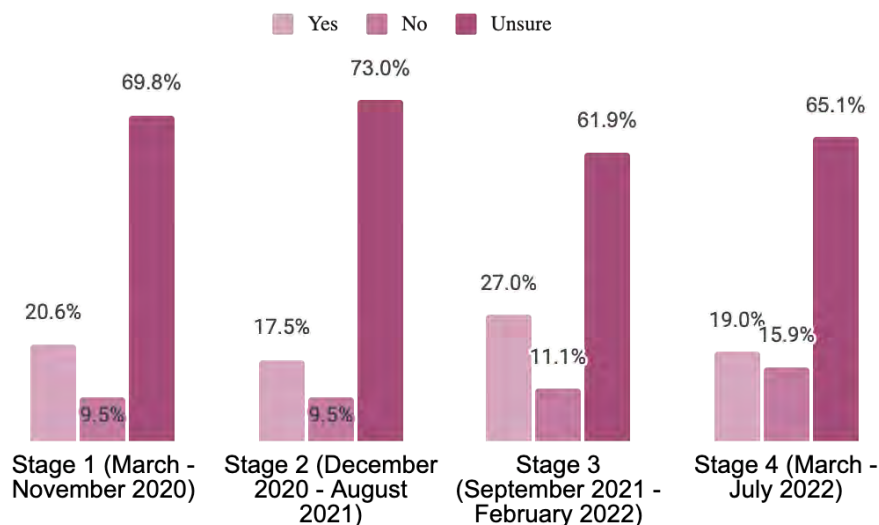
Approximately 15% (n=9) respondents agreed or strongly agreed that their district received adequate funding for case investigation and contact tracing and over half (n= 36) disagreed or strongly disagreed. About a third of respondents (33.3%, n=21) agreed or strongly agreed that they received adequate funding for testing, and vaccinations (30%, n=17). Responses to each category do not equal 100% because these represent all responses except for “N/A, My school did not engage in these activities.”

Figure 7: Adequate funding for COVID-19 response activities (School Nurse respondents, N=63)



Respondents were also asked if they ever felt their district did not have adequate funding to support their community in managing the pandemic. The vast majority of respondents did not know the answer to this question across all stages, and approximately a quarter of respondents were worried for each stage that they would run out of funding.

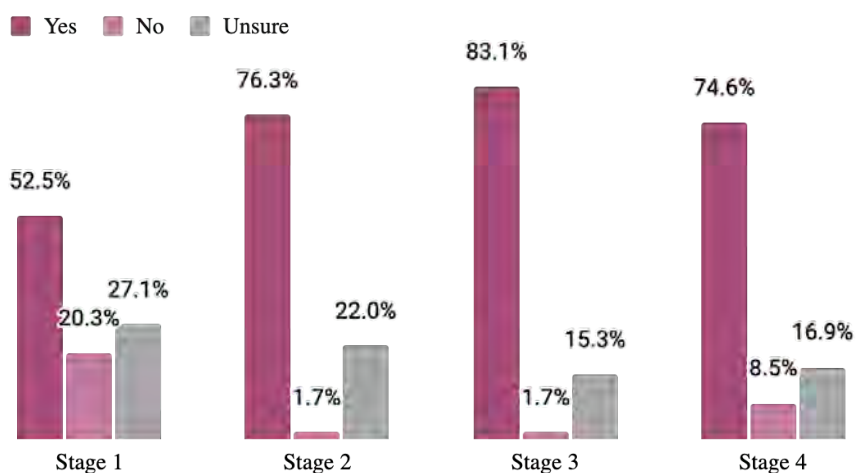
Figure 8: Did school worry if they would continue to have enough funds to support community in managing the COVID-19 pandemic (N=63)



Epidemiology Data Access

Survey respondents were asked if they had access to local epidemiological data to guide their COVID-19 decision making. In Stage 1, about half respondents felt that they had access to local data. But for Stages 2-4, three-quarters of respondents felt they did have access to local data to guide decision making.

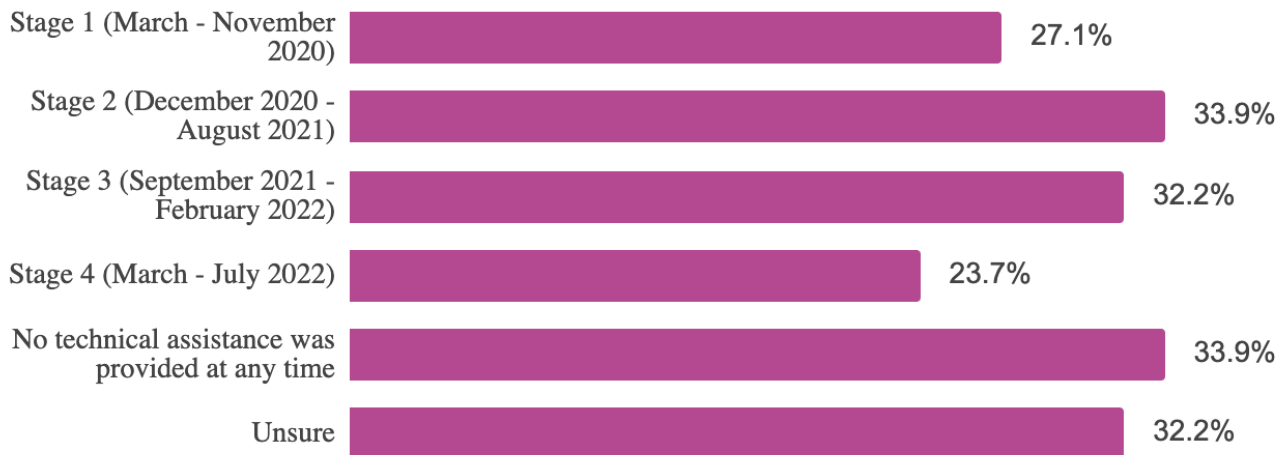
Figure 9: Access to local epidemiological data to guide COVID-19 decision making by stage (School Nurse respondents, N=59)



Data TA

Respondents were also asked if they received technical assistance (TA) to access, understand, or use epidemiological data. About a third (n=20) reported not receiving any TA at any time, and another third did not know (n=19). Twelve respondents reported receiving TA during every stage of the pandemic.

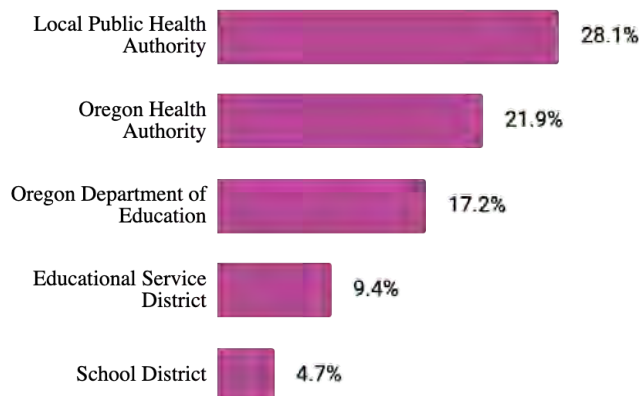
Figure 10: Stages during which schools received TA to access, understand, or use epidemiological data (N=59)



Organizations providing TA

Respondents who reported receiving TA were also asked what entities they received support from. TA was provided by local health departments, ODE, Educational Service Districts, school districts, and OHA. Three respondents included comments in "other," indicating they received TA from: OSNA, CDC, and OHSU.

Figure 11: Entities that provided TA to access, understand, or use epidemiological data (N=59)



COVID-19 Response Activities

Formal Pandemic Response:

Respondents were asked when their school began their formal COVID-19 response. About half of respondents (52.7%, n=39) reported that they began their response the date of Oregon's emergency declaration. Three respondents said they began emergency response when there were cases in their school community, and five respondents reported starting the date of the federal emergency declaration. Fourteen respondents said they did not know. Twenty-seven respondents selected "other," their write-in responses are included below.

"3/12/20"

"Fall of 2020 when staff returned in person, and then students on a limited basis"

"I began work when Oregon got its first case, a custodian in a public school."

"I believe it was Oregon's declaration."

"I think it was before Oregon declared it an emergency, but probably not much before."

"My understanding is that our response aligned with Benton County's recommendations from the beginning."

"March 13, 2020"

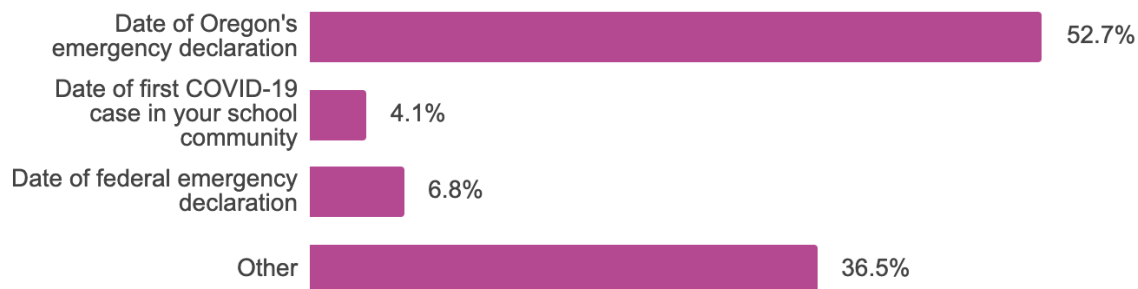
"March 13, 2020"

"Online school was implemented within weeks of the initial outbreak (March 2020) but a written disease response came much later - fall of 2020."

"Prior to emergency declaration meetings were being held, handwashing being stressed to students spring break"

"They closed on March 13th 2020, as ordered by the governor, but did not begin any sort of plan for months after that. They did not include any health care individuals in any of the planning until 2021."

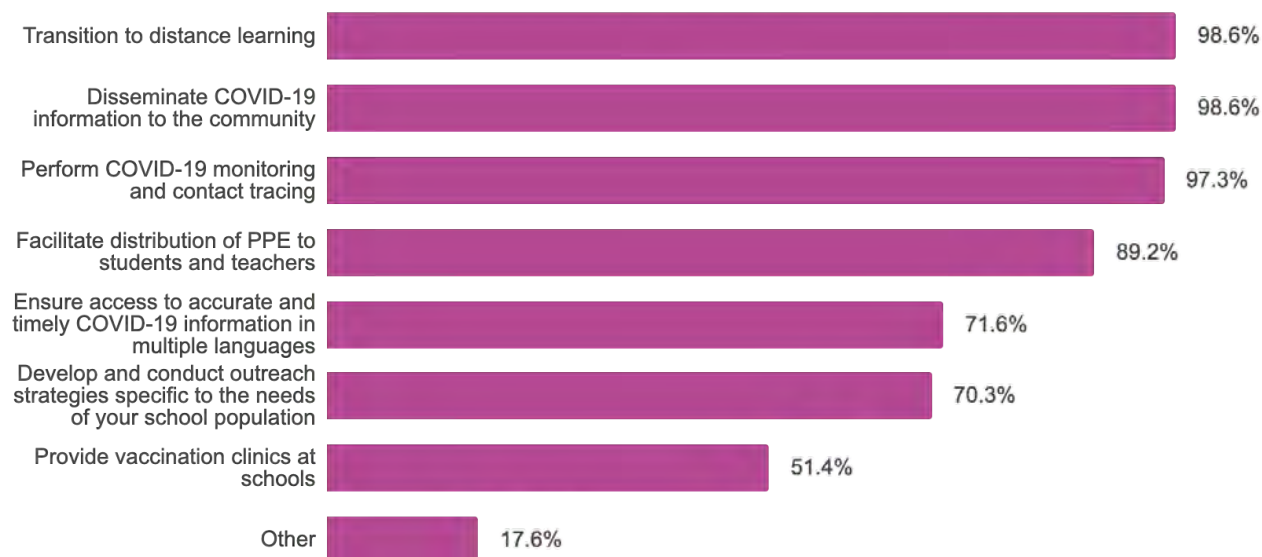
Figure 12: Date formal COVID-19 response began (N=74)



Overall Response:

Respondents shared ways their school responded to the pandemic. All but one respondent (n=73) reported transitioning to distance learning and disseminating COVID-19 information to the community, and all but two respondents (n=72) reported performing contact tracing and monitoring.

Figure 13: Ways that schools responded to the COVID-19 pandemic (N=74)



Thirteen respondents selected “other,” their responses are listed below.

“COVID testing in schools and District Office”

“Covid-19 testing in schools”

“Developed a COVID response team. Also, the district held regular meetings with invited stakeholders and community members to discuss/problem solve/hear concerns about COVID related responses by the district.”

“employ nurses through MESD. Had a COVID response team”

“excluding non sick kiddos and disrupting their learning”

“hybrid learning was quickly implemented”

“On-site testing”

“Our district had a gradual, delayed response starting with child care for health care and police children.”

“Starting an emergency daycare, onsite RN's at all times.”

“Strict implementation to isolation and quarantine protocols, and universally mandated masking”

“Took part in testing programs that made both PCR and rapid antigen testing accessible and free to all of our students and staff”

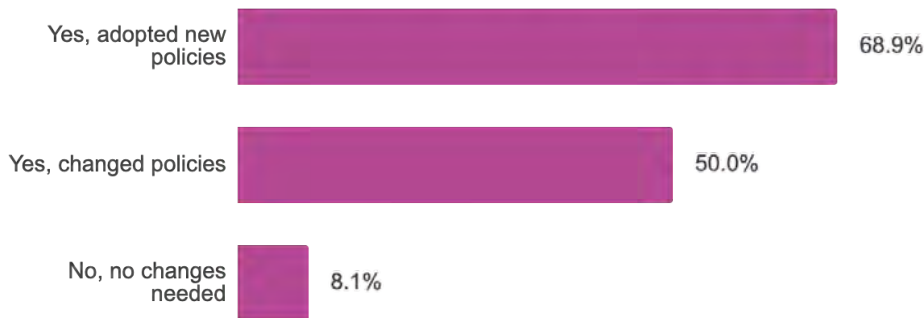
“Transition back to in-person learning, providing adequate policy and supplies for cleaning and disinfecting”

“We not only provided COVID vaccine clinics for our staff and school community, but also for smaller districts that did not have the ability to run clinics of their own.”

Distance learning policies

When asked if they had to update policies to transition to distance learning, almost half of respondents said they changed policies, and one third said they created new policies. Please note that four respondents selected both options for yes, so the total equals more than 100%.

Figure 14: Abrupt closure of schools and resulting transition to distance learning required changes to existing policies (N=74)



Challenges and Barriers to COVID-19 response

Nurses were asked to select which challenges hindered the effectiveness, scale, or quality of their school's response. The top response selected was the politicization of public health (n=60), followed by not having enough staff (n=58). Inconsistent guidance from government agencies were the next to challenges identified- state government (n=56), local county government (n=44). "Other" responses included:

"Communicable disease response was often left to school officials with no knowledge or experience in disease mitigation. There was often tension between the nursing ESD and the schools. Getting schools to trust and adhere to the guidance was (is) a struggle."

"Delayed guidance from state government"

"frequently changing guidelines"

"inequitable communication to parents and students"

"It's difficult to describe all of the challenges. But another challenge was the resistance and aggression/abuse healthcare staff faced from the public (parents, students) and from other staff."

"Lack of a simple, universal contact tracing software for schools. We each had to invent the wheel and figure out how to keep it functional as the cases reached fever pitch."

"Lack of timely info, we had to figure things out and then would get formal guidance after we had figured it out."

"not enough translation services available to adequately communicate with non-english speaking families."

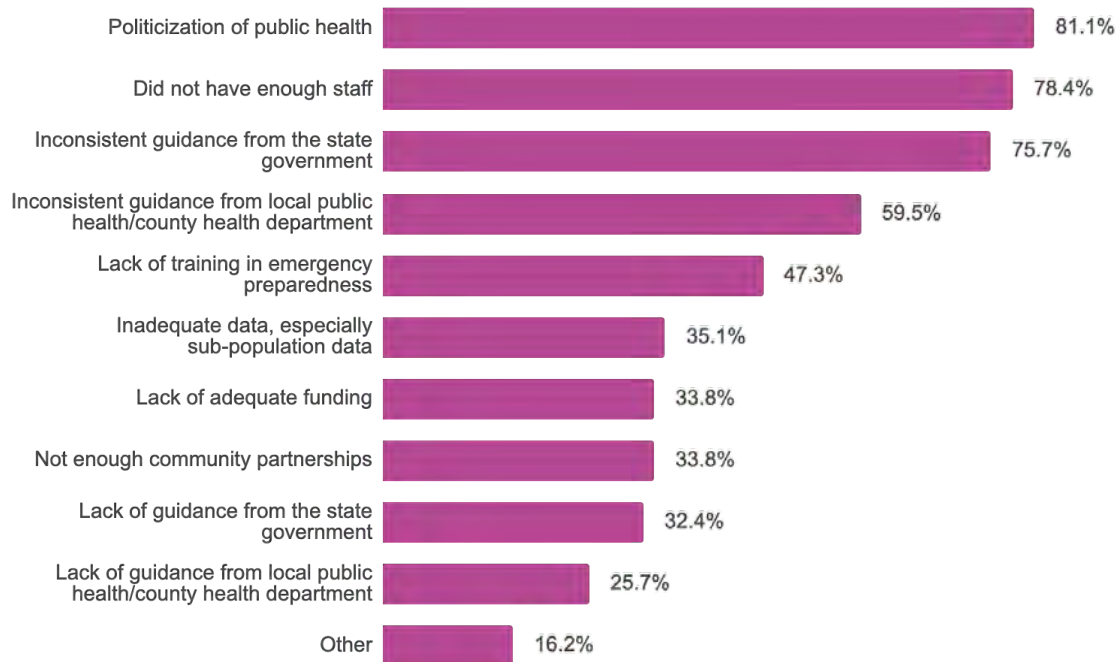
"OHA lack of transparency and lack of understanding of the disease and forcing ridiculous guidance that did not work"

"School nurses have always been hard to get, but during this time when high wages were paid in hospital and travel nursing fields, nurses were extraordinarily hard to find at our school wage." "We are still struggling to retain the nurses that we have employed."

"We had too inconsistent information, not consulting school nurses on available resources and how to appropriately implement plans. Changes happened every 2 weeks, way too many changes for parents and students to tolerate and understand, added increased stress and workload. Counties all had different responses, resources, interpretation of directives from the state. MD's also had different

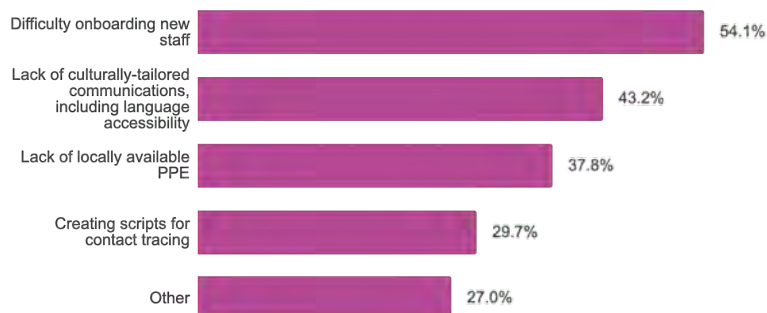
interpretations that they gave to parents and did not understand different rules the school district had to follow. Too often, the school was the frontline of educating students and parents about the changes that the state mandated.”

Figure 15: Challenges that hindered the effectiveness, scale, or quality of COVID-19 response (N=74)



The top barrier identified to being able to respond to the pandemic was difficulty onboarding new staff (n=40), followed by a lack of culturally-tailored communications (n=32). A little over one-third (37.8%, n=28) of School Nurse survey respondents identified a lack of locally available PPE as a top barrier in responding to the COVID-19 pandemic. Additional “Other” barriers written by respondents included:

Figure 16: Barriers to response to the COVID-19 pandemic (N=74)



“Angry families because of lack of transparency and resources to keep families safe”

“Brining in new staff was not an option”

“community buy-in, many of our community members did not think masks and the vaccine worked”

“Contact tracing took a significant amount of time, generally over 10 hours per day.”

“difficulty finding covid tests”

“educational Barriers put on by OHA and ODE. Restricting children and staff from coming to school. I still have boxes and boxes of covid tests that are expired but we continue to extend the expiration date. This never happens to any other medical supply or medication.”

“Inconsistency with safe practices in school population (hand washing/sanitizing surfaces/communication of whether they are sick or denial)”

“Lack of available COVID tests once students / staff came back on campus”

“Lack of staffing for contact tracing, creating communication and response plans, creating covid tools”

“Local county health expected the school district to perform all contact tracing and gathering information about students and family members. Received no assistance from county health.”

“No clear, workable direction from any public health agency.”

“politicization of effort/being judged/criticized”

“Resistance to implementing interventions. Lack of acceptance that COVID was real.”

“Rules and regulations that do not make sense in a school vs community. Poorly executed state regulations.”

“School nurses were an underutilized public health resource, and oftentimes the work we were asked to do was busy work without a clear benefit/contribution.”

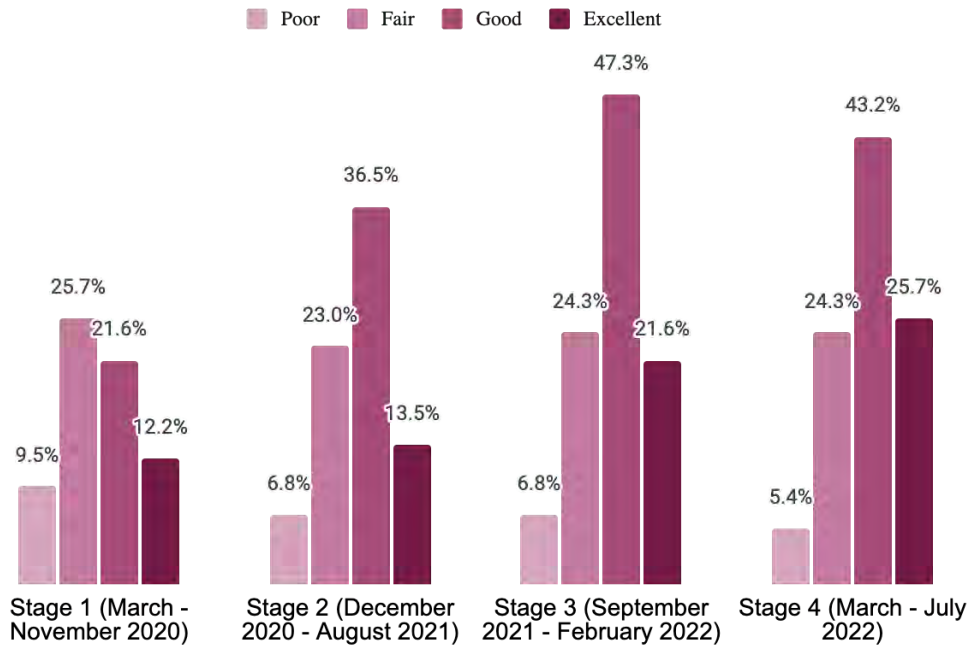
“Staff resistant to training”

“work load created without additional staff for COVID rules and implementation”

Rating of school response to COVID-19:

Respondents were asked to evaluate how well they felt their school's response to the COVID-19 pandemic was during each stage. Roughly the same number of respondents felt that their district did poor or fair throughout all four stages, but slightly more respondents felt their school did excellent or good as each stage progressed. Note that responses in each stage do not equal 100% as respondents could also select “I was not involved in COVID-19 response in my school during this stage.”

Figure 17: Rating of school's response to COVID-19 during each stage (N=74)



When asked to expand on why they rated as their school as they did, the following comments were provided:

As a nurse I have provided opportunities for vaccination clinics each fall. I have implemented and continued an illness/symptom tracker, I was hired as a full time nurse in the school during stage 3, which they did not have before, and I have been able to answer questions for staff and families of students in a timely fashion. I have been able to assess students and act promptly to any concerns. I provided the opportunity to the district to be able to do onsite COVID testing and make sure they have necessary supplies.

As soon as we moved from mandates to recommendations this year all good sense went out the window.

As the pandemic went on I was able to collaborate with our County Public Health and School Nurses weekly and sometimes daily. We still are zooming every week.

As we began there was a fair amount of confusion of roles, decision makers, etc. As the pandemic wore on, it became clear who the decision makers were and who needed to have input. In stage 4, turn around time and decisions became clearer.

At times there was a lack of information from our local health department as they were awaiting state guidance. At times guidance seemed to conflict. Our school board was not supportive of health guidance

Communications were better in stage 3, but we are still doing well.

Constant changes were happening but I think the staff were flexible to accommodate this.

Despite struggles with resources and staff buy-in, schools were able to stay open and operate safely Even though going through the pandemic was very difficult, the amazing nursing staff as a whole worked very hard to accomplish this the goals at each stage. The school district itself was unprepared.

With teamwork we were able to effectively make changes and roll out those changes amongst the schools, although it was time consuming and difficult.

everyone was tired of COVID, so lots of reluctance to engage on COVID mitigation.

Good initial response, but based on one employee's efforts & supports. Later district not very supportive of online supports, giving more help with contact tracing & expecting us to do it all along with normal work all while being verbally assaulted daily by families. Once protections ended, district & staff act like there never was a pandemic. No masking, handwashing, etc

Good with the information and tools we were given in such short notice.

I actually think we did a pretty excellent job overall, with several hiccups along the way, which is why I selected "good." I'd say we did very well for a small district, but not the gold-standard.

I feel that our response was better later in the pandemic, purely related to having experience and building on what we had created early on in the pandemic. The 1st trials for distance learning and "hybrid learning" were rocky.

I think my school district did a really great job of handling the changes throughout the pandemic. Some staff were reluctant to accept certain new requirements during stage 3, and retraining was needed for some, however overall I think our schools handled it very well.

I think that decisions were not thought out with full consequences.

I think the district did a good job of adjusting throughout the pandemic. When omicron hit especially, though, it was like a tidal wave without sufficient staff to take care of all the needs.

I think the school managed the best it could.

I think we (the school nurses) and our schools/staff really and truly did the best we could. I think we did a good job and absolutely gave our full effort and 100% dedication. However, I feel the response itself--the guidance from county/state, the planned interventions and how the pandemic was handled even on a national level-- fell short and was deeply flawed. Even though I feel we worked very hard and did all we could, I don't know if it was the right way to do things. I am proud of our efforts, but do not feel great about the end result and if it made a significant difference or positive effect. I feel we as a country could have done so much better and there is so much room to grow and learn.

I think we did the best we could given the circumstances, but we were drastically unprepared. We made up policies as we went. I would not say any of the stages went smoothly. It was all a crazy amount of work for us on top of our normal workloads--not just school nurses, but all school staff were affected by increased tasks and expectations.

I think, on our part, we did a great job. We adapted. We evolved communication strategies. We made testing available. We held vaccine clinics. That doesn't mean we had great results, because of course, the cooperation had to come from the families as well. Not all families were on board with testing and reporting and staying home, so that brought in more illness than we would've liked. But I feel like we did as well as we possibly could have.

I was working in the COVID units of my medical establishments before transitioning to school nursing in Feb 22. I was impressed by their readiness.

It became hard for the agency to even do its job, as whatever stance the state took, our agency would tend to go even more conservative, as we have a good mix of medically fragile/vulnerable population. Adaptations were made which primarily helped caregivers, but preschools shut down and those kids had zero social skill experience/development opportunities in-person, setting them back.

Lack of clear consistent policies from school district administrators. No one was on the same page and communication was done top down with lack of foresight in discussion with people doing the work and how the processes would actually be facilitated.

Lack of support from admin, did not seek or listen to health care team recommendations, Masking, distancing, and vaccination were politicized, so Stage 1 was off to a bad start when schools reopened. Parents allow their ill, symptomatic students to come to school, complicating all stages. In stage 3, I had zero extra FTE support (no SHA), in the busiest time of year with case management for student with chronic health conditions, immunization deadlines, Covid management including reporting and isolation space management, along with seeing students who came to the health room for injuries, and school-wide health emergency management. (The district website published that every school had a SHA which was untrue.)

My district was transparent with the community and involved stake holders and a wide array of parents/community members in the planning and problem solving aspects of the response. They built a response team that developed the school level and district level response. They involved the nurses in every planning stage. Every response was consistent and organized across the district.

NA

not enough time to answer

Nurses were involved throughout the process as well as local Public Health

Once the school was able to make the initial transition, we just developed a flexible attitude and made changes as needed. Which wasn't without extreme stress or working a lot of hours.

Our administrative team worked tirelessly to review state guidelines and how to implement. The communication department did a good job, even with some confusions with communities understanding of the exclusion rules.

Our district was one of only a few the adhered to public health protections in our region. This was important but was also overwhelming with the limited resources that we had, which I feel negatively impacted our execution of protocols.

Our districted consulted with the schools nurse team

Overall, the process was laid out as well as it could be given the directives from govt, public health, and other agencies. The challenge persisted with communication and expectations at both a staff and community level. Disappointed that districts created their own guidelines on many aspects of the pandemic.

PPS has a student health team that helped create guidelines and policies. They partnered with health providers for vaccines, provided transportation, employed more nurses.

School cluster outbreaks were minimal except for athletics and after New Year of 2022

School district as a whole worked with nursing, toward the end of the first stage, had minimal inclusion with nursing prior to coming back, and improved by stage 3 and 4. It was difficult for teachers to be forced to come back and teach when many businesses and state funded entities were closed or working from home.

Stage 1: schools were focused on online learning and academics. They seemed to be almost in denial about disease management. Stage 2: Schools worked hard to prepare for re-opening. There was not consensus, however, on what that would look like or how disease response would be instituted. Stage 3: Schools did very well with reporting disease cases, outbreaks, contact tracing. Stage 4: Everyone is "over" the pandemic. Masks are rarely worn, staff seem to have given up on almost all disease

mitigation, including staying home while sick. Students seem to be managing better than staff! However, when there is a reported case of COVID, schools are responding appropriately.

Stage 2 - distance learning was a disaster for most kids academically (lack of participation) and we lost track of so many vulnerable kids/families. Stage 3 - social distancing, contact tracing requirements in classes/lunch/buses were too difficult to keep track of and implement during this time. Practices seemed so outdated when other schools across the country had successfully returned with so many less restrictions. Stage 4 - still too many requirements/restrictions that made it difficult to keep track of cases and try to contact trace.

The first year back full time in person was a little rocky. Some students had a very difficult time complying with the mask mandate, It was quite a struggle for the school staff. Also, there were some complications securing a symptoms/testing space in some of my schools.

The initial pivot to CDL went fairly well, all things considered. The subsequent contact tracing, enforcement of public health protections, re-openings were so heavily burdened by bureaucracy that we really missed opportunities and it felt like we were constantly a day late. Stage 4 was fine because including significant measures in the school when they're not being followed outside of school didn't seem to add much and had a cost to some of the more vulnerable members.

The only reason I didn't choose poor is because everyone was trying their best. But we just did not have the capacity to uphold everything that was being asked. Staff also did not have adequate training or education to help support what I was telling them needed done.

There once again were changes that happened frequently with the guidelines and no federal clarification, or local health department clarification. Seemed to be confusion all the way around. They improved with time. I finally realized that including school nurses into the discussions was vital. Too much inconsistency from the State.

Upon reopening, we were able to hire a designated covid team to help with contact tracing. Which helped to take some of the load off of understaffed nurses.

We did a good job planning and reacting for most of COVID to the best of our abilities, but we were overwhelmed by Omicron in Jan 2022.

We did a great job at trying to implement rules that were forced on us. Contract tracing and following up to exclude non sick kiddos feels really terrible. We tried to find different ways to allow kids to still come to school (separate study halls etc, this was shut down by the local health department.)

We did excellent with the resources we were provided.

We did our best, but faced significant staffing challenges and community backlash

We had a lot of pushback from building administrators, especially in High Schools. This was basic science- a respiratory virus that transmission decreased with distance and barriers, and simple surface cleaning. Those interventions, especially simple surface cleaning by students and staff, also reduce influenza and RSV. The administration was hesitant to implement them, and couldn't wait to get rid of them when not required.

We immediately formed a covid response team and were ready and responsive to all of the changes and mandates that were sent out. Our team kept the district on track and we were able to bring all of our schools into compliance in a unified way.

We maintained communication with our LPHA and our COVID response team ensured we were able to bring students/staff back into our buildings safely. It was very difficult to complete contact tracing per LPHA guidance during stage 2-3. We did not offer vaccinations at our schools.

We managed but were overwhelmed continuously throughout the district.

We ran an incredible vaccination clinic program for staff and families, it was bonding to be part of the solution. We all in district leadership did our best and worked countless hours to attempt to educate the kids and care for families and staff to the best of our ability within the ODE requirements and state mandates.

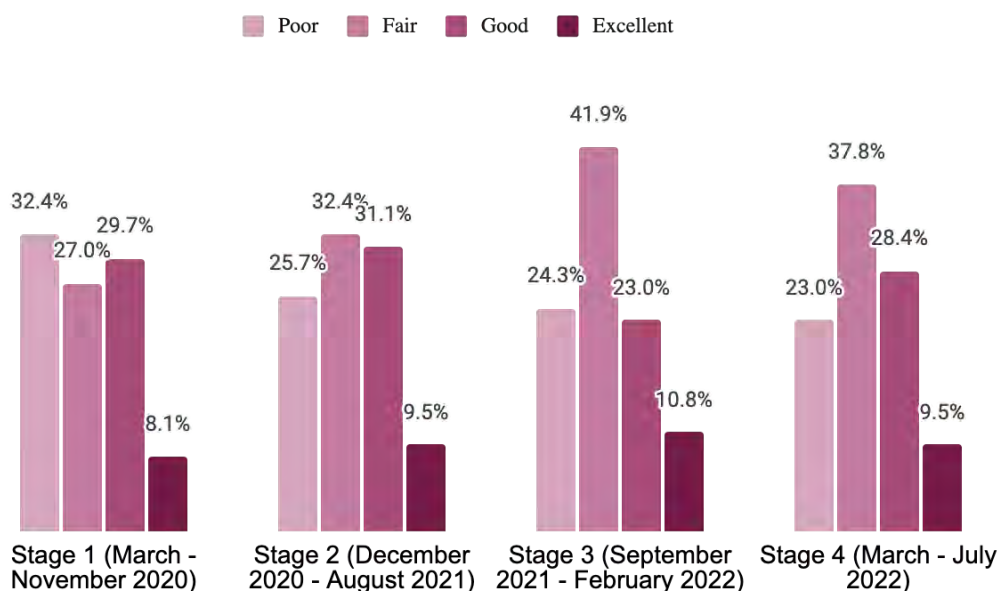
We worked together to follow all the constantly changing guidelines that the state put out for us and worked to make school a positive place for the students.

When you consider the challenges faced, I think things went fairly well.

Public health system response

Survey respondents were asked to rate the state of Oregon's management of the pandemic response to COVID-19 in schools during each stage. The majority of respondents rated Oregon as poor or fair in all four stages. The state of Oregon was rated worst in Stage 1, with over two-thirds of respondents selected poor or fair (68.6%, 48).

Figure 18: Rating of state of Oregon's management of the COVID-19 response in schools during each stage (N=74)



When asked to expand on why they rated as Oregon as they did, the following comments were provided:

Again, I think the state did the best it could under the circumstances, but the response left a lot to be desired.

As a school nurse I felt supported by OHA/ODE. Both agencies worked well together. I also felt supported and heard during meetings with both agencies.

Communication and education could have been MUCH better.

Communication from the state was frequent and thorough

Considering the struggles of managing the pandemic, I appreciated Oregon's guidance that was largely responsive and fairly elaborate, especially compared to other states. I also appreciated their careful response and efforts to protect public health.

Extremely poor. Since Covid we have destroyed our youth, caused an increase in anxiety, lack of discipline and kids do not care to be in school anymore.

From the perspective of a nurse caring for individual children I didn't appreciate the mandates that looked good on paper but didn't make a difference as far as stopping the spread of the disease. The risk of the disease vs. the risk of the mandate should have been better weighed as you would do with any medical intervention. The ramifications of online schooling, excluding children from in person education and keeping them from socialization with their peers and masking has done irreversible damage to their self esteem and caused educational set backs. It is not worth the damage done compared to the risk of the disease to them. At this juncture the staff and students that are out sick the most are vaccinated. Selling the vaccine as a way to "get back to normal" was a lie and they should be ashamed of the false information you sold people to get them to do what you wanted them to do.

Given the low level of transmission of COVID in schools in Oregon (and overall), yeah I think we did a pretty excellent job.

Guidance for schools often came out too late. We generally had to make changes for ourselves to align with federal guidelines or mandates, and would then have to modify those changes weeks to months later once state or local guidance was released.

I appreciate that the state closed the schools when it did. And I appreciate that the funds were made available for PPE, testing, and vaccines. And the Covid dashboard was great (for those of us who love data.) But it felt like, with the frequently shifting policy/guidance, there wasn't a lot of thought given to how that inconsistency would breed distrust and confusion and anger for parents, especially working parents. (How many times did I have to say, "Well, that was last week" or "Well, that's what Linn County is doing, but we're Benton County). It seemed very much as if edicts were being made from a very detached "ivory tower". I understand the political imperative to give local control, but in this case, local control and the array of policies that arose from it, resulted in confusion and chaos.

I feel like Oregon shut everything down, set these rules, but were very unclear. Didn't have any immediate plans in place to help guide schools districts. Left us "hanging" at times. I feel that the vaccine roll out was okay considering the circumstances. Reopening schools was a complete mess as far as contact tracing and how to keep everyone safe while at school.

I feel OHA pushed too much onto already overburdened school nurses, there was little support available from local public health

I feel that there should have been more communication and guidance - we were left to figure things out on our own and hope we were doing everything correctly.

I think at the beginning, Oregon was proactive in shutting down and saving lives. After that, however, due to the magnitude of the situation and the number of organizations needing to work together to transmit information, there was difficulty in communication trickling down and being interpreted.

I think our state numbers speak for themselves. Our state government under the leadership of Kate Brown should be commended for their bravery and resolve in the face of this global health crisis. Many lives were saved.

I think rules were made for large population areas that did not pertain to smaller districts.

I think the guidance was sometimes quite laborious to process and go through...I'm not sure if we could expect any more, but it was challenging, as there were multiple up-dates and changes.

I think the state became politicized due to nation wide issues
I think they did the best they could given the circumstances.
I thought Oregon managed the pandemic well, especially when it was not politically or economically easy to do so. I believe the data supports that lives were saved by the measures implemented early on.
I was not involved in stage 1 or 2
Inconsistent and poor Restrictive Did not follow science
Initially, Oregon based their interventions on science. As death decreased and public support waned, Oregon made decisions based on their popularity. COVID isn't a death sentence today for most of the population, but you would think COVID had almost been eradicated by looking around. Oregon will not go back to mitigating interventions unless people start dying in large numbers.
It could have been better. Inconsistent guidelines/rules.
It was often written by those NOT in school buildings, so it was unrealistic the majority of the time.
Keeping students out of school was the biggest mistake this state has made. Students are now showing up with large amounts of mental health issues, low education scores and the school systems are still low on staff due to many reasons including vaccination mandates still enforced. There are no counselors available for students struggling and they are booked out for long periods of time. It's extremely frustrating to see children suffer when this did not need to happen the way it did.
Lack of coordination with school nurses who worked in schools. ODE did not consult with any school nurses on how to implement precautions. Lack of coordination between ODE, county health departments and school districts.
Many mandates put on top of mandates to educate students and provide other services. The teacher union had an outsized voice in response. Fear and not science led policies. Students missed too many in person days. Schools provided limited distance learning resources outside of Chromebooks for all.
Masks were not recommended and then they were. We didn't have enough at first. We had no tests, now we have so many tests they are expiring before we can get them out.
My feelings on Oregon's response are more or less the same as my response to the schools' response. I do appreciate that Oregon was more actively involved with different measures intended to reduce the spread of COVID, with enforced masking, social distancing, and other precautions. But I just feel that overall that the nation as a whole, including Oregon, still had room to grow and could have done better.
Once again confusion confusion over guidelines
Oregon did great responding and protecting students. We might have had a much different experience here in Oregon if the did not, and would have had many more fatalities.
Oregon was inconsistent at first & then swung way to strict. There should have been more local control from the beginning. Way too many across the board mandates & not enough support.
Our states leaders were so incredibly short sighted during the Pandemic response. Keeping our schools closed for a year? Unforgiveable! The facts and data were present all across the country about how school could successfully reopen, even in fall of 2020. Did our state look at this data? No, the political alignments and fear completely overrode common sense and the mess we now face in students behaviors, academics, attendance is on them for the poor decisions that they made. It was frustrating and sad to watch our states response to the pandemic as a nurse and a parent.
Pandemic fatigue was very much present with time-
Seemed hesitant to put out guidance in the beginning and slow to keep up with CDC as we progressed.
So much confusion and politics

Stage 1 was a disaster, at stages II & III there was confusing information, changing guidelines and distrust. Opening as normal has been good.

Stage 1: It was a difficult time and overall, I feel the state was doing it's best. Vaccination roll out- was well-executed during the large scale events hospital/state partnerships started doing- but dissemination of information and an easy way to sign up and access appt for vaccination was a BIG, consistent barrier to getting the first round of vaccines. Inconsistencies of rules across counties statewide also did not help create a unified approach.

State recognized and communicated what was best practice.

Support and guidance was late and frustrating. The kids suffered without in person learning. The guidance continual mandated changes was straining and so very frustrating. I realize this was a new situation for us all, but watching and modeling after other states that were successfully bringing students back would have benefitted our whole school system. We could have done it with proper funding, supply and training supports.

The lack of appropriate planning for student's learning needs across the spectrum during the initial phase was disappointing. It was like we jumped in the water, head first, without considering any unintentional consequences. Students who could learn weren't allowed to and students who didn't have access weren't given realistic alternatives. The constant changing guidelines increased community distrust. The rules were frequently changing and inconsistent. When we got to stage 4 it became everyone for themselves with no warning; suddenly COVID-19 disappears and everything we had in place feels pointless. During the stage 4 time period I experienced an outbreak of a respiratory illness that impacted almost every school in my district. The health department responded to assist with data collecting but it was clear there would be no guidelines given for what to do with the high rate of infections in staff and students.

The Office Hours meetings and support were very helpful. When the pandemic began to ease and local control was established it was difficult to obtain an answer to questions. OHA seems to have a poorly coordinated response -for instance, test kits - supply/expiration dates. One department does not seem to understand what another department is doing

The outcome that has damaged our children will take years to resolve.

The state did not consult school nurses when publishing school health mandates. Many duties were pushed to the schools without additional staffing or funding.

The state should have continued to require masks in schools this fall. With continued COVID cases, as well as flu and RSV, there has been as much or more absence as the previous year. Students are largely willing and able to wear masks consistently, when supported to do so.

The vague and wishy-washy state level guidance cause a ton of confusion and stress in our community. They just told everyone to shut down and go to distance learning with no real guidance on how or what to do. When they did give guidance for having students back in class they gave out money like water for practical things but the districts were allowed to spend it where they wanted without repercussions for things like older school classrooms that were not provided with ventilation assistance. There was poor oversight on how the money was actually spent and much of it was wasted.

Too many changing targets to initiate, manage and change on short notice. Tuesday governor would announce, Wednesday clarification and Friday implement was not feasible at times. Our district is large geographically which made the process difficult.

Too quick of taking away all guidelines causing massive illness of ALL kinds

Tough times and tougher decisions. Not very much a win-win situation for all parties involved. But, we had one of the lowest death rates in the nation, which at the end of the day, was the ultimate goal. We were all doing our best in an ever changing unprecedented world, but the response was inconsistent and created a lot of stress for everyone.

Weekly collaboration with OHA and ODE started during our hybrid year

Public health requirements

Survey respondents were asked if their school adopted any public health requirements to reduce the transmission of COVID-19. Nearly all respondents reported adopting masking requirements (n= 61) and isolation and quarantine rules (n=61). Many respondents also reported adopting requirements prohibiting public gatherings (n=55) and prohibiting in-person school attendance (n=53). One respondent reported that their school did not adopt any public health requirements. “Other” responses included:

We followed all the recommendations from ODE/OHA

These differed for each school in our district. Some teachers kicked kids out of their class if they didn't wear the mask properly or if they cleared their throat....what message is this sending to children? Some were more relaxed about it. Me as the nurse if I knew of a confirmed case would contact trace and exclude anyone who was exposed, of the exposed kids they did not get sick and never had outbreaks and would miss up to two weeks of school unnecessarily

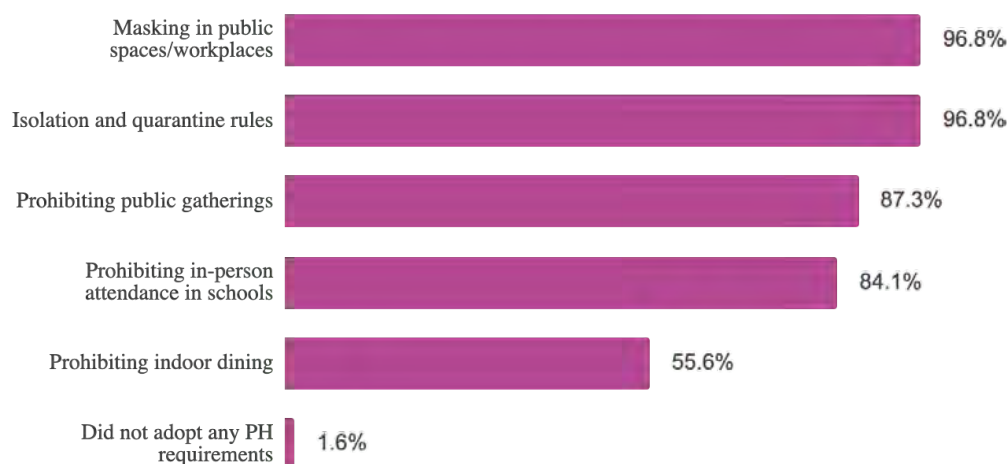
Our schools followed the guidance from the OHA, ODE and state law, which corresponded with public health requirements.

Our district implemented all requirements at some point, but opened and changed with the different stages.

Every rule we were required to follow to keep schools accessible.

encouraging outdoor meals, distancing, vaccines

Figure 19: Public health requirements that schools adopted (N=63)



Enforcement

Respondents were also asked to share what public health requirements they enforced. When asked which policies adopted by the school were enforced, nearly all respondents reported adopting masking requirements (n= 58) and isolation and quarantine rules (n=58). “Other” responses included:

All mandates were enforced
certain schools were stricter than others. And with the younger population it is difficult to wear masks correctly. Vaccines were enforced due to mandate but allowed exemptions
Isolation and quarantine rules were only enforced if parents notified the school of a positive case or if a student tested positive at school. If parents didn't report the case, then enforcement was impossible.
The school tried to enforce mask wearing, but some students would still take them off or not wear them correctly (witnessed many students only wearing the mask on their chin out of defiance.
One of the nurses did not enforce isolation and quarantine rules, masking requirements
Our schools followed the guidance from the OHA, ODE and state law, which corresponded with public health requirements.

Figure 20: Public health requirements that schools adopted that were enforced (N=63)



When asked which policies adopted by local or state government were enforced by the school, nearly all respondents reported adopting masking requirements (n= 61) and isolation and quarantine rules (n=60). “Other” responses included:

District as a whole implemented mandates, most followed them, some staff did not. Various responses from administrators had varying results.
Yes all, it was a requirement

Figure 21: Public health requirements that local or state government adopted that were enforced by school (N=63)



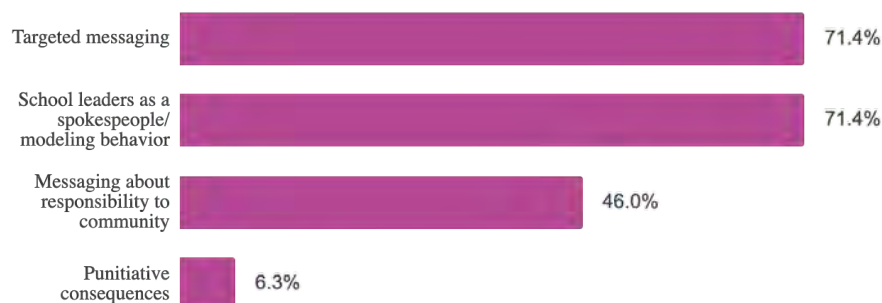
Some strategies that were used to increase compliance with public health mandates included developing targeting messaging (n=45) and school leaders modeling behaviors (n=45). Only four respondents reported that punitive measures were effective at increasing compliance. A few “other” responses included:

Individual schools had individual responses and results.

None of this. Kids were shamed if they took off their masks in some schools. It was hard for some teachers to control this. This was HORRIBLE for our children. The kids that had parents that wanted them to wear them, the message came from home to the student and the student would wear their mask.

Public health announcements, state rules

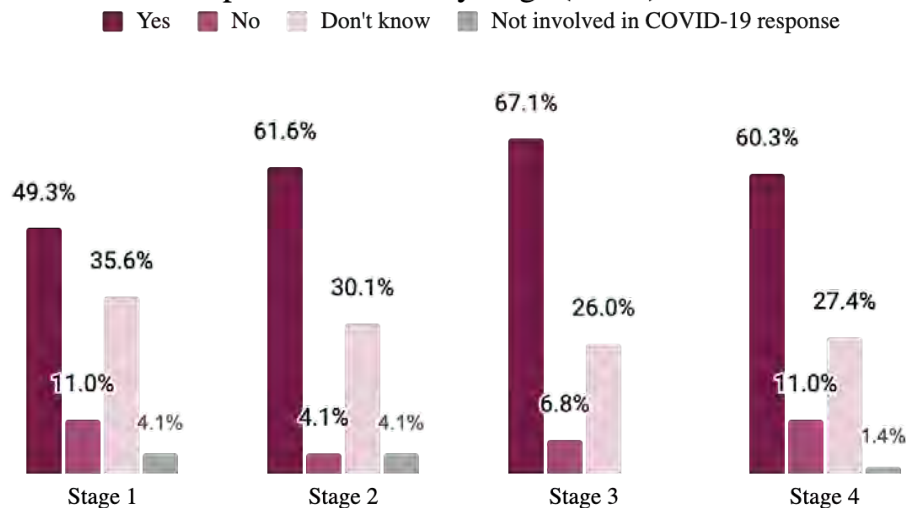
Figure 22: Strategies that were most effective for schools in enforcing public health mandates (N=63)



Technical Assistance

About half of respondents reported receiving technical assistance to inform their COVID-19 response activities, with slightly fewer reporting receiving TA during Stage 1.

Figure 23: Percent of schools that received technical assistance to inform COVID-19 response activities by stage (N=73)



A variety of entities provided TA to schools to inform their COVID-19 response efforts. The top two agencies were local public health authorities (n=51) and the OHA (n=47). “Other” responses included: *I don't think we received any TA. We did have multiple infectious disease consults from OHA, but I'm not sure if that's considered TA.*

OSNA provided a covid toolbox that we used parts of for our covid response.

University of Oregon

There was minimal technical assistance from all entities. Nursing department had to work with entities and try to get them to coordinate and fix conflicting direction and information.

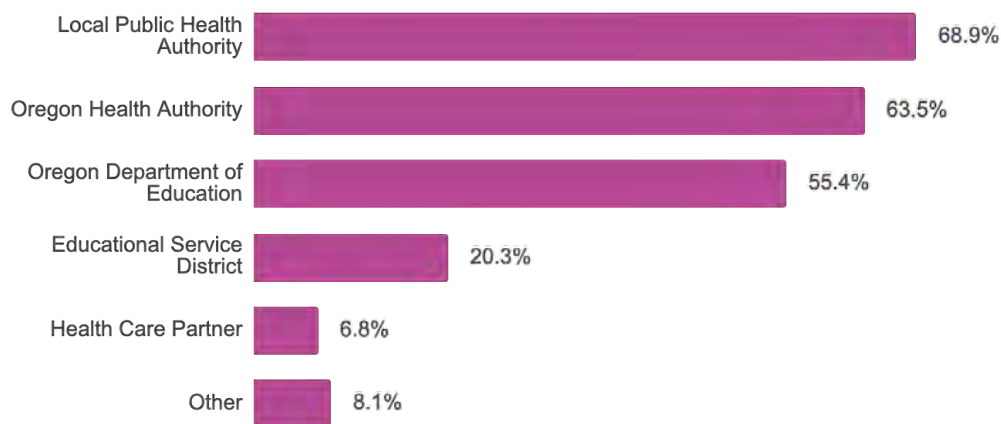
I'm not sure if I fully understand what TA includes. We had some email communications from the county, with some letter templates and detailed COVID in schools information. But I do not think we received things other than that.

The support was stated but minimal and usually not timely

We did it all on our own.

Oregon School Nurses Association

Figure 24: Entities that provided TA (N=74)



Respondents were also asked about their use of a variety of resources. Nearly all respondents reported using ODE's Ready School, Safe Learners Resiliency Framework (n=68) and OHA/ODE Communicable Disease Guidance (=68). "Other" responses included:

CDC

Local health department

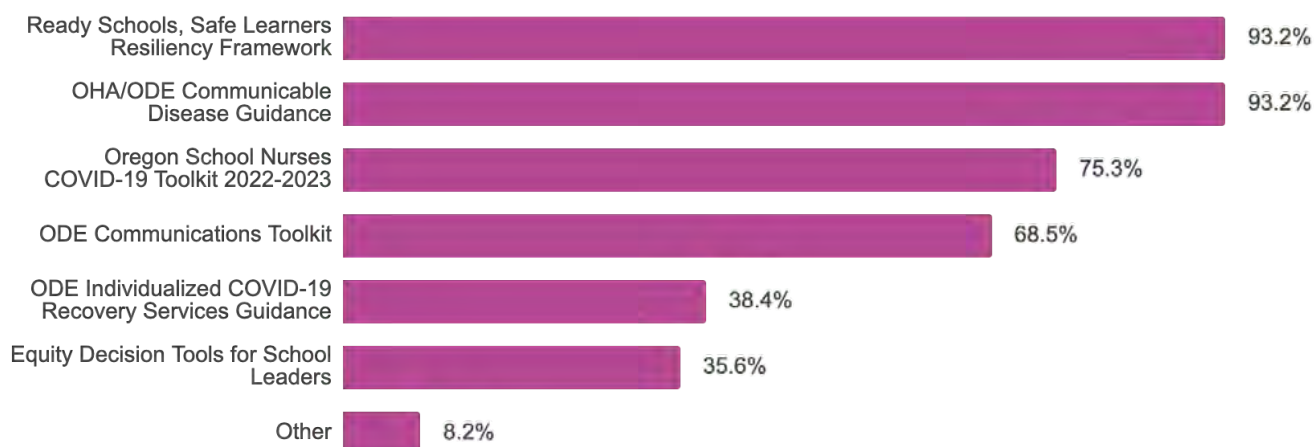
MESD COVID 19 Toolkit 22-23. PPS Standard operating procedures

OHA Investigative Guidelines

We may have used the other ones too, but I'm not sure. I was focused primarily on the communicable disease aspect of the response.

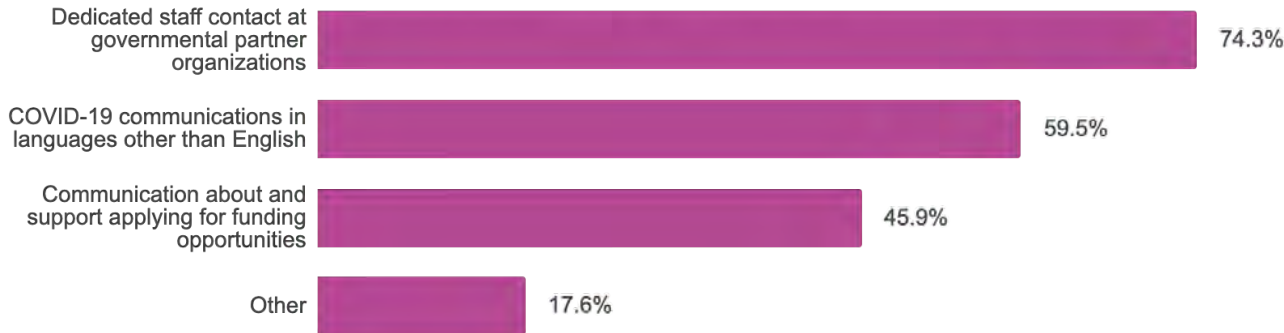
We used all of it for information and adjusted it to information that we could use for staff, students, and parents.

Figure 25: Resources utilized (N=74)



Respondents were asked to select which supports would have been helpful for their school when first responding to the COVID-19 pandemic. The top resource identified was having a dedicated staff contact at partner government agencies (n=55).

Figure 26: Resources that would have been helpful (N=74)



“Other” answers included:

An actual supportive functioning Health Department. All work was put on School Health Nurses. Coordination between ODE and school nurses to advise what is possible in a school setting, help coordinate the directives and how to implement them in a school setting.

Documentation forms for contact tracing

extra health care workers to assist

Fully funding the local health department so that they could do their job and not push it on to the schools.

I feel like we had all of these supports in place and utilized them.

Legislature requiring an evidence-based nurse(RN):student ratio for all schools

Onsite assessments of need and physical assistance. Staffing pool including a nurse relief pool. staff for contact tracing and completing multiple required forms. Staff for contacting parents. templates for protocols that schools could adapt, instead of making our own. Training materials for educating staff on protocols.

The supports that were released were very helpful, but we needed them sooner.

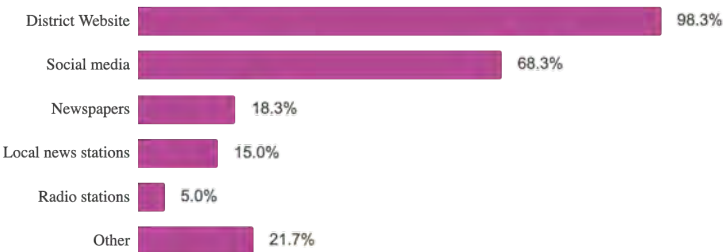
we had all of this

We were very fortunate to have a dedicated staff contact at our local health authority

Communications

All respondents reported providing public health messaging through mass media communication methods. Most respondents provided information on the district website(n=59) and many provided info on social media (n=41). “Other” mass media outlets included their agency

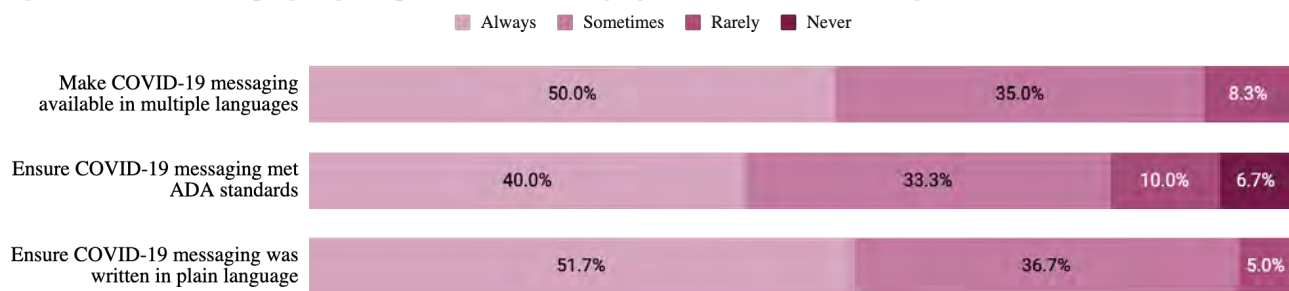
Figure 27: Mass-reach communication platforms utilized to communicate COVID-19 information (N=60)



website, mass emails and texts, notes and letters to home, ParentSquare, Youtube videos, district Zooms for families, school and district newsletters, school App or Remind App.

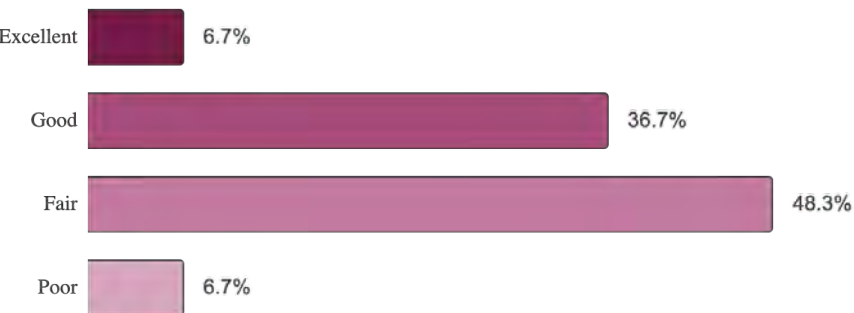
Respondents were also asked to reflect on how their district incorporated accessibility standards into their public health messaging. Four respondents stated that their school did not develop public health messaging. Nearly all reported that COVID-19 messaging was always or sometimes written in plain language (85%, n=51), and reported that messaging was always or sometimes available in multiple languages (88.3%, n=53). Most respondents (73.3%, n=44) reported that messaging always or sometimes met ADA standards. Four respondents reported never ensuring messages met ADA standards.

Figure 28: When developing targeted public health messaging, schools did the following (N=60):



Respondents rated the Oregon Department of Education’s communication during pandemic response. Fewer than half of respondents evaluated ODE favorably, with 43.3% (n=26) who selected good or excellent. Only four people rated ODE’s communications as poor.

Figure 29: Evaluation of the Oregon Department of Education's communication during the COVID-19 response (N=60)



Survey respondents were asked to rate OHA on their communication with the community about a variety of public health requirements that were implemented by stage. Note that respondents could select “Not applicable to stage” so totals won’t always equal 100%.

Figure 30: Rating of OHA Communication with Community, Stage 1 (March - Nov 2020) (N=60)

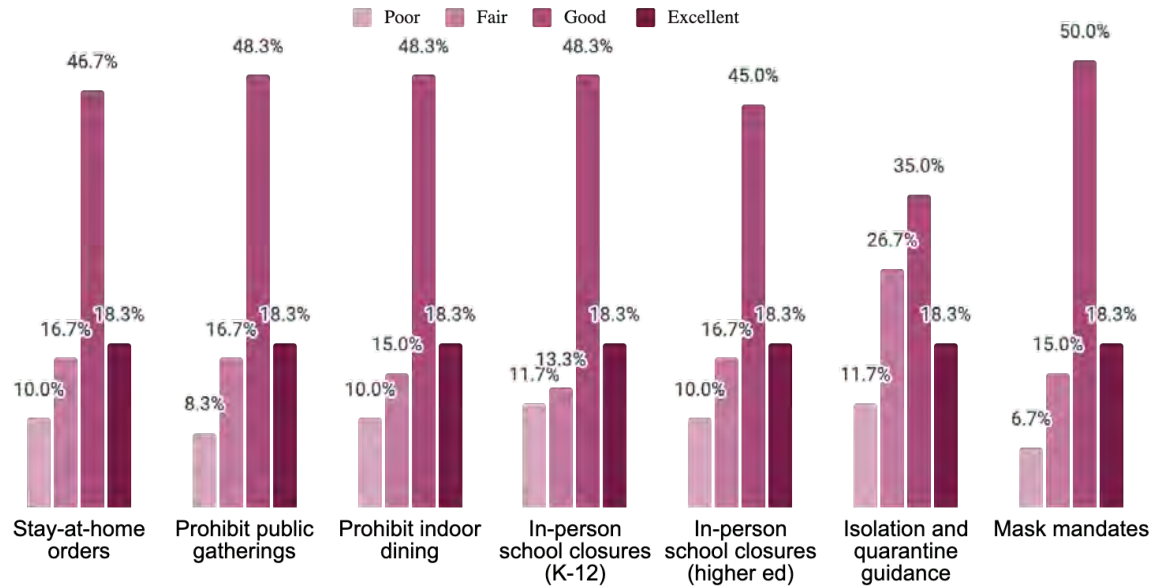


Figure 31: Rating of OHA Communication with Community, Stage 2 (December 2020 - August 2021) (N=60)

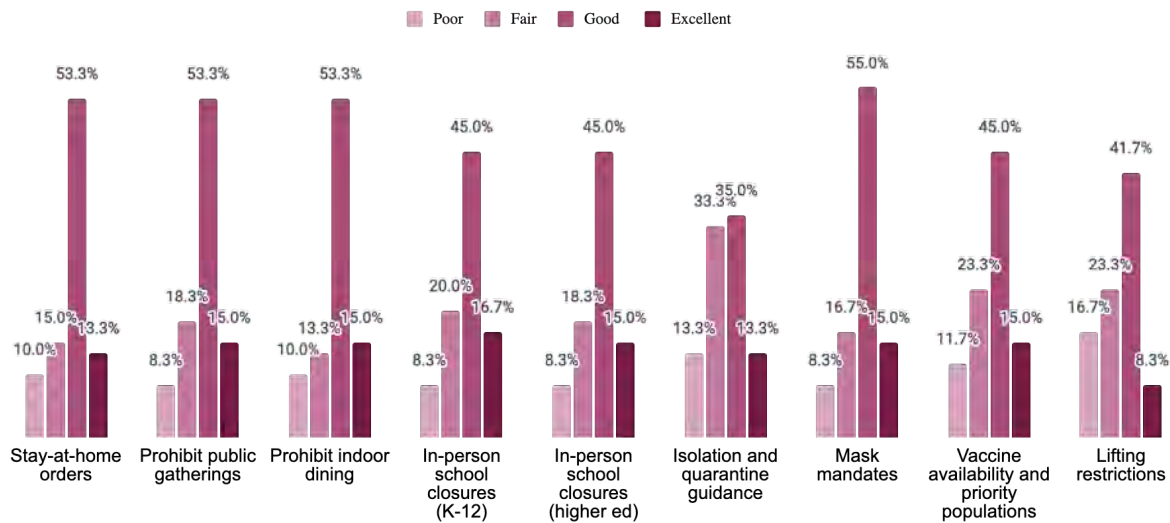


Figure 32: Rating of OHA Communication with Community, Stage 3 (September 2021 - February 2022) (N=60)

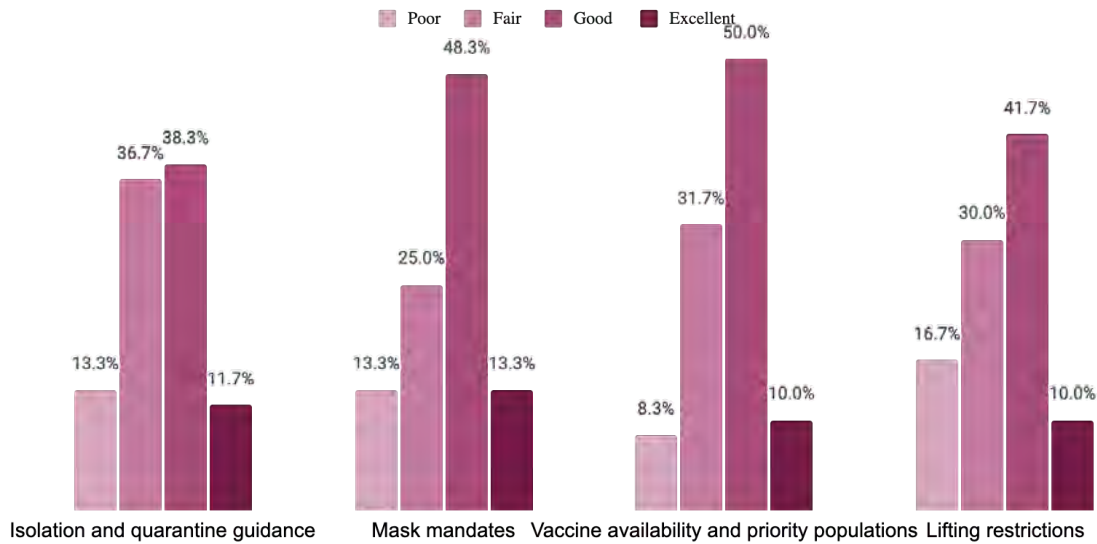
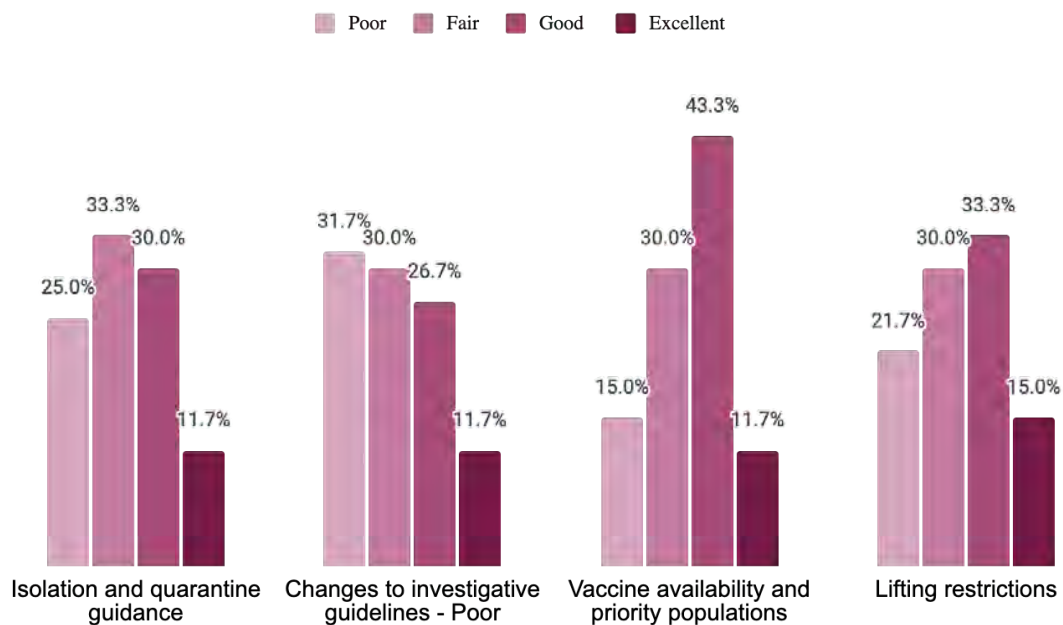


Figure 33: Rating of OHA Communication with Community, Stage 4 (March - July 2022) (N=60)



Partnerships

Respondents engaged in many COVID-19 public health response activities with partners, especially with LPHAs, OHA, ODE, and CBOs. All respondents indicated that they did not engage in public health

response activities with long term care facilities (or skipped the question). Very few respondents partnered with higher education, CCOs or Tribes.

Figure 34: Types of activities schools partnered on with community, education, and health organizations (N=64)

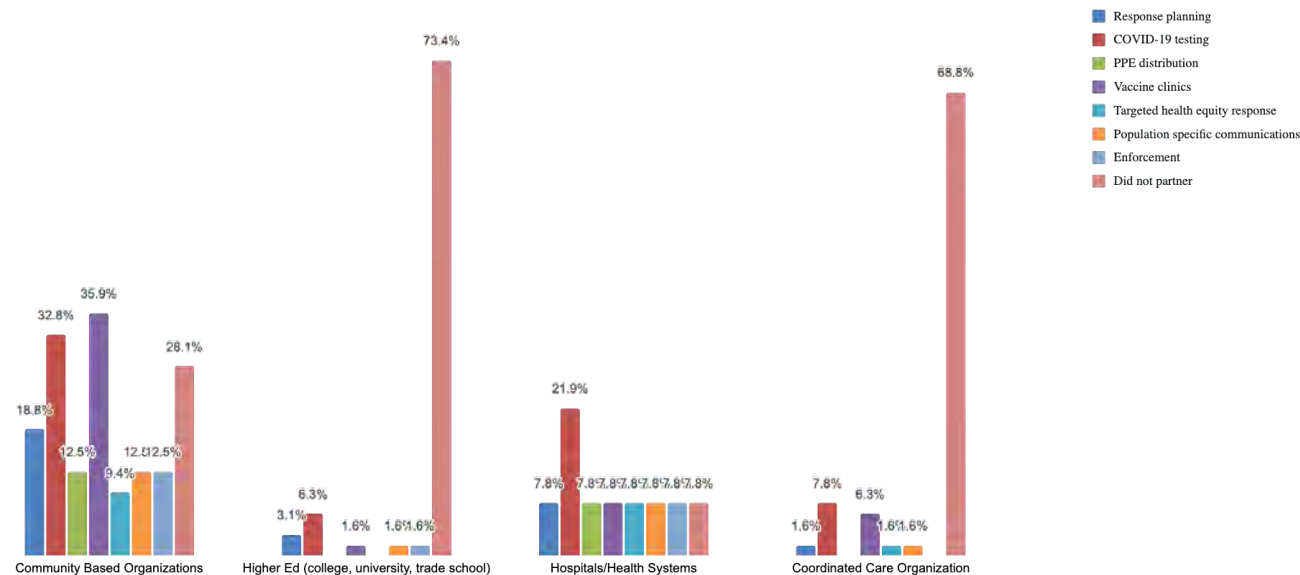
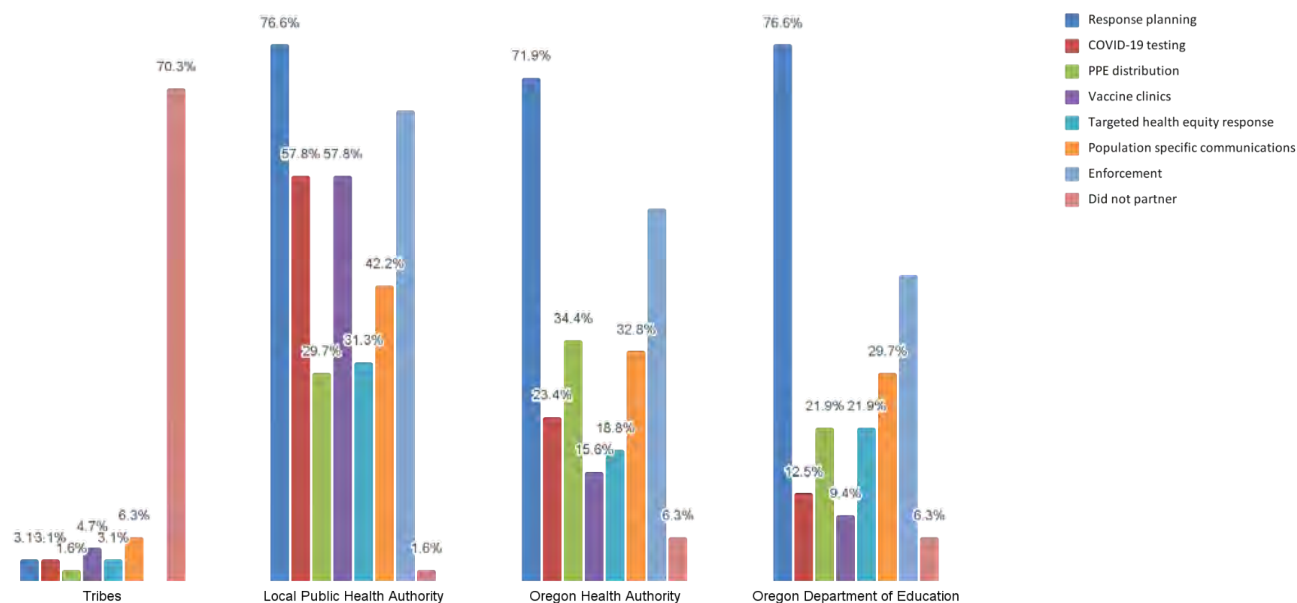


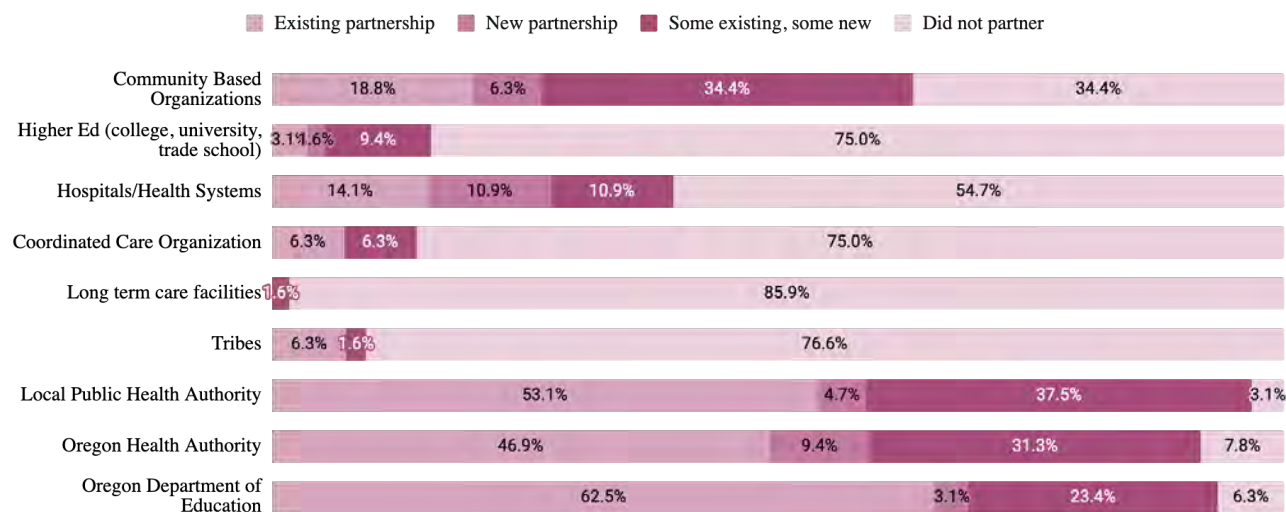
Figure 35: Types of activities schools partnered on with government agencies (N=64)



Respondents also shared if their relationships existed before pandemic response or if they were new. Most of their relationships were existing or a mix of existing and new. The partner type that the most respondents reporting developing new relationships with were hospitals/health systems (n=7), with

Oregon Health Authority a close second (n=6). The partner that the most respondents had an existing relationship with was the Department of Education (n=40).

Figure 36: Types of school partnerships for COVID-19 Response (N=64)



Appendix I: Detailed Limitations

Study Limitations

Overarching Limitation

Time Constraint

Primary Data Collection

Incentives

Self-report

Retrospective Recall

Public Health Workforce Turnover

School Informant Group Survey Sample Sizes

Secondary Data Collection

Using COVID-19 Data to Determine the Efficacy of Statewide Public Health Mandate Enforcement

Study Limitations

Study findings should be interpreted in the context of limitations. These limitations include time constraints, participant incentive structure, reliance on self-reported data, the retrospective nature of this study, and the large amount of public health workforce turnover. Importantly, these limitations were beyond the study team's control. Study design elements, including methodological approach and sampling and recruitment strategies, were used to counteract these limitations to the extent possible. These limitations are described in detail below.

Overarching Limitation

Time Constraint

The time constraint was the largest limitation of this report. The study team had 4.5 months to collect additional data for educational sector informants and analyze all of the data necessary to answer the research questions for Report 2. The accelerated timeline of this study impacted both primary and secondary data collection methods.

Primary Data Collection

The rapid study timeline for both Report 1 and 2 prohibited the study team to be exhaustive of all key informants involved in Oregon's Public Health System Response to the COVID-19 pandemic. As the study team could not collect data from each individual or entity involved in Oregon's Public Health System Response in schools, stratified sampling was utilized for ESDs and SDs.

Although Report 2 intended to include Protection Oregon Farmworker grantees as a key informant group, this informant group will be discussed and analyzed in Report 3. This additional time will allow Rede to receive grant reporting summaries and information from other informants who supported migrant and seasonal farmworker communities during the COVID-19 pandemic and ultimately, create a more complete picture.

Incentives

Despite the fact that the RFP stated a not to exceed the amount of \$70,000 allocated for participant incentives, OHA would not allow specific study informant groups, including ESDs, SDs, Principals, School Nurses, Labor Unions, and Health Care Associations to be compensated for their time spent participating in data collection activities (e.g., focus groups and interviews). Additionally, the overall incentive amounts were relatively low for the time associated with participating in this study. Assuredly, response rates, for ESDs, SDs, Principals, and School Nurses, were impacted by the lack of incentivization for survey completion.

OHA provided incentives for this study to community-based organization representatives through reimbursement of \$40/hour for the interview and focus group participation. Travel costs for CBO representatives, LPHAs, and Tribes/NARA representatives were available at current General Services Administration rates and in accordance with all OHA travel reimbursement policies however, no travel was required for participants in this study. In some instances, participants were frustrated that compensation would not be provided.

Self-report

Reliance on self-report is a limitation of this study. Although qualitative findings provide information-rich data, there is a chance that social desirability bias is present. In an effort to reduce the impact of social desirability bias on participants' responses, the study team reassured all participants of the confidential nature of this study. Self-report is also a potential limitation of survey responses.

Retrospective Recall

Although unavoidable, the retrospective nature of this study is a key limitation of this study. The use of the COVID-19 Stages Graphic was intended to help participants visualize response over time and aid in recall.

Public Health Workforce Turnover

Public health workforce turnover is another substantial limitation of this study. Many informants with historical knowledge of Oregon's public health response to the COVID-19 pandemic exited at some point during the response. In turn, this impacted the study team's ability to recruit key informants with extensive knowledge of their organization's public health response.

School Informant Group Survey Sample Sizes

Surveys were sent to school principals, school nurses, school district (SD) superintendents, and educational service district (ESD) superintendents. Response rates ranged depending on the informant group and the sampling methodology. Eight out of 19 ESDs responded, a sample size of 42%. Seventy-one out of 201 SDs responded, a sample size of 35%. There are approximately 1,160 school principals in Oregon and 171 principals completed the survey, which is a sample size of 15%. According to a 2020 report from ODE, there were 376 FTE of nurses reported statewide¹. Seventy-four nurses submitted completed surveys, for an approximate response rate of 20%. All four surveys included representation from all five regions of Oregon.

Secondary Data Collection

Using COVID-19 Data to Determine the Efficacy of Statewide Public Health Mandate Enforcement

One of the study questions from SB 1554 (2020) was to “compare health and health system data, including COVID-19 positivity rates, rates of COVID-19 infection, hospital capacity, and other core metrics with the efficacy of statewide public health mandate enforcement.” Limitations in the enforcement of public health mandates in Oregon are documented in Report 1. Challenges included a complaint driven system, multiple agencies being responsible for enforcement,

¹ Oregon Department of Education (2020). *2020 Nursing Services in Oregon Public Schools*. <https://www.oregon.gov/ode/students-and-family/healthsafety/SiteAssets/Pages/School-Nurses-Annual-Report/2020%20School%20Nursing%20Report.pdf>

variations in enforcement in different regions of the state, and weak statutory or regulatory authority for public health mandate enforcement. These limitations, in combination with a lack of data on the enforcement of public health mandates in Oregon made it impossible to examine the association between COVID-19 public health mandate enforcement and COVID-19 outcomes (such as case counts, mortality, or hospital capacity).

Appendix J: Impact of Public Health Mandates on COVID-19 Case Rates + Mortality Literature Review

The study team conducted a literature review to inform the topic of the comparative effect of public health restrictions (such as mask mandates, stay-at-home orders, business and government closures) on COVID-19 outcomes. The study team identified two study questions for the literature review: Did COVID-19 public health restrictions work to reduce COVID-19 case counts and mortality?; and What effect did public health restrictors that were more consistently enforced have on COVID-19 cases counts and mortality?

The literature review was limited to 2020-2023, and primarily included only US studies. The study team utilized PubMed and search terms included COVID, mandates, enforcement, cases, deaths, morbidity, mortality, stay-at-home, masking mandates, and non-pharmaceutical interventions. The study team also utilized citation lists from meta-analysis articles to identify additional articles. Additionally, LitCovid, a repository of COVID-19 related literature hosted by the National Library of Medicine, National Center for Biotechnology Information was searched for articles for inclusion. Nineteen articles were identified for inclusion in this literature review; some articles included analysis of multiple public health measures.

Citation	objective	public health measure	association with reducing cases	association with reducing death	results	limitations	method
Ahlers, M. J., Aralis, H. J., Tang, W. L., Sussman, J. B., Fonarow, G. C., & Ziaeian, B. (2021). Non-pharmaceutical interventions and COVID-19 burden in the United States. https://doi.org/10.1101/2021.09.26.21264142	To determine whether each of four broadly adopted NPIs (stay at home order, indoor restaurant dining ban, public mask mandate, and indoor public gathering ban) were effective in reducing the COVID-19 burden	Stay at home order	Yes	Yes	stay at home orders were effective at decreasing the rate of new diagnoses of COVID-19 the only NPI associated with decreasing COVID-19 mortality was stay at home order	This manuscript has not been published yet. The indicators it uses to present results (OR of a decrease in case/death velocity) looks confusing. Researchers did not examine compliance with government mandates	Researchers conducted a retrospective, observational cohort study to evaluate the state-specific NPI adoption or discontinuation and how it was related to COVID-19 case and mortality velocities between January 19, 2020 and March 7, 2021. Case and mortality data were obtained from The COVID Tracking Project (https://covidtracking.com/),

	among U.S. states.				Public mask mandates were associated with over twice the likelihood of reduced COVID-19 transmission even after adjusting for other policies that may have been adopted concurrently. Public mask mandates may encourage behavioral modifications as well as directly reduce the odds of transmission by using a physical barrier.		and dates for state-specific adoption and discontinuation of NPIs were obtained from publicly available reports. The odds of a decrease in case/death velocity were used to evaluate the effectiveness of each of the NPIs. (it's a bit confusing but generally speaking, OR > 1 means the NPI was successful in reducing COVID-19 case/death velocity)
		Masking mandate	Yes	No			
		Indoor public gathering s ban	No	No	Gathering bans with limits greater than 10 were insufficient or exacerbated COVID-19 spread		
		Indoor restaurant ban	Yes	No	Results from the mutually adjusted policy model suggested indoor restaurant dining bans and severe indoor public gathering may be associated with decreased case velocity		

Auger, K. A., et al. (2020). Association between statewide school closure and covid-19 incidence and mortality in the US. JAMA, 324(9), 859. https://doi.org/10.1001/jama.2020.14348	To assess the association between school closure and its timing with incidence and mortality of COVID-19	Closing in-person school	Yes	Yes	<p>The results of the study suggest that school closure was effective in reducing COVID-19 incidence and mortality.</p> <p>Adjusted analysis showed that school closure was associated with -62% relative change per week in COVID-19 incidence, and -58% relative change per week in COVID-19 mortality. States that closed schools earlier had a greater reduction in weekly cases compared to states that closed schools late. States that closed schools earlier had fewer estimated total deaths, while states that closed schools late had the largest absolute reduction in deaths.</p>	Some of the impacts could be due to other NPIs Measuring COVID-19 incidence is limited by testing availability	A longitudinal collection of data was done between March 9, 2020, and May 7, 2020, allowing for at least 6 weeks after school closures in each state. School closure and its timing were examined as the independent variables, and the outcome data, daily COVID-19 incidence and mortality were estimated using data from the Johns Hopkins University School of Public Health.
Bendavid, E, Oh, C, Bhattacharya, J, Ioannidis, JPA. (2021) Assessing mandatory stay-at-home and business closure effects on the spread of COVID-19. European Journal of Clinical Investigation, 51:e13484. https://doi.org/10.1111/eci.13484	To assess the impacts of restrictive non-pharmaceutical interventions (mandatory stay-at-home orders and business closures) on the spread of COVID-19	NPIs	No	No	<p>there is no evidence that more restrictive nonpharmaceutical interventions (such as stay-at-home orders) contributed substantially to reducing transmission of new cases in England, France, Germany, Iran, Italy, the Netherlands, Spain or the United States in early 2020 While modest decreases in daily growth (under 30%) cannot be excluded in a few</p>	Cross-country comparisons are difficult: countries may have different rules, cultures and relationships between the government and the people; findings rest on the assumption that NPIs reduce transmission	Researchers estimated COVID-19 case growth in relation to any NPI implementation in subnational regions of 10 countries: England, France, Germany, Iran, Italy, Netherlands, Spain, South Korea, Sweden and the United States. Using first-difference models with fixed effects, they isolated the effects of more restrictive NPIs by subtracting the combined effects of less restrictive NPIs

					countries, there is not evidence of large decreases in daily growth due to more restrictive NPIs		and epidemic dynamics from all NPIs. Case growth in Sweden and South Korea, two countries that did not implement mandatory stay-at-home and business closures, was utilized as comparison countries for the other 8 countries. mrNPIs = more restrictive, lrNPI=less restrictive)
Bundgaard, H., et al. (2021). Effectiveness of Adding a Mask Recommendation to Other Public Health Measures to Prevent SARS-CoV-2 Infection in Danish Mask Wearers : A Randomized Controlled Trial. Annals of internal medicine, 174(3), 335–343. https://doi.org/10.7326/M20-6817	To determine if mask wearing by uninfected individuals would reduce infection by COVID-19.	Masking mandate	No	N/A	In a community where mask wearing was uncommon, wearing masks by non-infected individuals did not reduce COVID-19 infection by more than 50%. 42 people (1.8%) in the masked group and 53 people (2.1%) in the control group were infected with COVID-19. The difference was not statistically significant, but the 95% CIs are compatible with a 46% reduction to a 23% increase in infection among those that wore masks.	Not a US study There was no assessment of whether masks could decrease disease transmission from infected mask wearers to others	A randomized controlled study was conducted. Adults who spent 3 or more hours in public with other people and who did not wear masks were recruited. Before participating in the study, participants were required to test negative for COVID-19. Participants were provided with 50 surgical masks and instructions for use. The primary outcome was SARS-CoV-2 infection in the mask wearer at one month by antibody testing, polymerase chain reaction (PCR), or hospital diagnosis. The secondary outcome was PCR positivity for other respiratory viruses.
Chu, D. K., et al. (2020). Physical distancing, face masks, and eye protection to prevent person-to-person	To understand the effects of physical distance, face masks, and eye protection on virus transmission in	Physical distancing	Yes	N/A	Transmission of viruses was lower with physical distancing of 1 m or more, compared with a distance of less than 1 m; protection was increased as distance was	Limitations include that none of the studies were randomized, and may suffer from recall bias.	This was a systematic review of 172 observational studies in health-care and non-health-care settings across 16 countries and six continents; 44 comparative

transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. Lancet (London, England), 395(10242), 1973–1987. https://doi.org/10.1016/S0140-6736(20)31142-9	health-care and community settings.				lengthened		studies were included in a meta-analysis, including 25697 patients with COVID-19, SARS, or MERS. Studies were all observational.
		Masking mandate	Yes	N/A	Face mask use could result in a large reduction in risk of infection, with stronger associations with N95 or similar respirators compared with disposable surgical masks or similar.		
		Eye protection	Yes	N/A	Eye protection also was associated with less infection		
Courtemanche, C., Garuccio, J., Le, A., Pinkston, J., & Yelowitz, A. (2020). Strong Social Distancing Measures In The United States Reduced The COVID-19 Growth Rate. Health Affairs (Project Hope), 39(7), 1237–1246. https://doi.org/10.1377/hlthaff.2020.00608	To determine the effectiveness of four types of social distancing measures (shelter-in-place orders, public school closures, bans on large social gatherings, and closures of entertainment-related businesses) on confirmed COVID-19 case growth rates through April 27, 2020.	shelter-in-place orders	Yes	N/A	Both shelter-in-place orders and closures of restaurants, bars, and entertainment-related businesses substantially slowed the spread of COVID-19. Shelter-in-place orders led to statistically significant reductions in the COVID- 19 cases.	Some of the effects from NPIs could have been seen without these measures put into place as some populations would have voluntarily adopted protective behaviors. There may also be issues with lack of testing availability that is not accounted for in modeling.	Researchers used an event study regression with multiple policies to estimate the relationship between social distancing policies and the exponential growth rate of confirmed COVID-19 cases.
		public school closures	No	N/A	Researchers did not find evidence that closures of public schools slowed the spread of COVID-19, although the confidence intervals cannot rule out moderate-size effects.		
		bans on large social gatherings	No	N/A	Researchers did not find evidence that bans on large social gatherings slowed the spread of COVID-19, although the confidence intervals cannot rule out moderate-size effects.		

		closures of entertainment-related businesses	Yes	N/A	Closures of restaurants, bars, and entertainment-related businesses substantially slowed the spread of COVID-19.		
Dreher, N., Spiera, Z., McAuley, F. M., Kuohn, L., Durbin, J. R., Marayati, N. F., Ali, M., Li, A. Y., Hannah, T. C., Gometz, A., Kostman, J. T., & Choudhri, T. F. (2021). Policy interventions, social distancing, and SARS-COV-2 transmission in the United States: A retrospective state-level analysis. The American Journal of the Medical Sciences, 361(5), 575–584. https://doi.org/10.1016/j.amjms.2021.01.007	The study was to retrospectively analyze the effectiveness of different NPIs in the early stages of the COVID-19 epidemic for every state in the U.S	stay-at-home order	Yes	No	Stay-at-home order, educational facilities closure, and non-essential business closure implemented during both of the first 2 weeks following 500th cases are significantly associated with lower Rt, which mean these NPIs were effective in limiting the spread of COVID-19 at the early stage of the epidemic. No significant association was found between the implementation of these NPIs and the doubling time from 50 to 100 deaths.	This study only assessed the effectiveness of NPIs at an early stage and thus is not sufficient to support the effectiveness of the long-term implementation of these interventions. This study only assessed state-level policies and mandates. County-level localized control and variation in COVID-19 cases were not accounted for.	COVID-19 case and death data for all 50 states and the District of Columbia were from the Coronavirus Resource Center at Johns Hopkins University. A real-time estimate of Rt, which predicted the reproduction rate of COVID-19 cases, was collected from Rt.live. The study chose the average Rt in the weeks following 500 cases and the time it took for each state to double the number of cases from 500 to 1000, and the number of deaths from 50 to 100, as the outcome indicators for the effectiveness of NPIs during the early stage of COVID-19 epidemic in the United States.
		school closure	Yes	No	Stay-at-home order, educational facilities closure, and non-essential business closure implemented during both of the first 2 weeks following 500th cases are significantly associated with lower Rt, which mean these NPIs were effective in limiting the spread of COVID-19 at the early stage of the epidemic. No significant association was found		

					between the implementation of these NPIs and the doubling time from 50 to 100 deaths.		
		limitation on mass gathering	No	No	The association between the limitation on mass gatherings and Rt was not significant. No significant association was found between the implementation of these NPIs and the doubling time from 50 to 100 deaths.		
		business closure	Yes	No	Stay-at-home order, educational facilities closure, and non-essential business closure implemented during both of the first 2 weeks following 500th cases are significantly associated with lower Rt, which mean these NPIs were effective in limiting the spread of COVID-19 at the early stage of the epidemic. No significant association was found between the implementation of these NPIs and the doubling time from 50 to 100 deaths.		

<p>Fowler JH, Hill SJ, Levin R, Obradovich N (2021) Stay-at-home orders associate with subsequent decreases in COVID-19 cases and fatalities in the United States. PLoS ONE 16(6): e0248849. https://doi.org/10.1371/journal.pone.0248849</p>	<p>To understand the impact of stay-at-home orders on cases and deaths</p>	<p>stay-at-home order</p>	<p>Yes</p>	<p>Yes</p>	<p>Stay-at-home orders are associated with a 30.2 percent (11.0 to 45.2) average reduction in weekly incident cases after one week, a 40.0 percent (23.4 to 53.0) reduction after two weeks, and a 48.6 percent (31.1 to 61.7) reduction after three weeks. Stay-at-home orders are also associated with a 59.8 percent (18.3 to 80.2) average reduction in weekly fatalities after three weeks. These results suggest that stay-at-home orders might have reduced confirmed cases by 390,000 (170,000 to 680,000) and fatalities by 41,000 (27,000 to 59,000) within the first three weeks in localities that implemented stay-at-home orders.</p>	<p>as with any observational study, the associations cannot be assumed casual cases and fatalities are based on incomplete data cannot separate out impact of other local interventions</p>	<p>Researchers combined the data on the timing of stay-at-home orders with daily confirmed COVID-19 cases and deaths at the county level during the first seven weeks of the outbreak in the United States. They estimated the association between stay-at-home orders and changes in COVID-19 cases and deaths using a difference-in-differences design to account for unmeasured local variation in factors like health systems and demographics and for differences in factors like national mitigation actions and access to tests.</p>
<p>Hansen, N-J.H., Mano,R.C. (2023) Mask mandates save lives, Journal of Health Economics. 88. https://doi.org/10.1016/j.jhealeco.2022.102721</p>	<p>To answer the question: Did statewide mask mandates save lives?</p>	<p>Masking mandate</p>	<p>Yes</p>	<p>Yes</p>	<p>statewide mask mandates reduced new weekly COVID-19 cases by 54.95 cases per 100,000 inhabitants, COVID-19 hospital admissions by 11.44 persons per 100,000 inhabitants, and new COVID-19 deaths by 0.73 by 100,000 inhabitants. impact of mask mandates on outcomes varies depending on political leaning, with higher reductions in cases</p>	<p>Estimates may be low potential sources of bias: other ph mandates, spillover effect (travel between states due to policies)</p>	<p>Researchers used a regression discontinuity design to examine the variation between counties across state mask borders, that is a state border that separates two counties, in which one county is in a state with a mask mandate at a given time and the other county is in a state without a mask mandate at the same time. The study period was between January 20, 2020 and December 20, 2020,</p>

					and deaths in democratic-leaning counties. estimates imply that statewide mask mandates saved 87,000 lives and could have potentially saved 57,000 additional lives up to December 19, 2020		when the COVID-19 pandemic hit the U.S. and mask mandates were being implemented and vaccines were not yet widely available.
McGrail, D. J., Dai, J., McAndrews, K. M., & Kalluri, R. (2020). Enacting national social distancing policies corresponds with dramatic reduction in COVID19 infection rates. PloS one, 15(7), e0236619. https://doi.org/10.1371/journal.pone.0236619	To determine efficacy of social distancing policies on slowing the spread of COVID-19.	Social distancing policies, including closure of non-essential workplaces and schools, as well as policies on physical spacing when in public	Yes	N/A	Social distancing is an effective measure to reduce the spread of COVID-19. In the US, there was a strong reduction observed in average mobility following implementation of social distancing policies in the 47 states with social distancing policies; changes in average mobility were significantly correlated with decreases in COVID19 spread rate. Globally, nations with regional or national social distancing policies had a significantly larger reduction in mobility than those without policies, and nations with national policies exhibited a significantly larger reduction than those with regional policies.	Reliance on COVID-19 testing is most likely an undercount of cases Study did not control for variables such as population density, healthcare infrastructure, testing rates, climate, population characteristics	Researchers determined the spread of COVID-19 both before and after implementation of social distancing policies, using daily case numbers for COVID-19 and population numbers acquired from the COVID-19 Data Repository by the Center for Systems Science and Engineering at Johns Hopkins University. Based on the 95% confidence interval for time from exposure to exhibiting symptoms of 8.2 to 15.6 days, they included cases a maximum of 7 days post implementation of social distancing policies to still be considered pre-social distancing. Researchers also looked at the impact of social distancing policies on community mobility, utilizing data from Google mobility reports. Average mobility was taken as the average reduction in mobility across the 5 Google mobility metrics (retail and

							recreation, grocery and pharmacy, parks, transit stations, and workplace).
Nguyen M. (2021) Mask Mandates and COVID-19 Related Symptoms in the US. ClinicoEconomics and Outcomes Research, 13:757-766 https://doi.org/10.2147/CEOR.S326728	This study investigates the extent to which the Public Mask Mandate, a policy that requires the use of face masks in public, can protect people from developing COVID-19 symptoms during the initial stage of the pandemic from mid-April to early June 2020 in the United States (US).	Masking mandate	Yes	N/A	Public Mask Mandate significantly lowers the incidence of developing all COVID-19 symptoms by 0.29 percentage points. The estimate implies an average reduction of 290%, compared to the proportion of the mandate-unaffected individuals who display all symptoms (0.1%).	other policies at the beginning of the pandemic such as lockdowns and eviction moratorium are not accounted for in the model does not account for subsets of population already required to wear masks examines likelihood of symptoms, not infection	Researchers employed a difference-in-differences model to exploit the differential timing of the mask mandate implementation across states. Data on symptoms were pulled from the COVID Impact Survey (CIS). Implementation dates of public mask mandates were pulled from government websites.
Rader, B., White, L. F., Burns, M. R., Chen, J., Brilliant, J., Cohen, J., Shaman, J., Brilliant, L., Kraemer, M. U., Hawkins, J. B., Scarpino, S. V., Astley, C. M., & Brownstein, J. S. (2021). Mask-wearing and control of SARS-COV-2 transmission in the USA: A cross-sectional study.	The study was to assess mask compliance across the USA, and evaluate the association of a change in self-reported mask-wearing with the timing of mask mandates. The purpose of the study was to examine the effect of face masks on the transmission of COVID-19 in the	Masking mandate	Yes	N/A	The results suggested that mask-wearing reduced transmission of COVID-19 across all levels of physical distancing. A 10% increase in reported mask-wearing was associated with an increase of more than three-fold in odds of transmission control.	Self-reported mask wearing data	Self-reported mask-wearing data were collected through a web survey hosted on SurveyMonkey, together with a random-selected invitation to participate in the COVIDNearYou survey. Transmission data were estimated based on the case data from The COVID Tracking Project and the open COVID-19 data working group. A daily Rt number was used to estimate the number of secondary cases arising from a single case for a given day to measure state-specific

The Lancet Digital Health, 3(3). https://doi.org/10.1016/s2589-7500(20)30293-4	US.						community transmission control. Mask mandate information for each state was from the masks4all database.
Siedner MJ, Harling G, Reynolds Z, Gilbert RF, Haneuse S, Venkataramani AS, et al. (2020) Correction: Social distancing to slow the US COVID-19 epidemic: Longitudinal pretest–posttest comparison group study. PLoS Med 17(10): e1003376. https://doi.org/10.1371/journal.pmed.1003376	To determine if social distancing measures to address the US COVID-19 epidemic had health and social impacts.	Social distancing measures, included closures of schools, closures of workplaces, cancellations of public events, restrictions on internal movement (stay-at-home orders), and closures of state borders.	Yes	Yes	Social distancing rules did appear to slow the transmission of COVID-19 and reduce mortality from COVID-19. There was a statistically significant reduction in COVID-19 case rates growth with statewide social distancing requirements. There was also a statistically significant reduction in COVID-19-attributed mortality growth rate in social distancing requirements seven days after implementation, but the effect was gone after ten days.	This study did not determine which types of social distancing requirements (closures of schools, closures of workplaces, cancellations of public events, restrictions on internal movement (stay-at-home orders), and closures of state borders) were most effective at reducing COVID-19. Researchers did not control for potential confounding factors such as underestimating strength of social distancing policies due to neighboring states or increased testing.	Researchers conducted a longitudinal pretest–posttest comparison group study to estimate the change in COVID-19 case growth before versus after implementation of statewide social distancing measures in the US. The primary outcome examined was the COVID-19 case growth rate and the secondary outcome was the COVID-19-attributed mortality growth rate.

<p>Singh, S., Shaikh, M., Hauck, K., & Miraldo, M. (2021). Impacts of introducing and lifting nonpharmaceutical interventions on COVID-19 daily growth rate and compliance in the United States. Proceedings of the National Academy of Sciences, 118(12). https://doi.org/10.1073/pnas.2021359118</p>	<p>To evaluate the heterogeneous impacts of introducing and lifting non-pharmaceutical interventions on COVID-19 with regards to population characteristics.</p>	<p>non-pharmaceutical interventions</p>	<p>Yes</p>	<p>N/A</p>	<p>Introducing NPIs led to significant increase in compliance and a reduction in COVID-19 cases, and lifting NPIs led to an increase in COVID-19 cases. The impact was stronger in counties with non-White populations above the county-wide median. However, only the implementation of “stronger” NPIs targeting the general population and businesses have a statistically significant impact.</p>	<p>This study did not determine which types of social distancing requirements (closures of schools, closures of workplaces, cancellations of public events, restrictions on internal movement (stay-at-home orders), and closures of state borders) were most effective at reducing COVID-19. Researchers controlled for testing at the state level not count level. Counties were included in the tx group if they had an official mandate, but some businesses may have closed without a policy implemented in their jurisdiction.</p>	<p>This study assessed the impacts of both introducing and lifting of NPIs on COVID-19 daily growth and compliance, and also evaluated the heterogeneous impacts of NPIs across counties’ sociodemographic and economic characteristics. The study assessed NPIs that selectively targeted population groups by allocating measures into four categories as suggested by the Trump administration - NPIs targeting vulnerable populations, businesses, and the general population through “weaker” and “stronger” measures. Data on COVID-19 cases were from publicly available COVID-19 databases through John Hopkins University and USAFacts. Data on COVID-19 tests were from the COVID-19 Tracking Project; data on mobility was acquired through SafeGraph.</p>
<p>Spira B. (2022). Correlation Between Mask Compliance and COVID-19 Outcomes in Europe. Cureus, 14(4), e24268. https://doi.org/10.7759/cureus.24268</p>	<p>To determine if mask wearing was correlated with COVID-19 morbidity and mortality.</p>	<p>Masking mandate</p>	<p>No</p>	<p>No</p>	<p>The positive correlation between mask usage and cases was not statistically significant ($p = 0.436$), but the correlation between mask usage and deaths was positive and significant ($p = 0.039$)</p>	<p>Differences in vaccination rates in different countries may impact transmission, but study was early in vaccine rollout that it would probably have limited impact (only three countries in study had vaccination rates over 30%). Another potential confounding effect could have been that</p>	<p>Data was collected from 35 Western and Eastern European countries who had a population of at least one million people. Data on morbidity, mortality, and mask usage during a six-month period were collected and analyzed. Spearman’s correlation analyses and</p>

						countries with already higher rates of cases may have been more likely to implement mask mandates, so they would then have higher rates of infection with mask wearing mandates in place.	Shapiro-Wilk normality checks were in JASP and linear regressions in Wolfram Mathematica 13.0.
Stype, A.C., Yaya, M.E. & Osika, J. Non-pharmaceutical Interventions and COVID-19: Do County- and State-Level Policies Predict the Spread of COVID-19?. J Econ Race Policy (2023). https://doi.org/10.1007/s41996-022-00112-w	Examine the overall impact of state and local government response to the initial stages of the COVID-19 pandemic in the USA through the end of Labor Day weekend 2020 (September 7, 2020)	non-pharmaceutical interventions (aggregated measures of mask mandates, daycare closures, stay-at-home orders, and restaurant and bar closures)	Yes	Yes	NPIs, early intervention, longer implementation of NPIs, and instituting a variety of NPIs, were effective in reducing deaths and cases during the first wave of the COVID-19 pandemic.	One weakness of this study is using the data as a cross-section instead of as a time series	Researchers conducted two-stage least square estimations for general NPI measure, which includes mask mandates, daycare closures, restaurant and bar closures, and stay-at-home orders at county and state levels. Four outcomes are examined: total deaths, total cases, cumulative deaths at peak, and cumulative cases at peak.
Xu, J., Hussain, S., Lu, G., Zheng, K., Wei, S., Bao, W., & Zhang, L. (2020). Associations of stay-at-home order and face-masking recommendation with trends in daily new cases and deaths of laboratory-confirmed	To understand the associations of stay-at-home orders and face-masking recommendations on trends in daily new cases and deaths of laboratory-confirmed COVID-19 cases.	stay-at-home order	Yes	Yes	Modeling of data shows that early implementation of stay-at-home orders could reduce daily new cases and deaths Modeling also shows that premature lifting of stay-at-home orders would be associated with a significant increase in daily new cases and deaths	A limitation in utilizing laboratory confirmed cases is that it was most likely an undercount of cases	Researchers conducted a quasi-experimental interrupted time series study to compare the changes in COVID-19 epidemics before and after stay-at-home orders and face-masking recommendations. They utilized national and state level daily case and death data from the COVID-19 Tracking

COVID-19 in the United States. medRxiv : the preprint server for health sciences, 2020.05.01.20088237. https://doi.org/10.1101/2020.05.01.20088237							Project. They only included cases and deaths that occurred from March 1 to April 20, 2020 in the 50 states and DC.
Zhang, R., Wang, Y., Lv, Z. et al. (2022) Evaluating the impact of stay-at-home and quarantine measures on COVID-19 spread. BMC Infectious Diseases 22, 648 https://doi.org/10.1186/s12879-022-07636-4	To evaluate impact of stay-at-home orders and quarantine measures on COVID-19 spread	stay-at-home order	Yes	N/A	Results indicate that self-isolation of the susceptible population is necessary to contain the outbreak. At a given rate, self-isolation of susceptible population induced by stay-at-home orders is more effective than quarantine of SARS-CoV-2 contacts in reducing effective reproductive numbers R_e .	Researchers neglected the effect of quarantine of SARS-CoV-2 contacts on the susceptible population, did not explicitly consider contact tracing efforts implemented after lockdown, they assume model parameters in counterfactual simulations such as the transmission rate and ascertainment rate remain the same as estimated using real-world data, and human behaviors and cultures vary in different counties and could impact the compliance with control measures	Researchers developed a mathematical model to estimate the effect of stay-at-home and quarantine on suppressing COVID-19 spread in four cities: Wuhan in China, New York City in the US, Milan in Italy, and London in the UK.