OHA COVID-19 Webinar Series for Health Care Providers

December 3, 2020

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Oregon Health Authority

Agenda Items

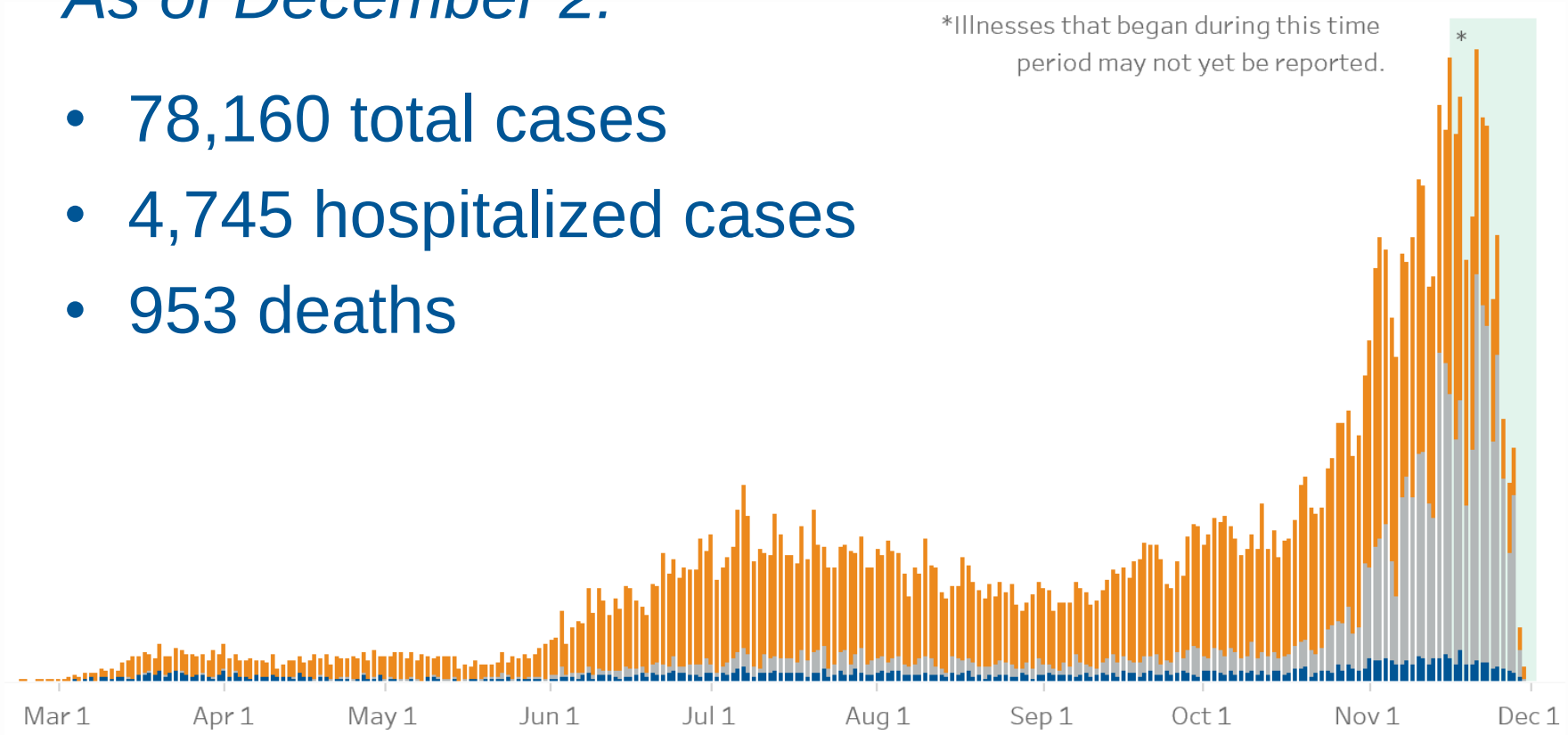
- COVID-19 epi update
- Brief Influenza Update
- *New*: Oregon's Risk and Protection Framework
- COVID-19 vaccine update
- Monoclonal Ab therapies
- CDC quarantine guideline update
- Literature review (MIS-A)
- Closing

COVID-19 Update

COVID-19 Oregon Update

As of December 2:

- 78,160 total cases
- 4,745 hospitalized cases
- 953 deaths



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COVID-19 Situation in Oregon

*For the week of **November 23-29:***

- 9,100 new cases were recorded
  - Up 5% from prior week (sixth consecutive week of record highs)
- Hospitalizations increased 8% (another record high)
- Eighty-six Oregonians died in association with COVID-19

*From **November 22-28***:

- 8.6% of test results were positive last week
  - Represents a “test-based” method, whereby all electronic lab reports received by OHA are used to calculate percent positivity

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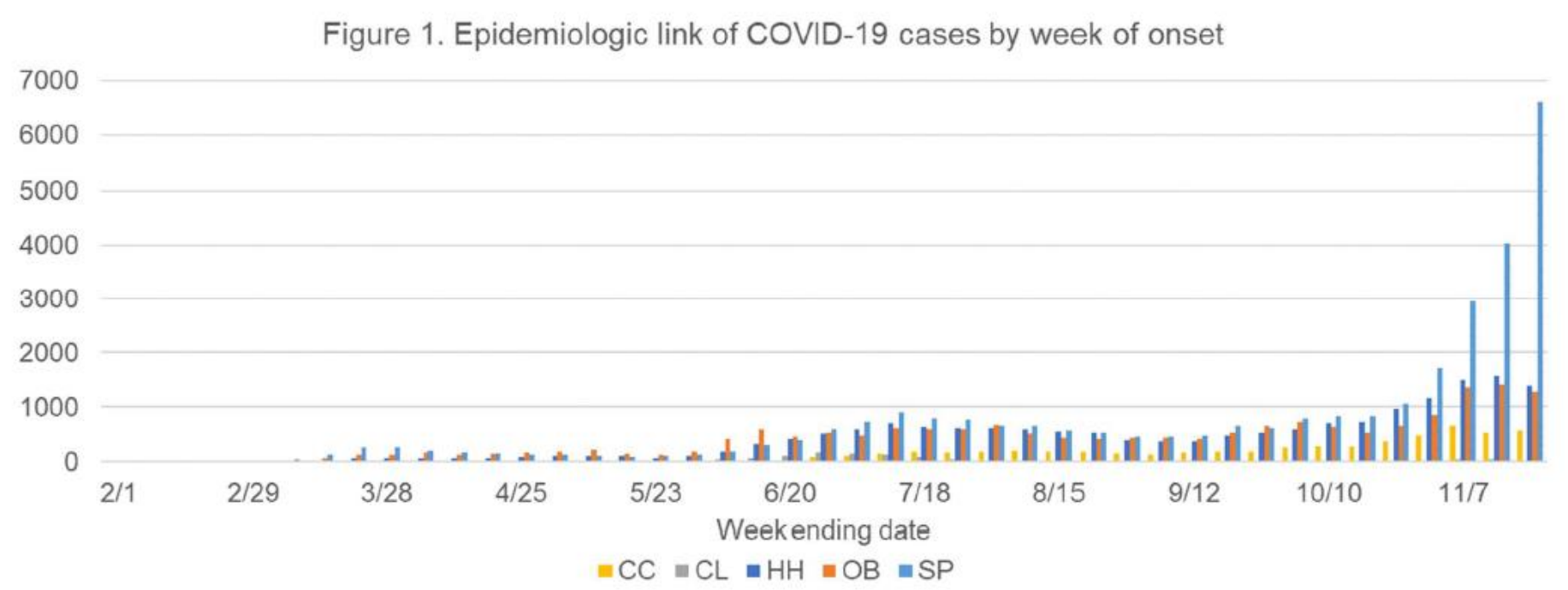
Epidemiologic Link Trends



COVID-19 Cases by Race, Ethnicity

Table 3. Severity and rates of COVID-19 by race[a]

Race	Cases	% of total cases	Cases per 100,000[b]	Hospitalized	% Hospitalized	Deaths	Case fatality
AI/AN	1,514	2	3106.4	123	8.1%	16	1.1%
Asian	2,289	3	1263.9	154	6.7%	23	1.0%
Black	2,111	2.8	2614.8	157	7.4%	24	1.1%
Multiracial	1,383	1.8	688.1	78	5.6%	25	1.8%
Other	20,830	27.6	15793	955	4.6%	96	0.5%
Pacific Is.	881	1.2	5303.4	101	11.5%	10	1.1%
Not Avalaible	12,189	16.2		323	2.7%	102	0.8%
White	34,236	45.4	957.3	2,627	7.7%	616	1.8%
Total	75,433	100	1780.6	4,518	6.0%	912	1.2%

Table 4. Severity and rates of COVID-19 by ethnicity

Ethnicity	Case count	% of total cases	Cases per 100,000[a]	Hospitalized	% Hospitalized	Deaths	Case fatality
Hispanic	24,042	31.9%	4421.3	1,079	4.50%	116	0.50%
Non-Hispanic	36,750	48.7%	995.2	2,787	7.60%	620	1.70%
Not available	14,641	19.4%		652	4.50%	176	1.20%
Total	75,433	100%	1780.6	4,518	6%	912	1.20%

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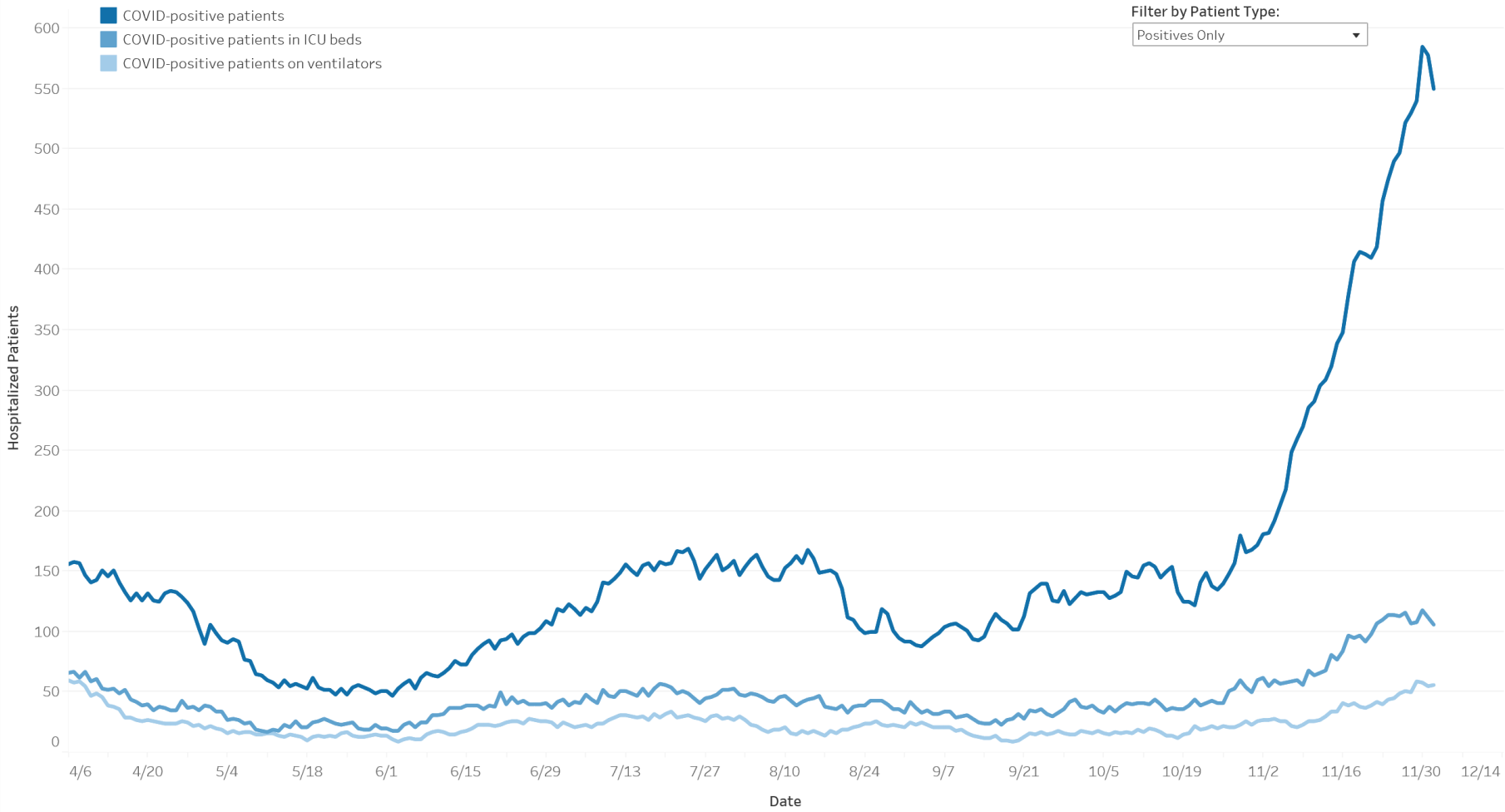
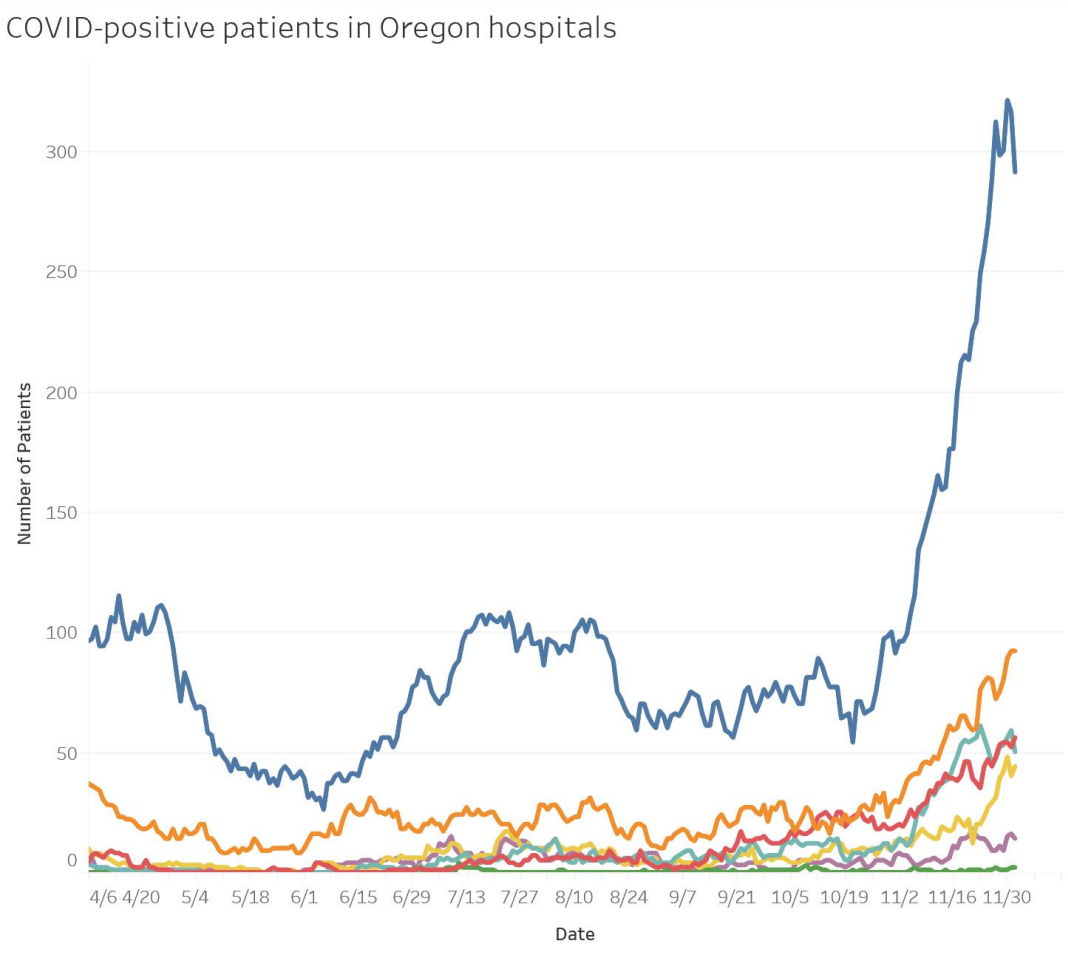
Hospital COVID Census: Statewide Trends



Hospital COVID Census: Regional Trends



Brief Influenza Update

Influenza Activity: Flu Bites

Data at a Glance November 15—November 21, 2020 (Week 47)		
	Current Week (47)	Previous Week (46)
Percentage of emergency department visits for ILI[1]	1.3%	1.4%
Percentage positive influenza tests[2]	0.2%	0.2%
Portland tri-county influenza-associated hospitalizations[3]	0	0
Portland tri-county COVID-19-associated hospitalizations[3]	127	122
Reported influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity[4]	0.0%	0.0%

[1]Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

[2]Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

[3]Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

[4] Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Subscribe to OHA's FluBites:
https://www.oregon.gov/oha/PH/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx

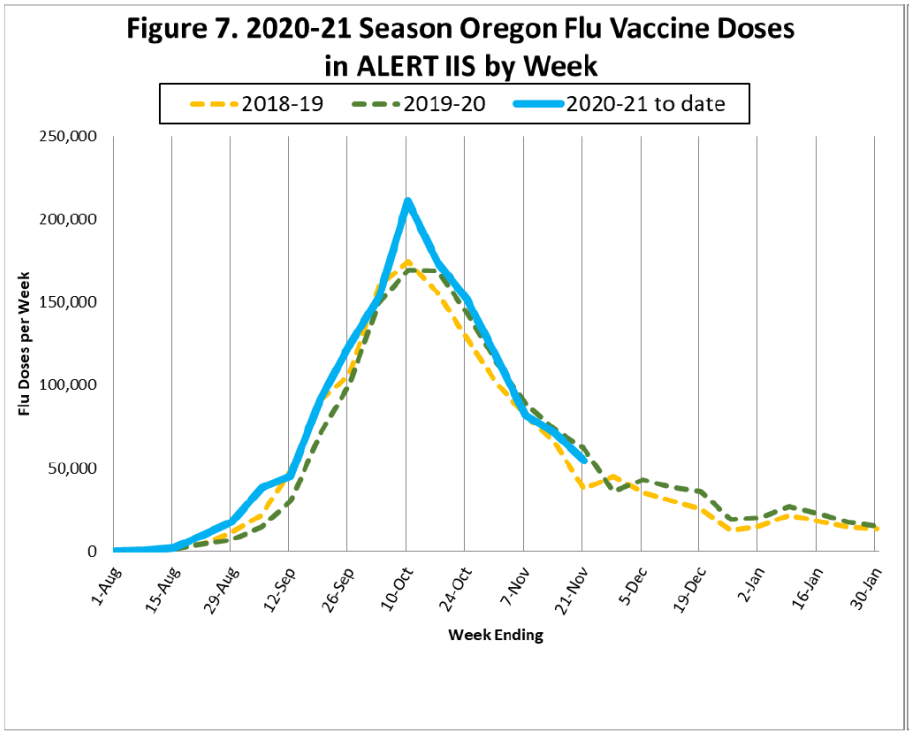
Influenza Tests Results Nov 15- Nov 21

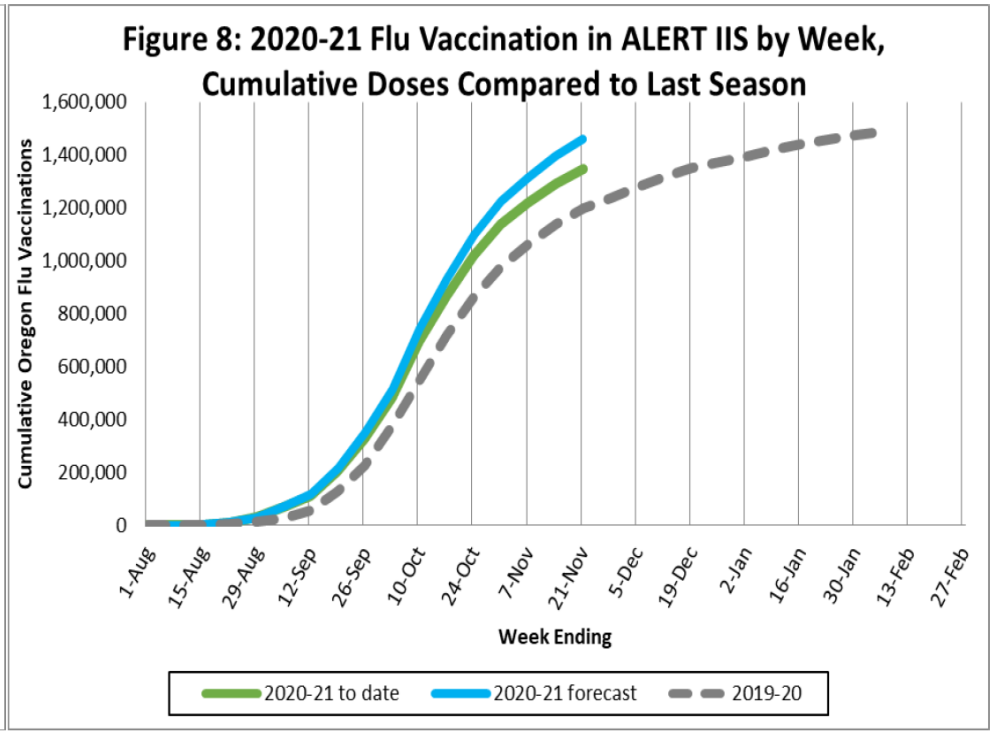
Table 1. Influenza Test Results in Oregon, NREVSS, Current Week, 2020–2021 Season

Region	Total Tests	Positive		Flu A		Flu B	
		No.	(%)	No.	(%)	No.	(%)
Portland Metro	1477	0	0.0%	0	0.0%	0	0.0%
Southern Oregon	416	0	0.0%	0	0.0%	0	0.0%
Columbia Gorge	90	5	5.6%	1	20.0%	4	80.0%
Central Oregon	419	0	0.0%	0	0.0%	0	0.0%
Willamette Valley	121	0	0.0%	0	0.0%	0	0.0%
State Total	**2523**	**5**	**0.2%**	**1**	**20.0%**	**4**	**80.0%**

Subscribe to OHA's FluBites:
https://www.oregon.gov/oha/PH/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx

Influenza Immunizations by Week





New: Oregon's Risk and Protection Framework

Oregon's Risk and Protection Framework

Effective 12/3: Oregon's Risk and Protection Framework

This new health and safety framework uses four different risk levels for counties based on their level of COVID-19 spread—Extreme Risk, High Risk, Moderate Risk, and Lower Risk—effective December 3.

On Monday, November 30, the Oregon Health Authority will reexamine county data to determine which counties qualify for each risk level on December 3, following the end of the 2-Week Freeze. In each subsequent two-week period, the Oregon Health Authority will examine and publish county data weekly, but county risk levels will not change until the end of the second week. In the first week, counties will be given Warning Week data to prepare for potential risk level changes. In the second week, county risk levels will be updated based on that week's data. More detailed information will be posted before December 3.

Disease Metrics (Table)

County Risk Levels (Table)

Guidance by Activity (Table)

County Risk Levels (Map)

https://govstatus.egov.com/or-covid-19/

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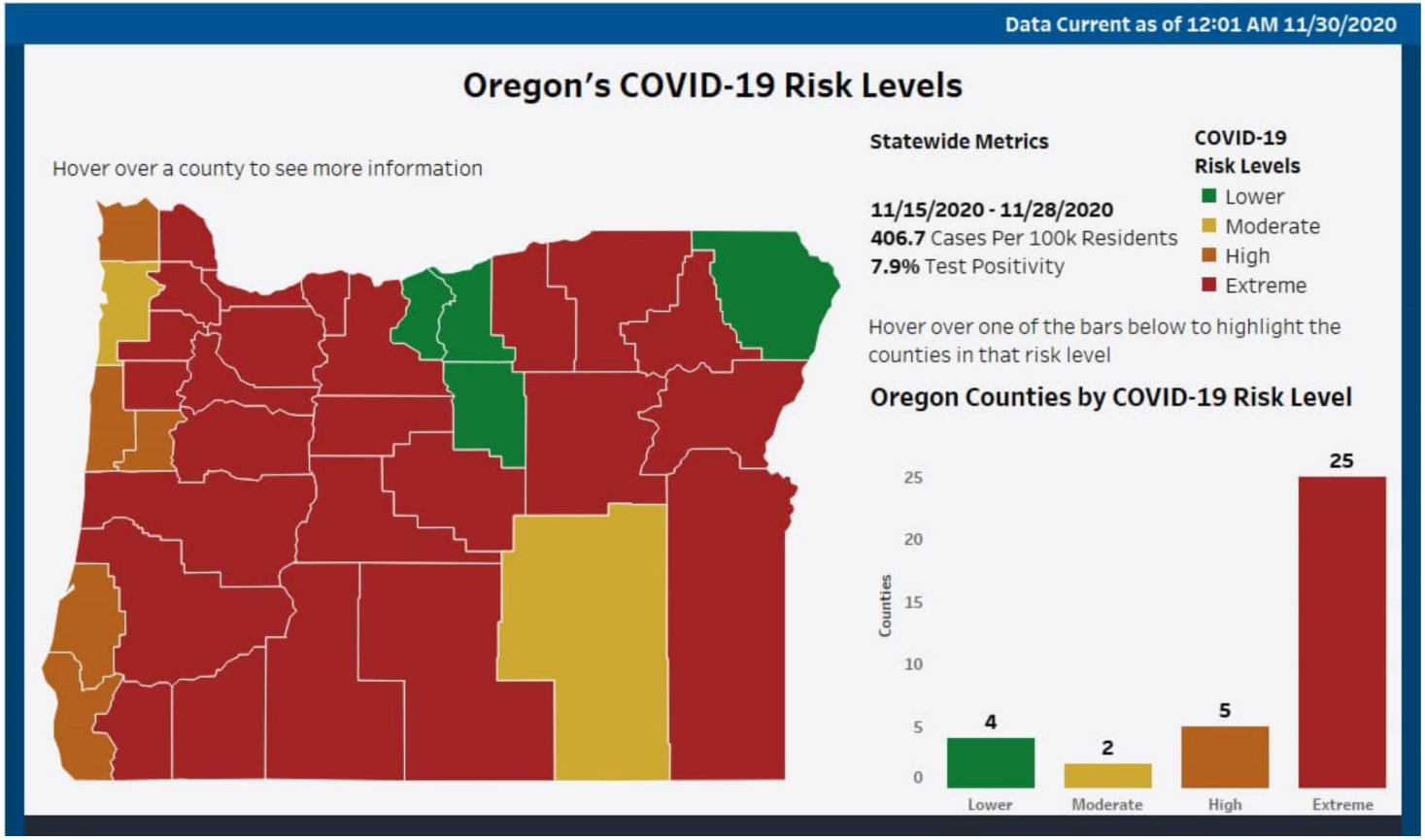
Oregon COVID-19 Disease Metrics

Disease Activity	Lower Risk	Moderate Risk	High Risk	Extreme Risk
Rate of COVID-19 cases per 100,000 over 14 days (counties with 30,0000 or more people)	<50.0	50.0 to <100.0	100.0 to < 200.0	≥200.0
-or-				
Number of COVID-19 cases over 14 days (counties with less than 30,000 people)	<30	30 to <45	45 to <60	≥60
-and-				
Percentage test positivity over previous 14 days	<5.0%	5.0% to <8.0%	8.0% to <10.0%	≥10.0%

County Risk Levels: MAP



Sector Risk Level Guidance (snapshot)

Sector Risk Level Guidance Chart

Activities	Lower Risk	Moderate Risk	High Risk	Extreme Risk
Social and At-Home Gathering Size — Indoor	• Maximum 10 people • Recommended limit: 4 households	• Maximum 8 people • Recommended limit: 2 households	• Maximum 6 people • Recommended limit: 2 households	• Maximum 6 people • Recommended limit: 2 households
Social and At-Home Gathering Size — Outdoor	Maximum 12 people	Maximum 10 people	Maximum 8 people	• Maximum 6 people • Recommended limit: 2 households
Eating and Drinking Establishments	• Indoor dining allowed • Indoor capacity: not to exceed 50% maximum occupancy • Outdoor dining allowed • Outdoor capacity: 300 people maximum • Indoor and outdoor seating: 8 people per table maximum • 12:00 a.m. closing time	• Indoor dining allowed • Indoor capacity: not to exceed 50% maximum occupancy or 100 people, whichever is smaller • Indoor seating: 6 people per table maximum • Outdoor dining allowed • Outdoor capacity: 150 people maximum • Outdoor seating: 8 people per table maximum • 11:00 p.m. closing time	• Indoor dining allowed • Takeout highly recommended • Indoor capacity: not to exceed 25% maximum occupancy or 50 people, whichever is smaller • Outdoor dining allowed • Outdoor capacity: 75 people maximum • Indoor and outdoor seating: 6 people per party and per table maximum, limit 2 households • 11:00 p.m. closing time	• Indoor dining prohibited • Takeout highly recommended • Outdoor dining allowed • Outdoor capacity: 50 people maximum • Outdoor seating: 6 people per party and per table maximum, limit 2 households. • 11:00 p.m. closing time
Indoor Recreation and Fitness Establishments (includes gyms, fitness organizations, indoor recreational sports, indoor pools)	Capacity: Maximum 50% occupancy	Capacity: Maximum 50% occupancy or 100 people total, whichever is smaller	Capacity: Maximum 25% occupancy or 50 people total whichever is smaller	Prohibited

https://govstatus.egov.com/or-covid-19/

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COVID-19 Vaccine Update

mRNA vaccines

Pfizer

- mRNA codes for prefusion spike protein
- 2 doses 21 days apart
- Vaccine Effectiveness = 95%
- 162 cases of symptomatic disease in placebo; 8 in vaccine group
- 10 cases of severe disease; 9 in placebo, 1 in vaccine
- Effectiveness in those over 65 years old = 94%
- Requires ultra-cold transport

Moderna

- mRNA codes for prefusion spike protein
- 2 doses 28 days apart
- Vaccine Effectiveness=94.1%
- 185 cases of symptomatic disease in placebo; 11 in vaccine group
- 30 cases of severe COVID and 1 death, all in placebo group
- No difference in effectiveness by age or ethnicity
- Normal freezer temp

Non-Relicating Viral Vector Vaccine AstraZenica (AZD1222)

- How it works: It adds DNA that code for the SARS-CoV-2 spike protein into a weakened cold virus (Simian adenovirus) that infects human cells and hijacks the cellular mechanism to produce the spike protein.
- Phase 3 trial interim analysis of 131 cases (from press release 11/23/20) https://www.astrazeneca.com/media-centre/press-releases/2020/azd1222hlr.html
  - 11,000+ volunteers (2,744 in UK and 8,895 in Brazil) showed an average efficacy of 70%
  - 2 different dosing regimens showed between 62-90% effectiveness
  - No hospitalization or severe cases of COVID-19 in participants given AZD1222 vaccine
  - No serious safety events related to the vaccine have been confirmed. AZD1222 was well tolerated across both dosing regimens
  - 2 shots 28 days apart- Store in normal refrigerator

What is different AZ vs mRNA vaccine trials?

- Endpoints: AZ- used weekly swabs to detect infection whereas the mRNA trials looked at prevention of symptomatic disease. (AZ endpoint may be better at determining the ability to stop transmission)
- AZ used a meningitis vaccine for the placebo with the first immunization vs saline in the mRNA trials
- Cost: AZ $3-$4 /dose vs $20-$30/dose for the mRNA vaccines
- AZD 1222 was paused in July and September after 2 volunteers reported neurologic symptoms – investigators found no link to the vaccine. Like the mRNA vaccines the AZ company reports no serious safety events

Factors Affecting Timeline

- EUA submission (Pfizer-current, Moderna- 11/30/20 , AstraZenica – coming soon)
- Vaccines and Related Biological Products Advisory Committee (VRBPAC) – Advises the FDA- Meets December 8,9 and 10 to review the Pfizer EUA application and December 17 to consider the Moderna EUA
- Advisory Committee on Immunization Practices (ACIP) – Advises the CDC regarding the guidelines for usage. This process begins simultaneously while VRBPAC committee is deliberating but their guidelines come out after official FDA authorization.
- Western States Scientific COVID-19 Vaccine Safety Workgroup- Also will work concurrently with other committees
- Pfizer vaccine is scheduled to be shipped to Oregon December 15 and Moderna as early as December 21

Expectations and Hopes

- The US Government has purchased 100 million doses of each mRNA vaccine and 300 million of the AZ vaccine with an option to purchase more.
- Timeline is uncertain but supposedly the US will get these cumulative doses by April/May 2021
  - 22 million Pfizer and 18 million Moderna in December
  - 30 million Pfizer and 20 million Moderna in January
  - 35 million Pfizer and 25 million Moderna in February and March – This should take us through most of the 1a and 1b groups.
- Additional vaccines may speed this timeline.
  - AstraZenica- Will likely apply for an EUA soon
  - Jannsen- Will likely have interim analysis readout by early January which might let them apply for EUA

Phase 1a group for vaccination

- Frontline healthcare workers and staff- hospital based
- EMS providers who care for patients
- Residents and workers in long-term and congregate care settings (this will be done through the federal-pharmacy partnership)
- HCWs and staff in out-patient settings

- Do not give vaccine within 90 days of a known COVID-19 infection

Oregon's Initial Allocations and Implications

- Allocation is based on a pro rata (population based) basis. Oregon has roughly 2% of the US population
- It appears that with initial allocations of Pfizer and Moderna vaccines Oregon will be given enough vaccine to fully vaccinate over 100K HCWs and staff in December (though to fully vaccinate this group will extend into January)
- This number will be inadequate to cover all healthcare workers and others in group 1a
- Some sub-prioritization will be necessary
- Most, if not all, hospitals will likely receive the Pfizer ultra-cold mRNA vaccine
- A hub and spoke distribution method is being developed to address the ultra-cold requirement for the Pfizer vaccine

Provider Office Hours and Web Resources

Topic: **COVID-19 Vaccine Office Hours**

- **Monday Noon-1pm**
- **Wednesdays**
  - Dec 2, 2020 07:00 AM
  - Dec 9, 2020 07:00 AM
  - Dec 16, 2020 07:00 AM
  - Dec 23, 2020 07:00 AM
  - Dec 30, 2020 07:00 AM

- Please download and import the following iCalendar (.ices) files to your calendar system.
- Weekly: https://www.zoomgov.com/meeting/vJIsceurrDwtHFyV0M_Cmc4WB7OSsbRRd8k/ics?icsToken=98tyKuiurz0oGdaStx_BeI86FYn4bOnFlWVmjLprzDLaIC1QNjTUYc1xIbBNItyI
  - Join ZoomGov Meeting
  - https://www.zoomgov.com/j/1616232776?pwd=cGs0NDA4UjV3UVhyd3BvOFNKWDArUT09
  - Meeting ID: 161 623 2776
  - Passcode: 813375

https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/VACCINESIMMUNIZATION/IMMUNIZATIONPROVIDERRESOURCES/Pages/COVIDvaccine.aspx

References

- Press release for AstraZenica vaccine trial results https://www.astrazeneca.com/media-centre/press-releases/2020/azd1222hlr.html
- Moderna press release https://www.modernatx.com/cove-study
- ACIP slide review of Phase 3 trials https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2020-08/COVID-07-Oliver.pdf
- ACIP guidelines for Ethical framework for vaccine allocation MMWR%20Allocation%20guidelines%2011_23_20
- National Academies Framework for Equitable Allocation of Coronavirus Vaccine Framework%20for%20Equitable%20Allocation%20of%20COVID-19%20Vaccine_Highlights%20short%20summary
- Pfizer release https://www.Pfizer.com/science/coronavirus/vaccine

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References

- Moderna Primate Challenge study:
  - N Engl J Med 2020;383:1544-55. DOI: 10.1056/NEJMoa2024671
- Moderna mRNA 1273 Phase 1 Trial results
  - N Engl J Med 2020; 383:1920-1931
    DOI: 10.1056/NEJMoa2022483
- Moderna's press release on EUA submission: https://investors.modernatx.com/news-releases/news-release-details/moderna-announces-primary-efficacy-analysis-phase-3-cove-study

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Monoclonal Antibody Therapies

Bamlanivimab, Casirivimab + Imdevimab

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Monoclonal Antibody mAb

- Several manufacturers have produced neutralizing monoclonal antibodies (mAbs) targeting the SARS-CoV-2 virus
- mAbs are most effective when given early in the course of COVID-19 disease and help prevent progression
- Most target the coronavirus spike protein binding domain and prevent viral penetration into cells
- On November 9, 2020, Eli Lily received an Emergency Use Authorization (EUA) for its monoclonal antibody therapy, bamlanivimab
- On November 21, 2020 Regeneron received an EUA for its monoclonal antibody cocktail, Casirivimab and Imdevimab

SARS- CoV-2 Neutralizing Antibody LY-CoV555- NEJM, published10/28/20

Major Points:

- This phase 2 trial showed a decline in viral load after a single infusion with one of three doses of bamlanivimab.
  - This decline was only statistically significant in comparison to placebo for the 700-mg dose (i.e., the middle dose studied).
- Secondary outcomes:
  - On Day 29, the percentage of patients who were hospitalized with COVID-19 was 1.6% (5 of 309 patients) in the treatment group compared to 6% (9 of 143 patients) in the placebo group.
  - Among patients 65 years and older and those with BMI of 35 or more: the percentage of hospitalization was 4% in the treatment group (4 of 95) compared to 15% in the placebo group (7 of 48 patients)
- Safety profile showed 1 case of anaphylaxis and risk for infusion reaction.

Casirivimab + Imdevimab Combination

- The data for efficacy are scant and unpublished
  - Triple-arm randomized, double-blind placebo-controlled study with 799 non-hospitalized adults with mild to moderate COVID-19
    - 266 received single IV dose of 2,400 mg (1,200 of each Ab)
    - 267 received 8000mg (4000mg of each Ab) and 266 -placebo.
    - Doses given within 3 days of positive test.
  - The primary endpoint showed decreased viral load in treated groups compared with placebo
  - The reason for the EUA: In a small subset of the volunteers at high risk (78 patients), the treatment group had a lower risk of ER or hospital visits within 28 days of treatment
    - 3% in the treated group vs. 9% in the placebo group
  - Dose did not seem to make a difference with regards to viral load or ER/hospital visits, so the company is marketing the 2,400 mg dose.

EUA: Eligibility and Exclusions

Bamlanivimab and the combination of Casirivimab and Imdevimab have been authorized for treatment of **COVID-19 test-positive, symptomatic adults and children over age 12** who weigh at least 40kg:

- With mild to moderate disease
- Early in the course of the disease (w/i 10 days of symptom onset)
- With the following additional risk factors:
  - Body mass index (BMI) ≥35 or
  - Are ≥65 years of age or
  - Have a chronic medical condition from a predetermined list

These patients are **excluded** from treatment at this time:

- Patients hospitalized due to COVID-19, or
- Patients requiring oxygen therapy due to COVID-19, or
- Patients on chronic oxygen therapy who require an increase in baseline oxygen flow rate due to COVID-19

Administration of Monoclonal Therapies

- Must be administered intravenously over 1 hour
- Must be observed for 1-hour post-infusion to observe for adverse events
- May only be administered in settings in which health care providers have immediate access to medications to treat a severe infusion reaction, such as anaphylaxis, and the ability to activate the emergency medical system (EMS), as necessary.

Reservations and feedback

- Ongoing concerns about the **data informing both EUAs** – secondary analyses with only effect noted on hospitalizations in subgroups
- Ongoing challenges with **logistics** of delivering the product – infusion, time incurred, training of personnel
- Ongoing concerns about **alternatives** such as the vaccine in relationship to the availability of this product

Current Plan for Allocation

- Fulfill existing requests for doses by hospital systems across the state
- Target broader group of health systems including those representing outpatient settings including:
  - Home health agencies
  - Long term care facilities
  - Surge capacity facilities (SNFs)
  - Dialysis Units
- Continue consideration of the following in ongoing allocation:
  - Ensuring access for those disproportionately impacted by COVID-19
  - Ensuring geographic equity in distribution
  - Reducing hospital burden in heavily impacted regions

References:

- FDA Emergency Use Authorization: Eli Lilly and Company: Bamlanivimab: http://pi.lilly.com/eua/bamlanivimab-eua-fda-authorization-letter.pdf
- Fact Sheet for Providers: EUA of Bamlanivimab: http://pi.lilly.com/eua/bamlanivimab-eua-factsheet-hcp.pdf
- Fact Sheet for Patients, Parents and Caregivers: https://www.fda.gov/media/143604/download
- FDA FAQ regarding the EUA: https://www.fda.gov/media/143605/download
- NEJM Article https://www.nejm.org/doi/full/10.1056/NEJMoa2029849

References

- FDA Emergency Use Authorization: Regeneron: Casirivimab and Imdevimab https://www.fda.gov/media/143891/download
- Fact Sheet For Providers: EUA of Casirivimab and Imdevimab:https://www.regeneron.com/sites/default/files/treatment-covid19-eua-fda-letter.pdf
- FAQ's regarding Casirivimab and Imdevimab: https://www.fda.gov/media/143894/download
- Fact Sheets for Providers and Patients, Parents and Caregivers:
- Article on how Mab cocktails prevent résistance: *A. Baum et al., Science 10.1126/science.abd0831 (2020).*

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CDC Quarantine Guideline Update

CDC Quarantine Guideline Update

- December 2, 2020 Update
- https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html
- Quarantine is used to separate someone who might have been exposed to COVID-19 and may develop illness away from other people
- CDC currently recommends a quarantine period of 14 days. However, based on local circumstances and resources, the following options to shorten quarantine are acceptable alternatives.
  - 1) Quarantine can end after Day 10 without testing and if no symptoms have been reported during daily monitoring.
    - With this strategy, residual post-quarantine transmission risk is estimated to be about 1% (range 0.1%-10.6%)

CDC Quarantine Guideline Update

- *2) When diagnostic testing resources are sufficient and available,* then quarantine can end after Day 7 if a diagnostic specimen tests negative and if no symptoms were reported during daily monitoring. The specimen may be collected and tested within 48 hours before the time of planned quarantine discontinuation (e.g., in anticipation of testing delays), but quarantine cannot be discontinued earlier than after Day 7.
  - With this strategy, the residual post-quarantine transmission risk is estimated to be about 5% with an upper limit of about 12%.

- In both cases, additional criteria (e.g., continued symptom monitoring and masking through Day 14) must be met (see next slide)

CDC Quarantine Guideline Update

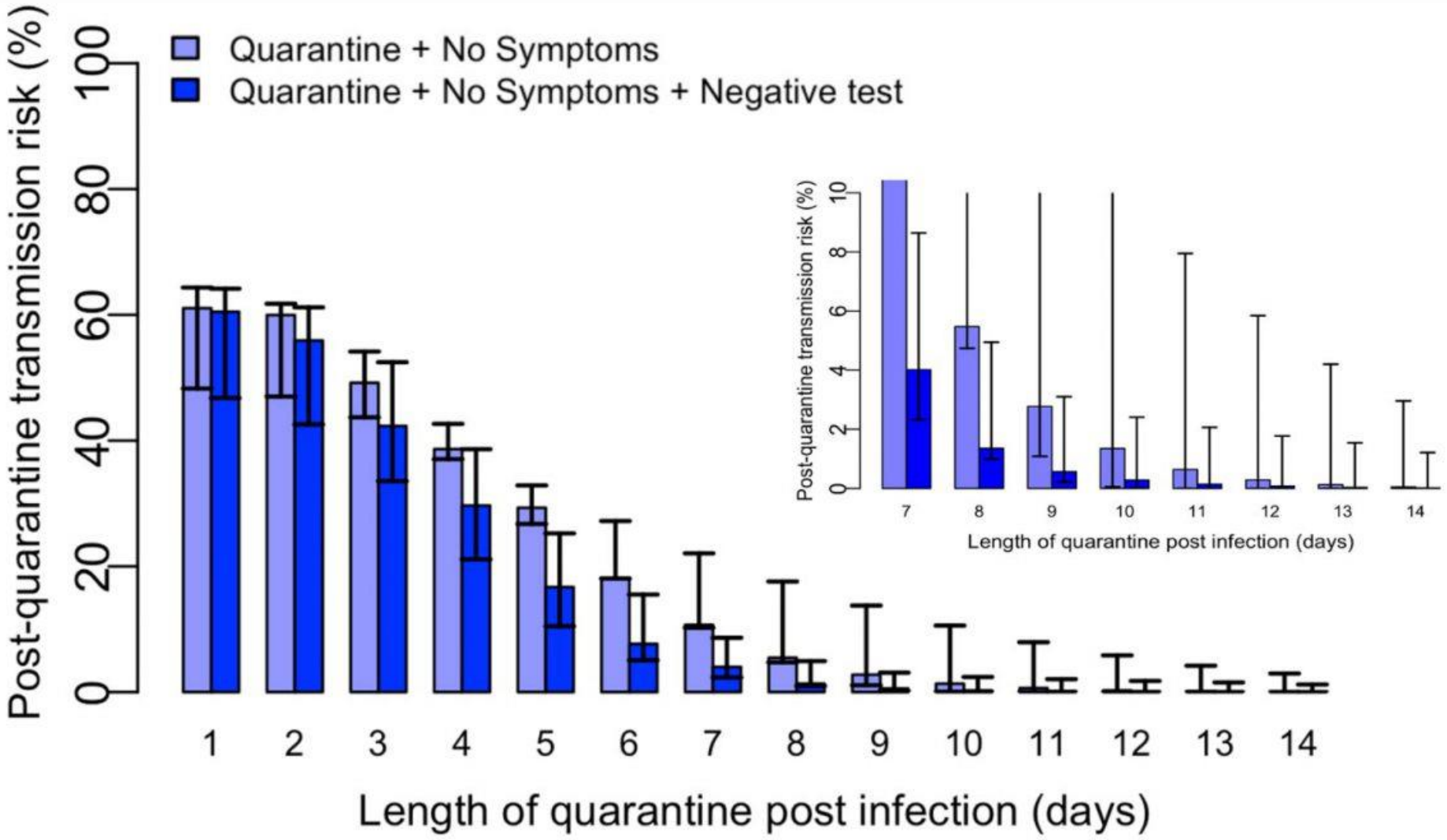
- Persons can discontinue quarantine at these time points only if the following criteria are also met:
  - No clinical evidence of COVID-19 has been elicited by daily symptom monitoring during the entirety of quarantine up to the time at which quarantine is discontinued; and,
  - Daily symptom monitoring continues through quarantine Day 14; and,
  - Persons are counseled regarding the need to adhere strictly through quarantine Day 14 to all recommended non-pharmaceutical interventions especially. They should be advised that if any symptoms develop, they should immediately self-isolate and contact the local public health authority or their healthcare provider to report this change in clinical status

CDC Quarantine Guideline Update

- Testing for the purpose of earlier discontinuation of quarantine should be considered only if it will have no impact on community diagnostic testing. Testing of persons seeking evaluation for infection must be prioritized.
- Persons can continue to be quarantined for 14 days without testing per existing recommendations. This option maximally reduces risk of post-quarantine transmission risk and is the strategy with the greatest collective experience at present.

CDC Quarantine Guideline Update

- Rationale:
  - Longer quarantine periods may result in personal/financial hardship that may reduce compliance
  - Implementing quarantines can also pose additional burdens on public health systems and communities, especially during periods when new infections, and consequently the number of contacts needing to quarantine, are rapidly rising
  - The prospect of quarantine may dissuade recently diagnosed persons from naming contacts and may dissuade contacts from responding to contact tracer outreach if they perceive the length of quarantine as onerous
- Evidence
  - Several pre-print articles referenced but not available for review


Quarantine + No Symptoms
Quarantine + No Symptoms + Negative test
Post-quarantine transmission risk (%)
0
20
40
60
80
100
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Length of quarantine post infection (days)
Post-quarantine transmission risk (%)
0
2
4
6
8
10
7
8
9
10
11
12
13
14
Length of quarantine post infection (days)

COVID-19 Literature Updates

Multisystem Inflammatory Syndrome in Adults (MIS-A)

- MMWR, October 9, 2020; Case Series of Multisystem Inflammatory Syndrome in Adults Associated with SARS-CoV-2 Infection — United Kingdom and United States, March–August 2020
  - N=27 patients
  - Working MIS-A case definition used in this report:
    - a severe illness requiring hospitalization in a person aged ≥21 years;
    - a positive test result for current or previous SARS-CoV-2 infection (nucleic acid, antigen, or antibody) during admission or in the previous 12 weeks;
    - severe dysfunction of one or more extrapulmonary organ systems (e.g., hypotension or shock, cardiac dysfunction, arterial or venous thrombosis or thromboembolism, or acute liver injury);
    - laboratory evidence of severe inflammation (e.g., elevated CRP, ferritin, D-dimer, or interleukin-6); and
    - absence of severe respiratory illness (to exclude patients in which inflammation and organ dysfunction might be attributable simply to tissue hypoxia).

Multisystem Inflammatory Syndrome in Adults (MIS-A)

- Ages 21-50; all but one of the patients with MIS-A described in this report belonged to racial or ethnic minority groups
- If patients had preceding COVID symptoms, MIS-A symptoms were reported 2-5 weeks later
- Antibody testing was required to identify SARS-CoV-2 infection in approximately one third of 27 cases.
- Treatment was with intravenous immunoglobulin, corticosteroids, or the interleukin-6 inhibitor tocilizumab
- 10 patients required intensive care
- 3 of 27 patients died
- Clinicians and health departments should consider MIS-A in adults with compatible signs and symptoms. These patients might not have positive SARS-CoV-2 PCR or antigen test results, and antibody testing might be needed to confirm previous SARS-CoV-2 infection

Upcoming Health Care Provider Sessions on COVID-19

Dec 3: OHA COVID-19 Information Session for HCPs*

Dec 10: Project Echo COVID-19 Response for Clinicians Part II^

Jan 6: OHA COVID-19 Information Session for HCPs*

***Oregon Health Authority COVID-19 Information Sessions for Oregon Health Care Providers**

- Session information, slides and recordings at: www.healthoregon.org/coronavirushcp

^OHSU's COVID-19 Response ECHO for Oregon Clinicians Part 2

- https://connect.oregonechonetwork.org/Series/Registration/278

Oregon Health Authority

Thank you