Oregon Public Health Division
System Assessment

Resources to Address Public Health Challenges in Oregon

September 2012

Acknowledgements

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Introduction

Background and purpose

In 2011, the Oregon Public Health Division (PHD) began working with partners to conduct a statewide community health assessment. As part of that assessment process, PHD published the State Health Profile, which describes the health status of Oregonians, discusses factors that contribute to the health challenges that Oregonians face, and identifies areas for improvement. For example, even with our low smoking rates, tobacco continues to be Oregon's number one preventable cause of death. Oregon's population is getting more obese, diabetes is affecting more Oregonians, and death from suicide now kills more people than motor vehicle crashes. Almost one in five homicides in Oregon is related to intimate partner violence. In addition, there are significant health inequities for specific populations, including racial and ethnic disparities, and those for people of low socioeconomic status. Addressing these opportunities to help our neighbors live healthier lives requires active, engaged participation from all of us to harness the innovation and resources we need to impact these complex issues.

This Public Health System Assessment report comprises the second component of Oregon's community health assessment, which is to describe state resources that can be mobilized to address identified health challenges. The report describes PHD programs and resources, and presents findings from a 2011 stakeholder survey of the strengths and challenges of the state's public health system. Other key resources that are an integral part of improving the health of Oregonians, including local health departments (LHD) and the health care system in Oregon, are also featured.

Framework

The statewide health assessment in Oregon has followed a modified version of the Mobilizing for Action through Planning and Partnerships (MAPP) model. MAPP is a community planning process developed by the National Association of County and City Health Officials (NACCHO) to identify strategic issues and recommendations to improve the public's health. This report addresses and expands on the third part of that model: a Public Health System Assessment that highlights the strengths and challenges of our current system. In addition, Oregon's Health System Transformation (Oregon-specific health care reform) is an important force that could affect the Oregon public health system. Therefore, we discuss health care reform as part of the fourth part of the MAPP model: a Forces of Change Assessment that identifies the political, social, and economic issues which could affect the Oregon public health system's ability to address health-related priorities.

Oregon's Public Health Infrastructure

The Oregon public health system comprises federal, state and local agencies, private organizations and other diverse partners working together to protect and promote the health of Oregonians. Oregon's Public Health Division is housed within the Oregon Health Authority (OHA), which is the organizational home for most of the state government's health care programs, including the Medical Assistance Programs (i.e., the Oregon Health Plan), Healthy Kids, Pharmacy Services, and Addictions and Mental Health Programs.

Two major advisory boards associated with Oregon's Public Health Division are the Oregon Health Policy Board (OHPB) and Oregon's Public Health Advisory Board (PHAB). The nine-member OHPB serves as the policy-making and oversight body for OHA. The Board is committed to providing access to quality, affordable health care for all Oregonians and to improving population health. OHPB was established through House Bill 2009, signed by the Governor in June 2009, to implement the health care reform provisions of that bill. In addition, PHAB advises OHA on policy matters specifically related to public health programs, provides a review of statewide public health issues, and participates in public health policy development. Numerous committees also inform the work of Oregon's Public Health Division.

Oregon Public Health Division's vision, mission, goals, and priorities

Oregon Public Health Division's vision is: lifelong health for all people in Oregon. Our mission is promoting health and preventing the leading causes of death, disease, and injury in Oregon.

Oregon's Public Health Division's five-year goals and priorities were established in fall 2011 during a strategic planning process that included staff and stakeholder input. Our first five-year goal is to make Oregon one of the healthiest states by focusing on the priority areas of 1) preventing tobacco use, 2) decreasing obesity and overweight, 3) reducing suicide, 4) preventing or reducing heart disease and stroke, 5) preventing family violence, and 6) increasing community resilience to emergencies. Our second five-year goal is to make Oregon's public health system into a model of national excellence by: 1) transforming the public health system through public health accreditation; 2) supporting Coordinated Care Organizations in achieving community health goals, 3) increasing use of health impact assessments; 4) maintaining excellence in epidemiology and surveillance; and 5) establishing mechanisms that ensure health in all policies (see figure next page).

PUBLIC HEALTH DIVISION

VISION: Lifelong health for all people in Oregon.

MISSION: Promoting health and preventing the leading causes of death, disease and injury in Oregon.

Preventing tobacco use

Decreasing obesity/overweight

Reducing suicide

Preventing or reducing heart disease and stroke, increasing survivability

Preventing family violence

Increasing community resilience to emergencies

Make Oregon one of the healthiest states

Partnership
Service Excellence
Health Equity
Leadership
Integrity

Make Oregon's public health system into a national model of excellence

Transforming the public health system through public health accreditation

Supporting CCOs in achieving community health goals

Increasing the use of health impact assessments as a tool in communities

Maintaining excellence in epidemiology and surveillance

Establishing mechanisms that ensure health in all policies

Funding overview

During 2011, the operating budget for the Public Health Division was approximately $313 million, of which the federal government supplied almost two-thirds; fees and service revenues one-fifth; and the Oregon state General Fund one-tenth.

Family health, including adolescent and women's health, student health, and nutrition services, accounted for almost 40% of expenditures (approximately $120 million). Disease prevention and epidemiology, including public health surveillance, disease reporting and investigation, accounted for

Public Health Division funding by source, Oregon, 2011		
Federal	$199,494,320	63.6%
State General Fund	34,020,643	10.9%
Tobacco Tax Revenues	14,957,182	4.8%
Other Funds	64,919,084	20.7%
Total	**$313,391,229**	**100%**

Sources: Oregon Public Health Division Director Presentation to Legislative Committee on Ways and Means, 2011.

almost 30% (approximately $89 million). Public health laboratory expenditures, community health planning and environmental public health accounted for less than 10% each of total expenditures.

Organizational structure

The Public Health Division has just completed a structural reorganization that realigns programs. As of July 1, 2012, the programmatic work of the Division is carried out by the Office of the State Public Health Director and three Centers organized by key functions — the Center for Prevention and Health Promotion, the Center for Health Protection, and the Center for Public Health Practice. (See Appendix I for the PHD organization chart.)

Office of the State Public Health Director

The Office of the State Public Health Director provides public health policy and direction to the public health programs within the Public Health Division, and ensures that the disparate programs within and outside the Division create an effective and coherent public health system for the state. This work includes extensive interactions with a range of state and local agencies and organizations, many of them outside the health care community. Leadership in the Office of the Director includes the State Public Health Director and Health Officer; the Deputy Public Health Director; and the State Epidemiologist and Chief Science Officer. Other programs and units include:

Emergency Medical Services and Trauma Systems Program
Develops and regulates emergency medical care in Oregon, ensures that responders are trained, vehicles are properly equipped, and that systems are functioning effectively.

Health Security, Preparedness and Response Program
Prepares for major acute threats and emergencies.

Policy and Planning Unit
Plans and coordinates public health policy development, internal quality improvement and performance, and budgeting.

Science and Evaluation Unit
Leads strategic initiatives that ensure excellence in epidemiology and the science of population health across the Division.

Social Marketing for Prevention Unit
Develops and implements social marketing contributions toward health and prevention; works closely with the OHA Communications Office.

Program Operations
Provides administrative services for the Public Health Division, including rulemaking, legislative support and coordination; risk management and safety; technology and support; volunteer coordination; business continuity planning; and informatics.

Center for Prevention and Health Promotion

The Center for Prevention and Health Promotion houses community-oriented prevention and clinical prevention services. This Center works with community partners to prevent disease and injury and promote good health, and is key to our work with Coordinated Care Organizations. Specific programs include:

Women's and Reproductive Health
Implements and supports women's health programs and policies, including reproductive health and birth control, diabetes screening, breast and cervical cancer screening, heart disease and stroke prevention, and rape prevention and education.

Adolescent Health and Genetics Program
Develops and coordinates school-based health center network, and programs that promote youth sexual health, nutrition and physical activity, adolescent health policy and worksite wellness. Monitors occurrence of genetically-related cancer and evaluates genetic cancer testing. Works on public policy related to Genetic Privacy and Research.

Maternal and Child Health Program
Develops and administers programs to improve health and well-being of pregnant women, infants and children and includes focus areas of perinatal health, infant and child health, oral health and newborn hearing.

Nutrition and Health Screening Program (WIC)
Develops and assesses programs focused on child growth and health, breastfeeding education and support, nutrition and physical activity, and promotion of a healthy lifestyle and prevention of chronic diseases including obesity. The program also makes referrals to other preventive health services and social services.

Health Promotion and Chronic Disease Prevention Program
Monitors occurrence of chronic diseases and their risk factors. Develops and administers programs and promotes policies to prevent chronic diseases and risk factors, such as asthma, arthritis, cancer, diabetes, heart disease and stroke, tobacco use, physical inactivity, and poor nutrition.

Injury Prevention and Epidemiology Program
Monitors occurrence and antecedents of unintentional and violent injuries in the state and works to prevent them. Monitors suicide occurrence and promotes interventions to prevent it. Promotes policies to prevent injuries.

Center for Public Health Practice

The Center for Public Health Practice houses programs that work with county public health departments, particularly related to communicable disease control.

Specific programs include:

Community Liaison
Provides support and oversight to local health departments.

Acute and Communicable Disease Program
Monitors communicable disease occurrence in the state, investigates communicable disease outbreaks and promotes policies that prevent communicable disease.

Immunization Program
Develops, implements and evaluates public and private efforts to provide immunizations to Oregonians.

Human Immunodeficiency Virus (HIV), Sexually Transmitted Disease (STD) and Tuberculosis (TB) Program
Monitors the occurrence of these diseases in the state, works to prevent their spread and provides direct services to low-income, HIV-positive people.

Health Statistics Program
Collects birth, death and marriage certificates and issues these to citizens upon request. Conducts the Oregon Healthy Teens and the Behavioral Risk Factor Surveillance System surveys.

Oregon State Public Health Laboratory
Provides laboratory services to state and local public health programs to support disease prevention and control. Conducts newborn screening for the Northwestern United States. Certifies Oregon clinical and environmental laboratories statewide.

Center for Health Protection

The Center for Health Protection's primary theme is programs that work with health care facilities and licensing, and environmental health and regulation. Bringing these programs together leverages public health's licensing and regulatory tools and provides a consistent, strong approach to protecting health. Programs in this Center touch every hospital, drinking water system, and restaurant in Oregon; they include:

Research and Education Services
Conducts studies and programs intended to help prevent or minimize human health effects from hazardous working conditions, injuries, exposure to hazardous waste, and other environmental dangers.

Food, Pool, Lodging Health and Safety
Conducts the food-borne illness protection program, including food service inspections and policy development. Conducts public pool and tourist licensing and certification.

Radiation Protection Services
Conducts programs to monitor and limit radiation exposures among workers and the public. Investigates accidental or intentional radiation-related incidents.

Drinking Water Services
Monitors and certifies Oregon's 3,500 public drinking water systems.

Health Care Regulation and Quality Improvement
Conducts state and federal Medicare certification of health facilities, providers and suppliers.

Oregon Medical Marijuana Program
Registers qualified patients who comply with program requirements to grow and use marijuana as an alternative medicine.

2012 Oregon Public Health System Assessment: Summary of Stakeholder Input

Background

The strength of our public health system in Oregon lies in our capacity to deliver the 10 Essential Public Health Services efficiently and effectively. Those services are:

1. Monitor health status to identify and solve community health problems.

2. Diagnose and investigate health problems and health hazards in the community.

3. Inform, educate, and empower people about health issues.

4. Mobilize community partnerships and action to identify and solve health problems.

5. Develop policies and plans that support individual and community health efforts.

6. Enforce laws and regulations that protect health and ensure safety.

7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.

8. Assure competent public and personal health care workforce.

9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.

10. Research for new insights and innovative solutions to health problems.

This report summarizes data collected from public health stakeholders in Oregon to ensure adequate delivery of these essential services by the Oregon Public Health Division.

Methods

In 2012, an online survey was conducted with a diverse group of 129 public health stakeholders (Appendices II – III), including county health department officials, health care providers, state health officials, and others, about the nature of the Oregon Public Health Division. These data were augmented by interviews conducted with four key informants within public health organizations. Data collection materials were based on the National Public Health Performance Standards Program (NPHPSP) to assess how well the 10 Essential Public Health Services are delivered within a state (Appendices IV – VI).

The survey gathered close-ended data on stakeholder awareness of the state's work in the essential services, and open-ended data on perceived strengths and gaps in our state system. Specifically, participants were asked the following questions about each of the 10 Essential Services:

1. To what extent are you aware of the state Public Health Division's activities in this area?

2. Please tell us about what works well at the state level for this essential service.

3. Please identify gaps you have observed or areas for improvement for this essential service.

Overall summary of findings

Awareness of the essential services

The first three essential services in public health shared a relatively high level of visibility and awareness, with about half of the respondents reporting they were "very or well aware" of these services. Because these essential services are related to epidemiology and health promotion, they tend to be the most visible activities in the Public Health Division and considerable resources, systems and media are focused on these activities. Survey respondents were least aware of research and evaluation activities at the state, indicating that communication and dissemination of information related to systematic and scientific inquiry performed at PHD can be improved.

Stakeholder feedback by 10 Essential Services

The amount of open-ended feedback given by stakeholders on each essential service tended to reflect the overall awareness of that particular service. Indeed, respondents offered the most feedback on the first three essential services, the services that also have the highest level of awareness. Notably, there was as much stakeholder feedback on the first three services as there was on the other seven essential services combined.

Quantity of feedback coded in open-ended survey responses by 10 Essential Services			
	What works	**Gaps**	**Totals**
1. Monitor health status	119	124	**243**
2. Diagnose and investigate	101	62	**163**
3. Educate and empower public	74	63	**137**
4. Mobilize partnerships	38	55	**93**
5. Develop policies and plans	42	38	**80**
6. Enforce laws and regulations	53	36	**89**
7. Linkage to health services	34	51	**85**
8. Assure competent workforce	45	50	**95**
9. Evaluation of health services	27	45	**72**
10. Research and innovation	17	33	**50**

Stakeholder feedback overall

The table below summarizes the topic areas that generated the most respondent input, feedback and discussion on what is working well and what the gaps are in our state public health system. The "what works" column can be interpreted as positive feedback from respondents while the "gaps" column can be taken as constructive criticism from stakeholders. Therefore, the table demonstrates the categories that have more positive or more negative comments overall.

Key themes

The content areas generating the **most stakeholder input** focused on resources, communication and Public Health Division collaboration with external partners. The considerable input from stakeholders on these specific topics could reflect the fact that more than one-third of the respondents were from county health departments where resources are tight, and communication and collaboration with the state are essential to their functions at the county.

Resources were identified as both a strength and a gap for the Public Health Division. Numerous specific services, data systems, and communication systems were mentioned as resources by stakeholders (see Appendix VI). Positive comments focused on tangible materials and products like reports and website materials, while lack of financial and programmatic resources was the main gap identified by stakeholders. The impact of funding challenges and limited resources was emphasized across the essential services, particularly for county health department

Frequency of categories of feedback identified in open-ended responses across the 10 Essential Services*			
Coding Category	**What works**	**Gaps**	**Category totals**
Resources	85	104	**189**
Communication	88	83	**171**
Collaboration - external	43	78	**121**
Support and technical assistance	80	23	**103**
Programs and systems	65	32	**97**
Competence	43	50	**93**
Leadership	13	63	**76**
Data	41	33	**74**
Disparities and equity	8	36	**44**
Reporting and regulation	17	17	**34**
Personnel	18	2	**20**
Enforcement	6	12	**18**
Policy	9	8	**17**
Collaboration - internal	6	6	**12**

* See Appendix V for a complete description of each coding category.

stakeholders. As one respondent noted, there has been a " ... *lack of funding for programs at the local level. Local Public Health staff is shrinking and cannot support all the programs and state mandates. ... Robbed Peter to pay Paul too many times, we can no longer do this.*" Key informants noted that the expert technical assistance received from the Public Health Division was a key strength, but they also echoed the limitation of shrinking financial resources. Key informants also called out the restrictions on federal funding issued "*in silos*" as a limitation to what the Division could do. However, one key informant called for leadership to think differently about funding —since the Division provides a service that benefits everyone, then everyone, including businesses, should pay for it, similar to Social Security.

Communication issues were raised equally by stakeholders as both strengths and areas for improvement. Many respondents pointed to positive experiences with specific programs and systems, as summarized by the stakeholder who reported that " ... *it is easy to call a person at the OHA-public health and ask specific question & get reliable answers.*" The availability of data at the state level — and often at the county level, as well — was consistently mentioned as a critical issue for stakeholders, with many indicating data-related communications as a consistent strength. Some, however, perceived communications to be inconsistent, program-specific, not timely (i.e., data out-of-date, or communications lagging far behind a decision being made), and difficult to access.
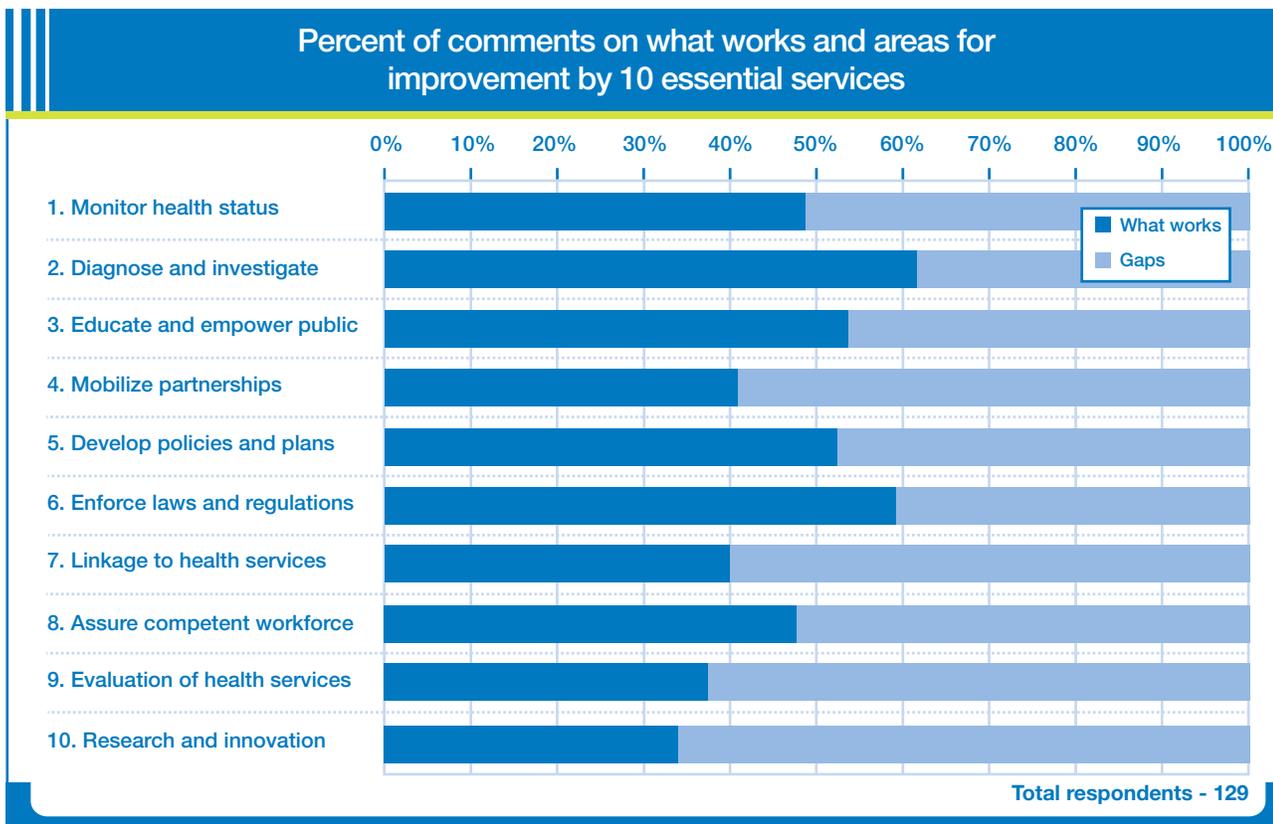
Several respondents felt that "*information flow is primarily one-way*" and that counties put considerable effort into reporting to state-level offices without having opportunities to offer genuine input to change policy or programmatic direction. A couple of key informants echoed this concern about "one-way" communications. One informant pointed out that, especially in rural areas with weak local media, local health departments can be swamped with messaging coming out of the metro area that may not be appropriate for the local area.

Stakeholders offered considerable input on the importance of **collaboration** and collaborative relationships, within the Public Health Division and OHA, but primarily with external partners. Stakeholders focused on the importance of collaboration as a way to maximize resources and manage limited resources more efficiently. Some respondents emphasized how well specific staff, programs, and partnerships in PHD work collaboratively with partners, as expressed by the stakeholder who said: "*There are individuals at PH who place a high value on collaboration and appreciate the value that outside partners bring.*" That sentiment, however, was not reflected in feedback about the larger state PHD.

Indeed, improving the state system's efforts to work collaboratively with external partners and to mobilize and support community partnerships was a gap identified consistently across the essential services. Part of genuine collaboration is valuing partners and having a two-way exchange of ideas and expertise, but the survey revealed the perception that

the Public Health Division does not value the expertise and ideas of local public health departments. This is a considerable area to address in future work. Key informants called out that collaboration, especially with local health departments, was a two-way street — that while LHDs get plenty of oversight from the state, they get relatively little chance to provide feedback. One key informant encouraged PHD to be proactive about partnerships, especially those outside of the usual ones, saying " ... *you can't sit in your office waiting for people to call.*" With respect to health care system partners, key informants pointed out that the Division must be thoughtful and proactive about bringing to the discussion explicit messages about the value that public health provides and the continual reminder that health is not the same as health care.

The graph below demonstrates the overall ratio within each essential service of positive to negative stakeholder feedback, in order to identify which topic areas or functions are working well and which areas offer the most opportunities for improvement. The services with the highest proportion of positive comments were diagnosis and investigation of health problems and health hazards in the community, and enforcement of laws and regulations that protect health. The services with the highest proportion of comments on areas for improvement were research and innovative solutions to health problems, along with evaluation of health services. Primarily, those gaps were related to the lack of stakeholder awareness of those activities and the need for additional communication related to state work in those areas.

Percent of comments on what works and areas for improvement by 10 essential services

Legend:
- What works
- Gaps

Categories:
1. Monitor health status
2. Diagnose and investigate
3. Educate and empower public
4. Mobilize partnerships
5. Develop policies and plans
6. Enforce laws and regulations
7. Linkage to health services
8. Assure competent workforce
9. Evaluation of health services
10. Research and innovation

Total respondents - 129

In addition, some categories demonstrate considerable differences in the **ratio of positive to negative feedback**. Three areas with the highest positive to negative feedback were **personnel, support and technical assistance**, and **programs and systems**. Data suggest that staff and programmatic activities are the greatest assets in the Public Health Division. When offering input on what works well at PHD, stakeholders focused on the accessibility and performance of individual staff and the help they provide, as well as the utility of specific programs and systems. Respondents offered numerous examples of different programs and systems that work well in PHD, "*providing training, education, and support to local staff*" and partners, emphasizing how "helpful and supportive" staff are within those programs. As one stakeholder said, "They always make time to talk with and advise local health department staff." That sentiment was echoed throughout survey results when talking about Public Health Division personnel, the support and technical assistance offered, and the programs or systems that comprise the Division. Key informants echoed this feedback lauding the collegiality and content area expertise of Public Health Division staff. One informant, though, called out the relative lack of managerial skill sets within Public Health Division staff, which was especially important given the level of PH oversight over local health departments. One informant lamented the lack of opportunity for local health departments to provide feedback for 360 degree performance reviews of Division staff.

Other topic areas had a much higher **ratio of negative to positive feedback**, though some of the categories, such as disparities and equity, did not receive much overall input. The four topics explored below are larger system issues, as opposed to feedback about Public Health Division programs or staff activities. Specifically:

- Stakeholders identified a number of **leadership issues** facing public health, as a state system and as a profession in a time of health reform and diminishing resources. One respondent stated, "*The state needs to take stronger leadership to advocate for the excellent work that public health is doing.*" Key informants specifically spoke of the need for public health leadership to highlight the value it provides to the public and that this should be clearly communicated to the public; for example, messages such as: public health means that you can drink your tap water. One informant said that public health needs to think of itself as a business; that is, that it provides a valuable service that benefits everyone and, therefore, everyone should pay for it. They noted that public health leadership is made up of academics who think the value of public health is self-evident, but that is not the way the public thinks. Key informants also saw the opportunity health care reform is providing leadership to re-invent public health, to think systemically and strategically about the mission of public health, and to focus on prevention and ensuring service provision in a shrinking financial climate by working collaboratively with a broad

base of "*out of the box*" partners such as education, business, transportation, and planning.

- Although respondents did not focus on issues of **disparities and equity** overall, proportionately this topic received more negative than positive comments, typically focused on the perception that Public Health Division is "*metro-centric*" and does not focus enough resources and attention on rural health issues in Oregon. Some key informants echoed the concern that the Public Health Division is focused too much on the Portland metro region. Some key informants highlighted a need for the Division to address disparities in health outcomes by race, ethnicity and socioeconomic status.

- Other respondents called for additional leadership around **enforcement** in public health with regard to reporting issues, violations of the Clean Indoor Air Act, and support for local public health authorities to enforce regulations.

- **Collaboration with external partners**, discussed earlier, was raised as an area of concern by respondents who also focused on issues of leadership and regional equity in public health activities, as demonstrated in the following quote: "*Local partners should be seen as stakeholders in this work and actively involved. Not just large counties, but small rural ones, as well.*" This issue was also highlighted by key informants — that especially in an environment of shrinking economic resources, the Public Health Division needs to be "*de-siloized*"

and "*out of the box*" in thinking about collaboration by viewing local health departments as an arm of their own goals and activities and by partnering with entities beyond health such as education, business, planning and transportation.

Conclusions

Public health stakeholders provided extensive feedback on awareness of the Public Health Division's activities in meeting the 10 essential services, what is working well, and areas for improvement. Overall awareness of state activities related to each essential service varied considerably. Stakeholders were most aware of PHD activities related to monitoring health, outbreak investigation, and health education services, while the least awareness was around research and innovation, and evaluation of health services.

Data suggest that staff and programmatic activities are the greatest assets in the Public Health Division and our statewide public health system. When offering input on what works well at the Division, stakeholders focused on the accessibility and performance of individual staff and the help they provide, as well as the utility of specific programs, systems, data and communications.

Data indicate the need for leadership to develop clear, consistent messages to highlight and communicate the value public health provides to the public. The Public Health Division's structural reorganization in July 2012 positions state public health to respond to these identified needs. Specifically, the introduction of a new social marketing officer and the expansion

of the State Epidemiologist position to include responsibility as the Public Health Division's Chief Science Officer will unify the organization's strategic direction and increase awareness of the varied and extensive services provided by the public health system in Oregon, including research, innovation, and health services evaluation.

Local Public Health System

The public health system in Oregon is a shared-services system among federal, state, and county governments. The federal government and the Oregon Public Health Division help counties fund local health departments (LHDs) to provide direct prevention interventions to communities, and in some cases, to also provide clinical interventions to vulnerable populations.

Overview of LHDs in Oregon

Oregon has 34 LHDs for its 36 counties. All except one LHD serve county jurisdictions; the remaining LHD serves a three-county rural jurisdiction.

A rural-urban divide and fairly large geographic size present challenges at the LHD level. Oregon is geographically the ninth largest state in the U.S., and the 29th most populous. About two-thirds of the 3.8 million persons living in the state reside within the nine counties located in the Willamette Valley. Most of the remaining 27 counties are fairly rural, and some are very sparsely populated. Harney County, for example, located in the southeastern part of the state, has an area of 10,228 square miles and only 0.75 people per square mile.
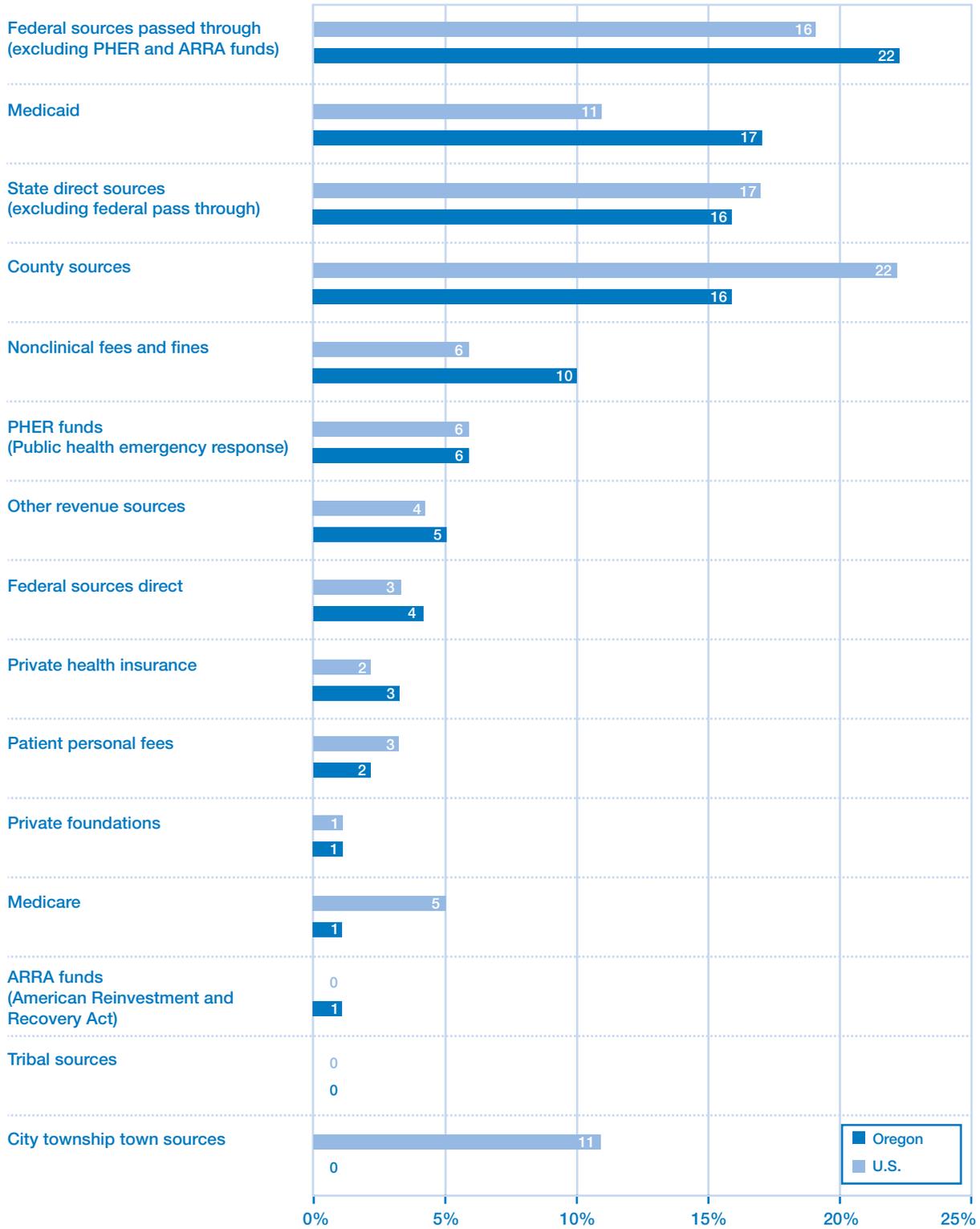
Below, we use information from a national survey conducted in 2010 by the National Association of County and City Health Officials (NACCHO) to describe the sources of revenue, personnel, and types of services at the 34 local health departments.
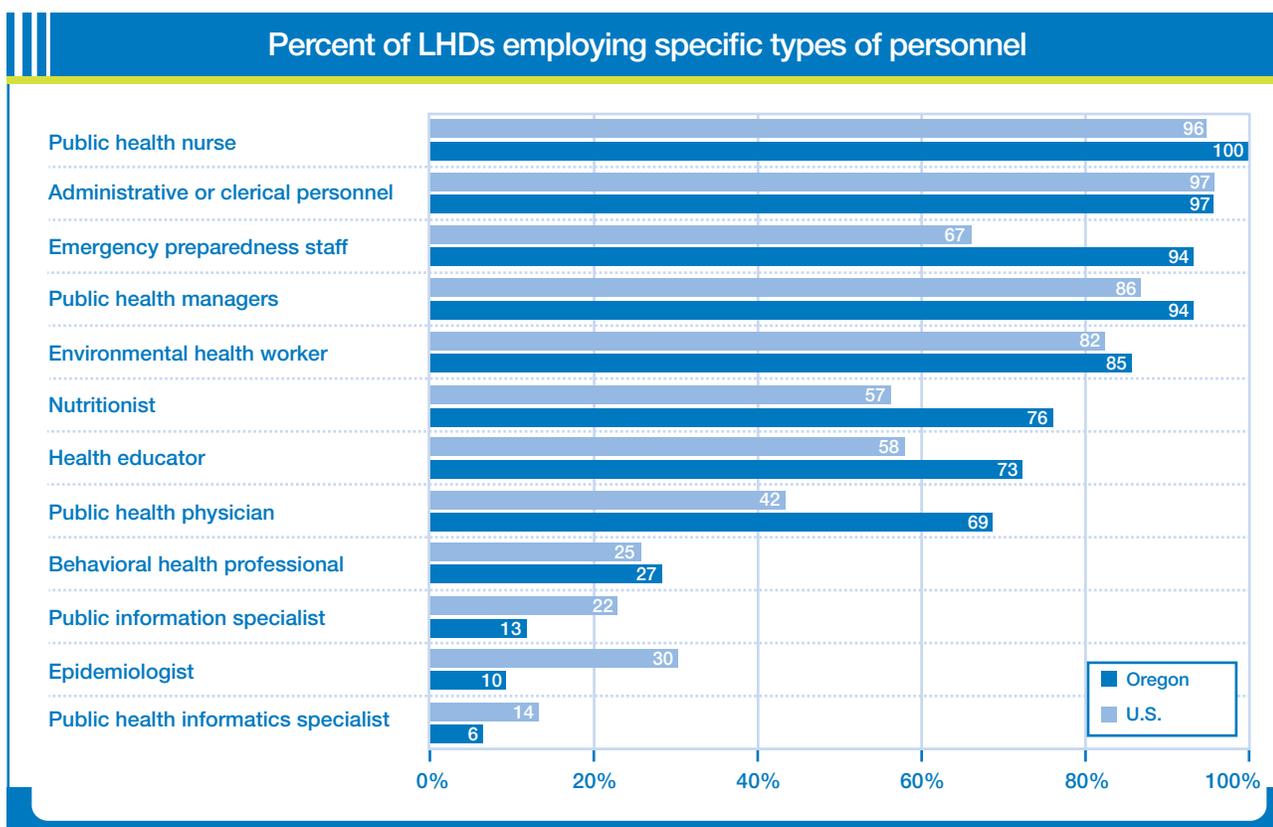
Sources of revenue

The total projected budget distributed to local public health agencies and Women, Infants and Children (WIC) clinics was $278 million for Fiscal Year 2012. Approximately $10 million of this total funds local health department activities. The balance pays for direct services to individuals. This revenue comes largely from federal, state and county sources, a pattern of funding very similar to LHDs across the nation.

LHD sources of revenue

Source	U.S.	Oregon
Federal sources passed through (excluding PHER and ARRA funds)	16	22
Medicaid	11	17
State direct sources (excluding federal pass through)	17	16
County sources	22	16
Nonclinical fees and fines	6	10
PHER funds (Public health emergency response)	6	6
Other revenue sources	4	5
Federal sources direct	3	4
Private health insurance	2	3
Patient personal fees	3	2
Private foundations	1	1
Medicare	5	1
ARRA funds (American Reinvestment and Recovery Act)	0	1
Tribal sources	0	0
City township town sources	11	0

Legend: Oregon, U.S.

X-axis: 0% 5% 10% 15% 20% 25%

Personnel

The graph below shows the percentage of all Oregon LHDs employing various types of personnel. All employ public health nurses and almost all employ emergency preparedness staff. Most employed environmental health workers, health educators, and nutritionists. The national pattern was roughly similar.

Percent of LHDs employing specific types of personnel

Personnel	U.S.	Oregon
Public health nurse	96	100
Administrative or clerical personnel	97	97
Emergency preparedness staff	67	94
Public health managers	86	94
Environmental health worker	82	85
Nutritionist	57	76
Health educator	58	73
Public health physician	42	69
Behavioral health professional	25	27
Public information specialist	22	13
Epidemiologist	30	10
Public health informatics specialist	14	6

Legend: Oregon, U.S.

Services

In Appendix VII, we list all services delivered by Oregon local health departments by type. The table below lists the most frequent activities and services provided. Adult and child immunization, communicable disease screening, treatment, and surveillance are among the most frequently provided services.

The table, "Percent of LHDs that perform selected activities and services, by those performed more frequently in Oregon than the U.S., NACCHO Profiles, 2010" on the next page shows those activities and services that Oregon LHDs performed more frequently than LHDs in the U.S. overall. Examples of activities and services that are much more likely to be performed in Oregon include campground and RV regulation, public drinking water regulation,

vital records, and sexually transmitted disease (STD) treatment.

Finally, the table, "Percent of LHDs that perform selected activities and services, by those performed more frequently in U.S. than Oregon, NACCHO Profiles, 2010" on the next page displays activities that are performed less frequently by Oregon LHDs than other LHDs in the U.S. overall. Examples of activities and services that are much less likely to be performed in Oregon than the U.S. include body art regulation, septic systems regulation, vector control, blood lead screening, and private drinking water regulation.

Percent of Oregon LHDs providing selected services, by most frequent services provided, NACCHO Profiles, 2010	
Service	
Adult Immunization	100%
Child Immunization	100%
HIV/AIDS Screening	97%
Other STDs Screening	97%
Other STDs Treatment	97%
Tuberculosis Treatment	97%
MCH Home Visits	97%
Tuberculosis Screening	94%
Tobacco Prevention	94%
Communicable/Infectious Disease Surveillance	92%
Vital Records	91%
Family Planning	91%
WIC	91%
Smokefree Ordinances Regulation	88%

Percent of LHDs that perform selected activities and services, by those performed more frequently in Oregon than the U.S., NACCHO Profiles, 2010			
Service	**OR**	**US**	**Difference**
Campground and RV Regulation	85%	42%	43%
Public Drinking Water Regulation	75%	36%	39%
Vital Records	91%	54%	37%
Sexually Transmitted Disease (STD) Treatment	97%	60%	37%
Family Planning	91%	55%	36%
Maternal and Child Health Home Visits	97%	62%	35%
HIV/AIDS Screening	97%	63%	34%
Other STD Screening	97%	65%	32%
Hotels/Motels Regulation	85%	53%	32%
Outreach and Enrollment for Medical Insurance (including Medicaid)	82%	50%	32%
WIC	91%	65%	26%
Smokefree Ordinances Regulation	88%	62%	26%

Percent of LHDs that perform selected activities and services, by those performed more frequently in U.S. than Oregon, NACCHO Profiles, 2010			
Service	**OR**	**US**	**Difference**
Body Art Regulation	0%	55%	-55%
Septic Systems Regulation	22%	68%	-46%
Vector Control Activities	13%	53%	-40%
Blood Lead Screening	25%	63%	-38%
Private Drinking Water Regulation	22%	60%	-38%
Home Health care	0%	24%	-24%
Food Processing Regulation	12%	31%	-19%
EPSDT (Early Periodic Screening, Diagnosis and Treatment)	22%	41%	-19%

Challenges at the local health department level in Oregon

As in other parts of the nation, Oregon has experienced funding cuts. In early 2012, the National Association of County and City Health Officials conducted a survey to assess reductions of staff and programs across the U.S. A total of 34% of Oregon LHDs lost full-time staff positions and an additional 19% were required to reduce staff time. The majority of LHDs (72%) made cuts to at least one program, and 30% made cuts to three or more programs.

For other information

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4. National Association of County and City Health Officials. The National Profile of Local Health Departments Study Series. Available from: *http:// www.naccho.org/topics/infrastructure/ profile/index.cfm*

5. National Association of County and City Health Officials. Local health department job losses and program cuts: State-level tables from January-February 2012 survey. Available from: *http:// www.naccho.org/topics/infrastructure/ lhdbudget/upload/State-level-tables- Final.pdf*

Health Care Delivery System

The health care delivery system in Oregon is multi-faceted, spanning a variety of organizations and agencies that can play important roles in health promotion and disease prevention, and can also support health care response in public health emergencies. These organizations provide outpatient services (including screening for and management of important disease risk factors), emergency evaluation and transport, acute hospital-based services, skilled nursing for those with chronic care needs, and end-of-life care.

Health care workforce

In 2011, Oregon had 9,953 licensed physicians, 4,873 (49%) of whom were primary care practitioners. The number of physicians per 10,000 population in Oregon (26.1) is similar to the rate in the U.S. as a whole (25.7). In 2011, the state had 30,960 registered nurses (80/10,000), somewhat lower than the representation in the U.S. (87.4/10,000) (1). Mid-level providers (nurse practitioners and physician assistants) are well integrated into Oregon's health care system. The state had 1,288 physician assistants (3.4/10,000) and 2,548 nurse practitioners (6.6/10,000) in 2011, giving Oregon higher representation for these professions than what is seen nationally (2.7/10,000 and 5.8/10,000, respectively). Further, the Oregon Nurse Practice Act (2) gives nurse practitioners broad discretion in diagnosis and prescribing, increasing the breadth of services they can provide independently.

Community-based health care resources in Oregon

There are hundreds of ambulatory care clinics throughout the state that provide primary care and specialty services. These include 26 federally qualified health centers, with 154 service delivery sites in 26 of Oregon's 36 counties, that provide care to many Oregonians of low income or who have limited English language proficiency (3). Sixty-four of these sites are run by county governments, which may facilitate implementation of public health-driven health promotion and disease prevention activities in populations that are disproportionately affected by chronic diseases and their risk factors. There are 73 home health agencies licensed to provide care in Oregon. Staff from these agencies can support the medical needs of ill persons residing in the community (4).

There are also 91 ambulatory surgery centers in the state. They provide non-hospital-based surgical services, including colonoscopy for colorectal cancer screening, and could potentially be used to expand capacity for acute care in situations of surge in health care utilization (4). Oregon has 137 skilled-nursing long-term care facilities with 12,231 available beds, which could potentially expand surge capacity for acute care (5).

In the area of health promotion and chronic disease prevention, the Public Health Division has established a strong partnership with the state's Medical Assistance Programs. Through this partnership, and work with the Public Employees' Benefit Board (PEBB), all Oregon Health Plan (Medicaid) recipients and all PEBB-covered government employees have access to comprehensive tobacco-cessation services, including nicotine replacement therapy, at no cost. In addition, Living Well with Chronic Conditions, an evidence-based chronic disease self-management program, has workshops available in 32 Oregon counties.

There are 750 retail pharmacies in Oregon that can meet the needs of community members for immunizations and medications (6). For those with addictions to alcohol and other drugs, there are 49 residential and 313 outpatient chemical dependency programs in the state. Oregon has 169 community-based mental health service facilities (7).

Hospice services are available in most regions of Oregon, with 54 licensed hospice agencies providing a full array of supportive, palliative care services for terminally ill Oregonians and their families (4, 8).

Emergency medical services systems in Oregon

Emergency medical services (EMS) play a critical role in transport of severely ill or injured patients for evaluation, stabilization and definitive care in the hospital setting. EMS includes dispatch centers (the initial 9-1-1 call point of contact), emergency medical response, field triage, treatment, stabilization, and transport. Oregon's 132 licensed Ambulance Service Providers also facilitate inter-hospital transfers, using 655 active transport units, including 25 for air transport (9). Such transfers can span hundreds of miles and are an integral part of a functional system for moving complex patients to higher levels of care.

Hospitals in Oregon

As shown on the map on page 29, there are 62 hospitals located in 32 of Oregon's 36 counties, with 6,381 staffed beds. This means Oregon has 17 beds/10,000 population, compared with 26 beds/10,000 for the nation as a whole. Of Oregon's hospitals, 25 are critical access facilities, rural community hospitals that are certified to receive cost-based reimbursement from Medicare. Nineteen of Oregon's hospitals have 100 or more staffed beds, and 11 of them are located outside of the Portland Metropolitan Area (10).

EMS and trauma system services in Oregon

The emergency medical services and trauma system represents an organized medical delivery system for injured patients at the local, regional and state levels to provide optimal coordinated care for patients. The Oregon Trauma System has seven regions. Each region is supervised by an Area Trauma Advisory Board (ATAB), which continuously evaluates trauma care in the region and pursues quality assurance and improvement in its jurisdiction.

The Oregon Trauma System provides the infrastructure for 44 trauma hospitals to provide varying levels of care and treatment. Trauma hospitals are designated by the state to provide trauma care and must meet specific benchmarks required for a given level of care. There are two Level I trauma centers (that is, the level providing the most intensive care) in Oregon. Both are located in Portland (ATAB 1). Four Level II trauma centers exist in Oregon (two in ATAB 2, one in ATAB 3 and one in ATAB 7). Three of the trauma regions do not have a Level I or II hospital. There are 13 Level III trauma centers and 26 Level IV trauma centers throughout the state. Two Level I hospitals provide specialty pediatric services and one hospital is a burn center (11). See page 30 for a map of the trauma systems.

Systems for response to evolving events of public health significance in Oregon

Oregon has established a robust communications infrastructure to provide up-to-date information on evolving events to public health decision makers and health care providers. Web-based systems like HOSCAP (to track hospital bed and resource availability) and HAN (to share real-time alerts and information with a broad health care and preparedness audience) can be used to support effective response. The state's new ESSENCE system provides near-real-time information on emergency department activity and can detect statistically significant changes in emergency department care for specific complaints at the facility and regional level.

There are several trained special medical response teams in the state. The SERV-OR health volunteer registry has more than 1,500 registrants who are trained to take part in event response. The Oregon Disaster Medical Team (ODMT) can deploy two to three teams of five health care professionals each to provide care in public health emergencies, and the Oregon National Guard's CRF-P unit can mobilize a multi-disciplinary health care team of 120 persons on short notice.

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5. Oregon Skilled Nursing Home Facilities. Accessed Jul. 16, 2012, at: *www.skillednursingfacilities.org/ directory/or/*

6. Oregon Board of Pharmacy, unpublished data.

7. Division of Addictions and Mental Health, Oregon Health Authority. Unpublished data.

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Oregon Association of Hospitals and Health Systems

Oregon Trauma System Hospitals

Level I
1. Legacy Emanuel Hospital & Health Center, Portland
2. Oregon Health & Science University, Portland

Level II
3. Good Samaritan Regional Medical Ctr., Corvallis
4. Sacred Heart Medical Center, Eugene
5. Salem Hospital, Salem
6. St. Charles Medical Center, Bend

Level III
7. Bay Area Hospital, Coos Bay
8. Good Shepherd Medical Center, Hermiston
9. McKenzie-Willamette Hospital, Springfield
10. Mercy Medical Center, Roseburg
11. Mid-Columbia Medical Center, The Dalles
12. Providence Hood River Hospital, Hood River
13. Providence Medford Medical Center, Medford
14. Rogue Valley Medical Center, Medford
15. Samaritan Albany General Hospital, Albany
16. Sky Lakes Medical Center, Klamath Falls
17. St. Anthony Hospital, Pendleton
18. St. Charles Medical Center, Redmond
19. Willamette Valley Medical Center, McMinnville

Level IV
20. Ashland Community Hospital, Ashland
21. Blue Mountain Hospital, John Day
22. Columbia Memorial Hospital, Astoria
23. Coquille Valley Hospital, Coquille
24. Curry General Hospital, Gold Beach
25. Grande Ronde Hospital, La Grande
26. Harney District Hospital, Burns
27. Lake District Hospital, Lakeview
28. Lower Umpqua Hospital, Reedsport
29. Mountain View Hospital, Madras
30. Peace Harbor Hospital, Florence
31. Pioneer Memorial Hospital, Heppner
32. Pioneer Memorial Hospital, Prineville
33. Samaritan Lebanon Community Hospital, Lebanon
34. Samaritan North Lincoln Hospital, Lincoln City
35. Samaritan Pacific Communities Hospital, Newport
36. Santiam Memorial Hospital, Stayton
37. Silverton Hospital, Silverton
38. St. Alphonsus Medical Center, Baker City
39. St. Alphonsus Medical Center, Ontario
40. Sutter Coast Hospital, Crescent City, CA
41. Three Rivers Community Hospital, Grants Pass
42. Tillamook County General Hospital, Tillamook
43. Wallowa Memorial Hospital, Enterprise
44. West Valley Hospital, Dallas

Out of State Resources:
SW Washington Medical Center, Vancouver, WA – Level 2
St. John Medical Center, Longview, WA – Level 3
St. Mary Medical Center, Walla Walla, WA – Level 3
Walla Walla General Hospital, Walla Walla, WA – Level 3
St. Alphonsus Regional Medical Center, Boise, ID – Level 2

Revised: February 1, 2012

Health Care Reform

Overview

Significant changes are occurring nationally and in Oregon in the way health care is delivered. Between 2003 and 2009, health care costs for Oregon families, business and government increased dramatically. The average deductible for families rose 94%, and state government faced a shortfall of $850,000 by 2011 for health care services (1).

In 2009, Oregon legislators began the process of health care reform. Specifically, they put state agencies related to health into a newly formed Oregon Health Authority. They also created the Oregon Health Policy Board (OHPB) to inform the reform process, as mentioned earlier.

In 2011, the Oregon Legislature took the next step in statewide reform, saying that the lack of basic health care coverage was harming not only health, but also job growth and economic development. House Bill 3650 created a new system in which health care services would be delivered to Medicaid/Oregon Health Plan clients by Coordinated Care Organizations or CCOs. Instead of a patient navigating numerous unconnected providers for physical, behavioral and oral health, the patient will now enter one coordinated network operating under a fixed budget. Each client will have a consistent and stable care team designed to provide independence, dignity and choice.

CCOs will shift focus and financial incentives away from emergency and acute health care toward prevention, early intervention and community-based management of chronic conditions. This will be a change from the current fragmented and costly system of 16 managed care organizations, 10 mental health organizations and eight dental care organizations that Medicaid/Oregon Health Plan clients must navigate.

The new approach to health care reflects the Triple Aim, a concept developed by the Institute for Healthcare Improvement (2). In this approach, OHA will address three dimensions:

- Improve the lifelong health of Oregonians.

- Increase the quality, reliability, and availability of care for all Oregonians.

- Lower or contain the cost of care so it is affordable to everyone.

The first dimension of the Triple Aim is especially important for the role of public health in health care reform, as it brings a population-based, public health perspective to the attention of thinkers accustomed to dealing with health and health care from the individual and clinical perspectives.

What does this mean for state and local public health?

From September 2010 to August 2011, the most populous county in the state conducted interviews with 50 public health stakeholders about local public health services, overall strengths, challenges, and recommendations for the system (3). Text from that report has been incorporated into this section, sometimes verbatim. Those interviews revealed a range of opinions about the changing role of public health in the face of health care reform, an increased focus on addressing the social determinants of health, and the current economic environment.

In many of the interviews, stakeholders discussed the way health care reform might impact the public health role with regards to shifts in cultural competence, prevention, data gathering practices, technology, electronic health records, evidence-based and best practices, and potential new partnerships. Many stakeholders recognized that the role of public health is in a transition period and next steps are unclear. One area of emphasis was the importance of planning for public health's future role and how important it is that we position ourselves as a system in a way that makes sense with the changing health environment. They also recognized, however, that public health needs "*to keep people energized about the change. Stay creative and nimble.*" Some expressed the opinion that public health-sponsored clinical care may no longer be needed or that it might look quite different. In fact, more recent developments indicate that local health department services might change. For example, the three large county health departments in the Portland metro area are participating in a CCO to deliver integrated medical, behavioral and oral health services to Medicaid/Oregon Health Plan clients. At this time, models are being created to address how some of the population-based functions of public health, such as maternal-child health home visiting, will be included in the new framework.

Many stakeholders discussed the opportunities reform presents to better define public health's role and relevance in a changing health environment. Examples of opportunities mentioned included:

- Public health should be "*at the table*" to show the importance of population health and prevention, to secure funding for public health services, including prevention, as well as other areas (e.g., data collection and education).

- Health care reform may enable public health to reorganize itself and focus on internal strengths (e.g., surveillance, evidence-based practices).

- Reform may provide opportunities for new partnerships. Stakeholders discussed the importance of collaborating with the new system, and bringing the public health perspective.

Challenges mentioned included concerns about the system changing too quickly and the need to consider it carefully, as well as the role of public health in chronic disease and addressing the social determinants of health.

The county's report also discusses other topic areas from these interviews that are

worth mentioning because of their potential implications for health care reform:

- Stakeholders mentioned the need to consider prevention on multiple levels, not only through clinical care, but also through local policies and the built environment.

- Stakeholders emphasized the need to incorporate equity into all public health work. This work needs to be driven by community needs identified through community health assessments, and must include culturally specific services and practices.

- Gaps in access to relevant data were mentioned, including data on program outcomes. One example stakeholders described was the disconnection between data systems from health care and public health organizations.

In summary, health care reform on state and national levels will give public health many opportunities to provide leadership and expertise. Public health has knowledge and expertise that helps keep people in the community healthy. Also, public health is uniquely skilled in engaging the community and addressing health equity issues. The following examples, outlined by the Oregon Conference of Local Health Officials (4), are some examples of the kinds of roles local and state public health will play in the new environment:

- State public health will continue to develop prevention programs funded by the Centers for Disease Control and Prevention. This practice ensures that

CCOs across the state have proven models for prevention.

- State public health will promote an appropriate level of standardization across the state in CCO prevention practices.

- State public health collects statewide indicators of the health of Oregonians, and these data will be crucial for CCOs in assessing costs and completing health improvement plans.

- State public health data also measure population health status over time for vulnerable populations, the uninsured and immigrant communities and assess gaps in insurance coverage, and will be used to measure the progress of CCOs in achieving better population health.

- Local and state public health routinely conduct community assessments and improvement strategies with community partners, and can support CCOs in identifying community needs.

- Local and state public health can help CCOs prioritize and direct resources to populations and areas where there is the most community need.

- CCOs can contract with local public health departments (LHDs) to provide preventive health services to the community, and ensure the health outcomes required of CCOs.

- LHDs can provide safety net services for populations without medical homes.

- LHDs have experience working with communities affected by health disparities, and using community health

workers and public health nurses to
address health risk behaviors.

References

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    transformation-0/how-we-got-here*

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    TripleAim/Pages/default.aspx*

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    lphschangeforces.pdf*

4. *http://www.oregonclho.org/health-care-
    reform.html*

Community Resources and Strengths

The public health and health care systems in Oregon are only one component of what keeps people healthy. Health is the result of many factors, including health care; education; the social and physical environment; economic opportunities; transportation; and political will for policies that promote health. These factors vary across communities. Data regarding the health of communities and the policies and circumstances that support health also vary widely. It is not possible to catalog in this report all of the factors in each community in Oregon that contribute to people's health and well-being. However, there are a variety of community resource lists and asset mapping products that outline resources in each community. For example, a built environment atlas has been developed for Multnomah County, the most populous county in the State. Individuals seeking services should contact local providers. Some examples are:

Local public health agencies, which serve as community resources for the protection and promotion of health, and prevention of injury, death and disease: *http://public.health.oregon.gov/providerpartnerresources/localhealthdepartmentresources/pages/lhd.aspx*

Coordinated Care Organizations, which are regional health organizations that provide direct services to Medicaid clients and serve as a nexus for achieving the Triple Aim: *https://cco.health.oregon.gov/Pages/Home.aspx*

211 info, which provides information and access to more than 5,000 community, health and social resources at no cost: *http://211info.org/*

Discussion

This report and the Oregon State Health Profile identify several opportunities for the Oregon Public Health Division (PHD). Health outcome areas in which the state could make substantial improvements include tobacco prevention and control; reduction of obesity and other chronic diseases; unintentional injury prevention in children and young adults; prevention of family violence; and suicide prevention. In addition, many disparities persist for specific populations in these and other health outcomes, such as teen pregnancy, low birthweight and infant mortality. Opportunities for improvement also exist in promoting environmental changes that support health and community resilience.

Oregon's health system transformation through creation of Coordinated Care Organizations (CCOs) offers important opportunities to adopt new approaches to address many longstanding health challenges in the state. CCOs, which will be accountable for measurable health outcomes and held to a global budget, should be incentivized to use prevention in reducing health care costs. CCOs, working with their health system partners to develop community health assessments, should strive to align public health knowledge and objectives with health care system resources. And, additional federal investments in the health system in Oregon to support the CCOs offer new sources of funding for the continued adoption of best and promising practices.

Systems issues in which Oregon has opportunities for improvement include ensuring strong public health leadership; enforcement of requirements to protect health; communicating the value of public health; and developing strong external partnerships. Funding for public health services also represents an opportunity for Oregon to make significant improvements. These are not simple challenges to address. However, public health accreditation, in addition to health system transformation, can serve as a lever to promote change and collaboration.

The uncertainty inherent in shifting to a new approach to local health and public health service delivery combined with declining local government budgets and shrinking federal grants for public health presents a risk to the public's health and the public health system. To address these challenges and opportunities, the Public Health Division has recently made significant organizational changes designed to better position the organization to rise to the opportunity of health systems transformation, respond to the changing needs of partners and the public in the current economic climate, and address gaps in its capabilities. The Public Health Division has also undertaken a strategic planning effort and is in the process of developing a comprehensive statewide health improvement plan that builds on prior health improvement planning work. Together, these assessments and plans suggest

a tremendous opportunity to improve the public's health and the health system in Oregon in the next decade.

Appendices

Appendix I: Public Health Division Organizational Chart

Appendix II: Stakeholder Survey Letter

Appendix III: Essential Services Survey

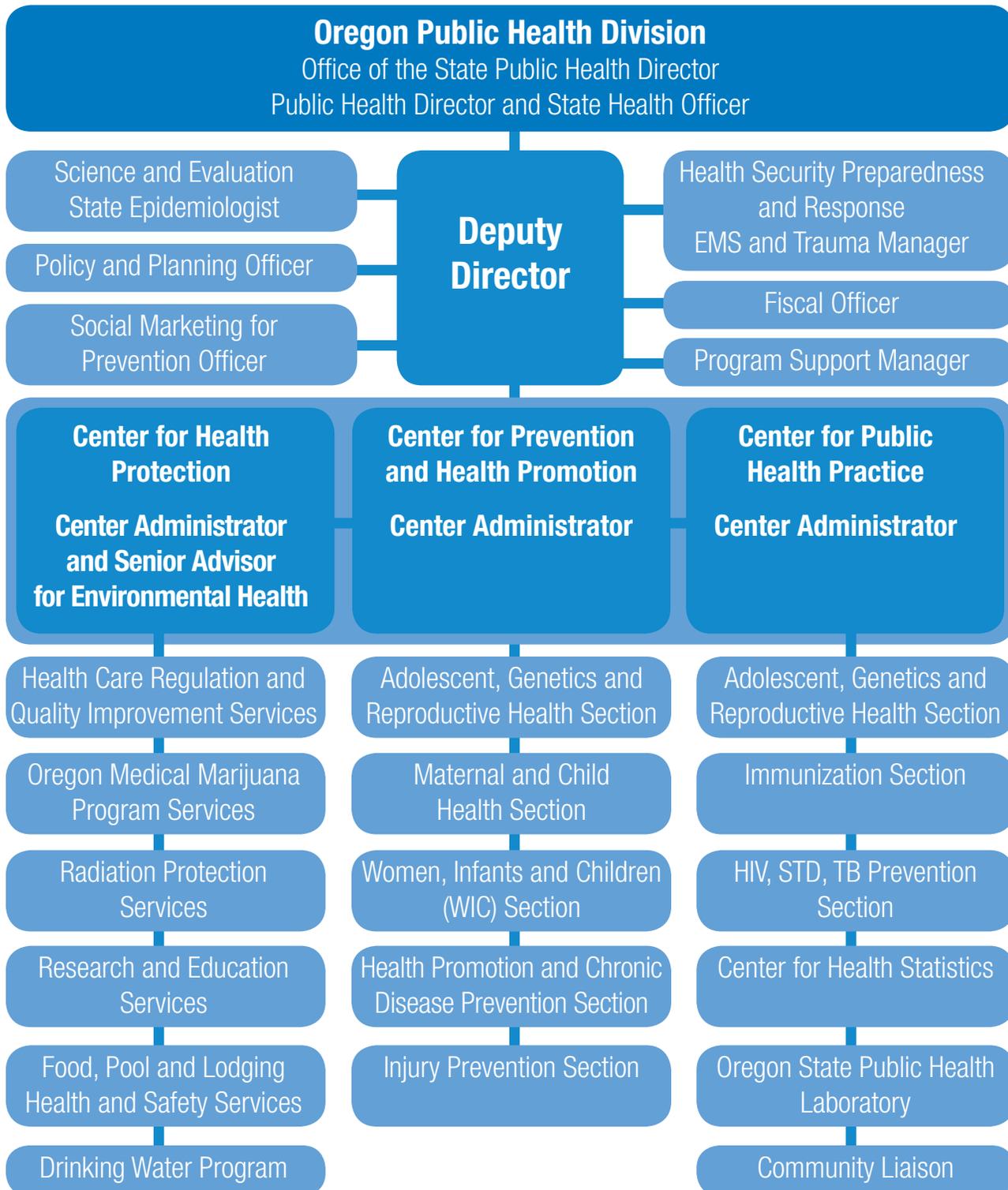**Appendix IV:** 10 Essential Public Health Services Assessment

Appendix V: Qualitative Coding Categories for Survey Responses

Appendix VI: Resources Identified by Stakeholders to Address Issues in the Public Health System in Oregon

Appendix VII: Percent of LHDs in Oregon that perform selected activities and services, NACCHO Profiles, 2010

Appendix I:

Public Health Division Organizational Chart

Oregon Public Health Division
Office of the State Public Health Director
Public Health Director and State Health Officer

Science and Evaluation
State Epidemiologist

Policy and Planning Officer

Social Marketing for
Prevention Officer

Deputy Director

Health Security Preparedness
and Response
EMS and Trauma Manager

Fiscal Officer

Program Support Manager

Center for Health Protection

Center Administrator and Senior Advisor for Environmental Health

Center for Prevention and Health Promotion

Center Administrator

Center for Public Health Practice

Center Administrator

Center for Health Protection	Center for Prevention and Health Promotion	Center for Public Health Practice
Health Care Regulation and Quality Improvement Services	Adolescent, Genetics and Reproductive Health Section	Adolescent, Genetics and Reproductive Health Section
Oregon Medical Marijuana Program Services	Maternal and Child Health Section	Immunization Section
Radiation Protection Services	Women, Infants and Children (WIC) Section	HIV, STD, TB Prevention Section
Research and Education Services	Health Promotion and Chronic Disease Prevention Section	Center for Health Statistics
Food, Pool and Lodging Health and Safety Services	Injury Prevention Section	Oregon State Public Health Laboratory
Drinking Water Program		Community Liaison

Appendix II:

Stakeholder Survey Letter

PUBLIC HEALTH DIVISION
Office of Disease Prevention and Epidemiology

John A. Kitzhaber, MD, Governor

Oregon
Health
Authority

800 NE Oregon St., Ste. 730
Portland, OR 97232-2195
Voice: 971-673-0982
FAX: 971-673-0994

April 24, 2012

Dear Colleagues,

We are asking for your assistance in filling out a survey that will evaluate PHD's performance in the 10 Essential Public Health Services.

https://www.surveymonkey.com/s/RV7CWS3

In September 2011, the Public Health Accreditation Board (PHAB) launched a national, voluntary accreditation program for state, local, territorial and tribal public health departments. The goal of the accreditation program is to advance the quality and performance of public health departments in order to improve the health of communities.

The Oregon Public Health Division (PHD) is proud to share our plans to apply for accreditation in fall 2012. We need your help, as a valued stakeholder in our public health system. Your input and feedback on the survey are critical in identifying our strengths and opportunities for improvement. The information you provide will support our state-level Community Health Assessment work. I have attached a fact sheet on Public Health accreditation and the 10 Essential Services, as reference.

If you have any questions, comments, or concerns please do not hesitate to contact Viktor Bovbjerg at Viktor.Bovbjerg@oregonstate.edu or Courtney Archibeque at archibec@onid.orst.edu. More information on public health accreditation may be found at www.phaboard.org.
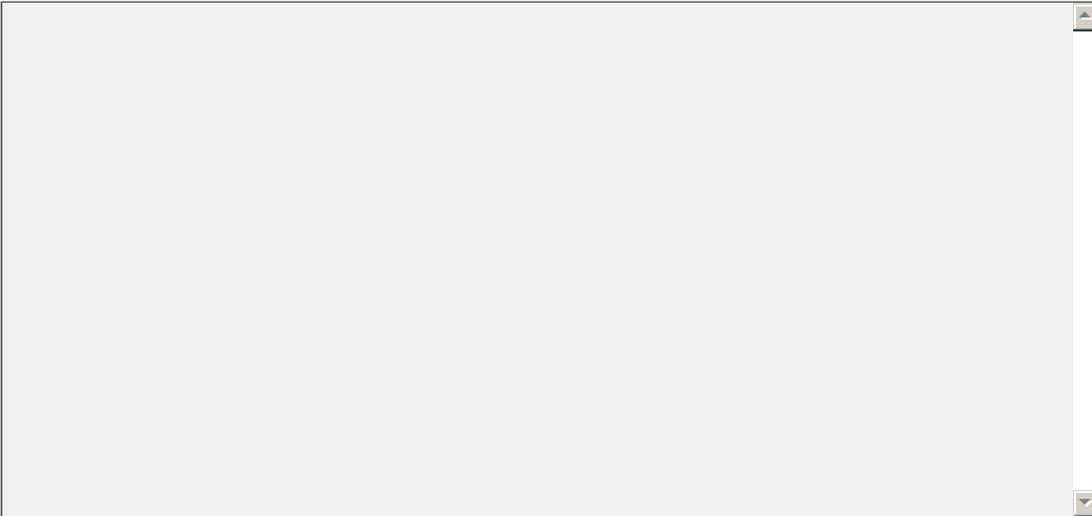
Thank you,

Katrina Hedberg, MD, MPH
Oregon State Epidemiologist

Appendix III:

Essential Services Survey

Essential Public Health Service Survey

We need your help! The Oregon Public Health Division is undertaking comprehensive quality assessment and improvement activities, in support of accreditation by the Public Health Accreditation Board. An important element of that effort is your opinions about what works in state public health currently, and what areas need improvement. Your responses are crucial to help shape the quality improvement efforts at the state level going forward.

This survey is modified version of a more technical evaluation method created by the National Public Health Performance Standards Program (NPHPSP) to evaluate how well the 10 Essential Public Health Services are being delivered within the state. This survey contains questions regarding the 10 Essential Services in both closed and open-ended format. The survey can take as few as 10 minutes, although each essential service question allows you the opportunity to expand on your responses considerably, so your completion time may vary. Your thoughtful and thorough answers are appreciated. Individual responses are anonymous, and will not be shared with Oregon Public Health Division staff. Aggregate (i.e. group) results will be included in the Oregon state health assessment.

Thank you for your time. If you have any questions, comments, or concerns please do not hesitate to contact Viktor Bovbjerg at Viktor.Bovbjerg@oregonstate.edu or Courtney Archibeque at archibec@onid.orst.edu

More information on public health accreditation may be found at http://www.phaboard.org/

Essential Public Health Service

#1 Monitor health status to identify community health problems.

This includes: Assessment of a statewide health status and its threats and the determination of health service needs; attention to the vital statistics and health status of specific groups that are at higher risk of heath threats than the general population; identification of community assets and resources, which support the SPHS in promoting health and improving quality of life; utilization of technology and other methods to interpret and communicate health information to diverse audiences in different sectors; collaboration in integrating and managing public health related information systems.

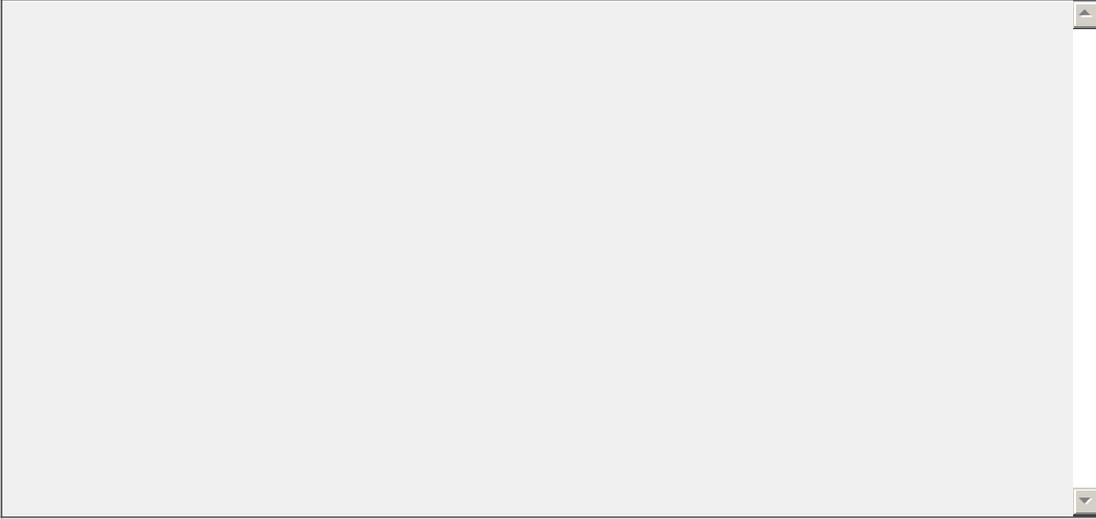### 1. To what extent are you aware of the state Public Health Division's activities in this area?

◯ Not at all

◯ A little

◯ Somewhat

◯ Well aware

◯ Very aware

2. Please tell us about what works well at the state level for this essential service:

3. Please identify gaps you have observed or areas for improvement for this essential service.
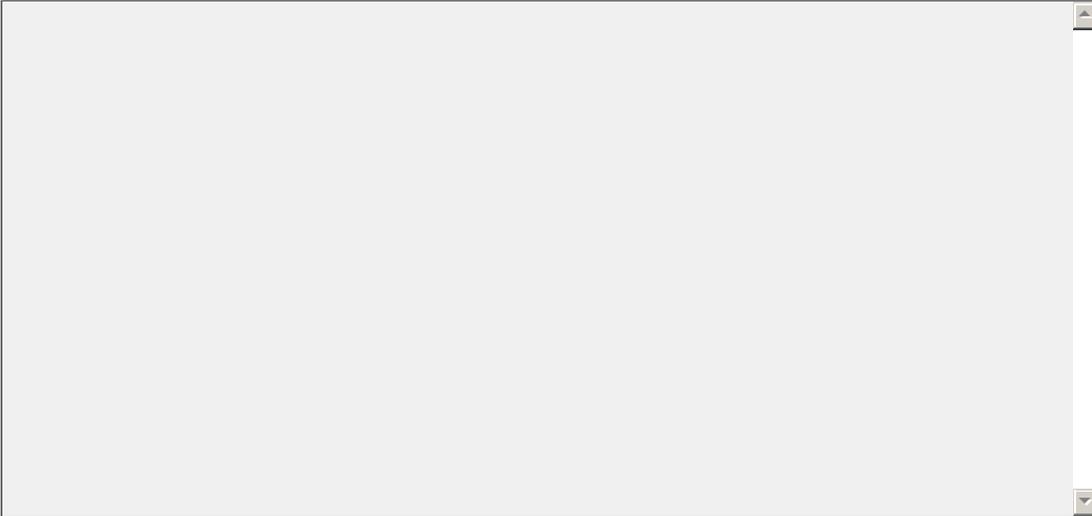
Essential Public Health Service

#2 Diagnose and investigate health problems and health hazards in the community.

This includes: Epidemiologic investigation of disease outbreaks and patterns of infectious and chronic diseases, injuries, and other adverse health conditions; Population-based screening, case finding, investigation, and the scientific analysis of health problems; Rapid screening, high volume testing, and active infectious disease epidemiology investigations.
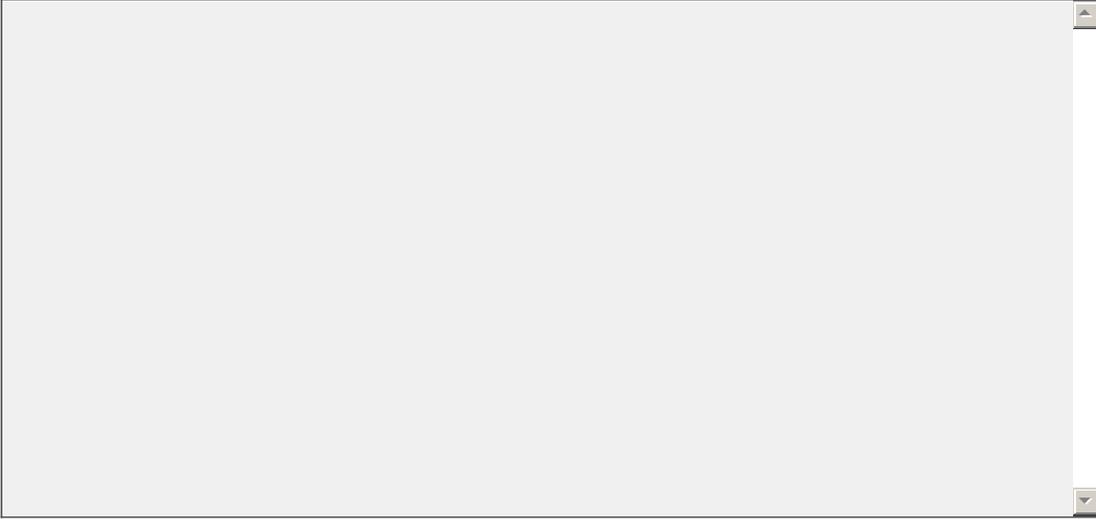
4. To what extent are you aware of the state Public Health Division's activities in this area?

○ Not at all

○ A little

○ Somewhat

○ Well aware

○ Very aware

5. Please tell us about what works well at the state level for this essential service:

6. Please identify gaps you have observed or areas for improvement for this essential service.
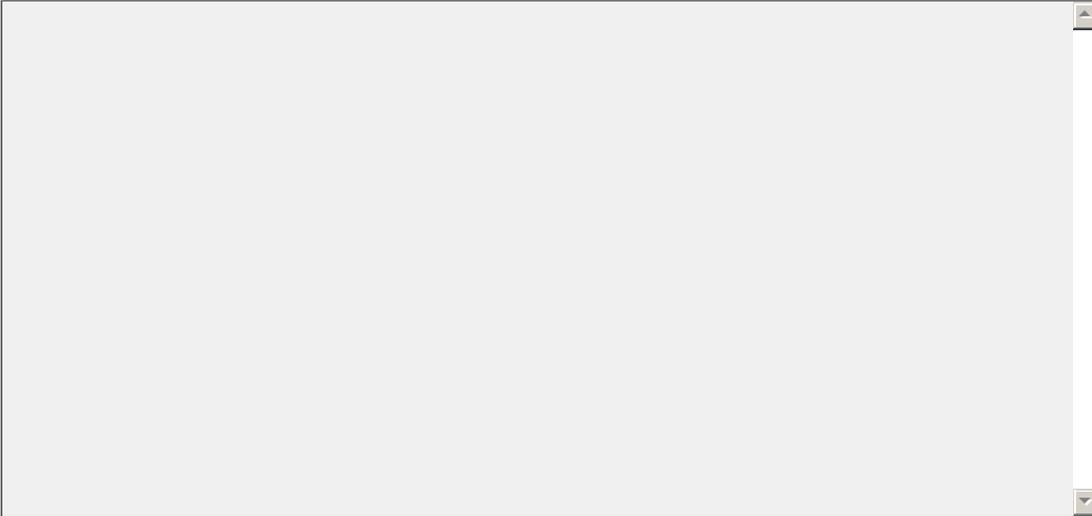
Essential Public Health Service

#3 Inform, Educate, and Empower People about Health Issues

This includes: Health information, health education, and health promotion activities designed to reduce health risk and promote better health; health communication plans and activities such as media advocacy and social marketing; accessible health information and educational resources; health education and promotion program partnerships with schools, faith communities, work sites, personal care providers, and others to implement and reinforce health promotion programs and messages.

7. To what extent are you aware of the state Public Health Division's activities in this area?

◯ Not at all

◯ A little

◯ Somewhat

◯ Well aware

◯ Very aware

8. Please tell us about what works well at the state level for this essential service:

9. Please identify gaps you have observed or areas for improvement for this essential service.

Essential Public Health Service

#4 Mobilize Partnerships to Identify and Solve Health Problems

This includes: The organization and leadership to convene, facilitate, and collaborate with statewide partners (including those not typically considered to be health-related) to identify public health priorities and create effective solutions to solve state and local health problems; the building of a statewide partnership to collaborate in the performance of public health functions and essential services in an effort to utilize the full range of available human and material resources to improve the state's health status; assistance to partners and communities to organize and undertake actions to improve the health of the state's communities.
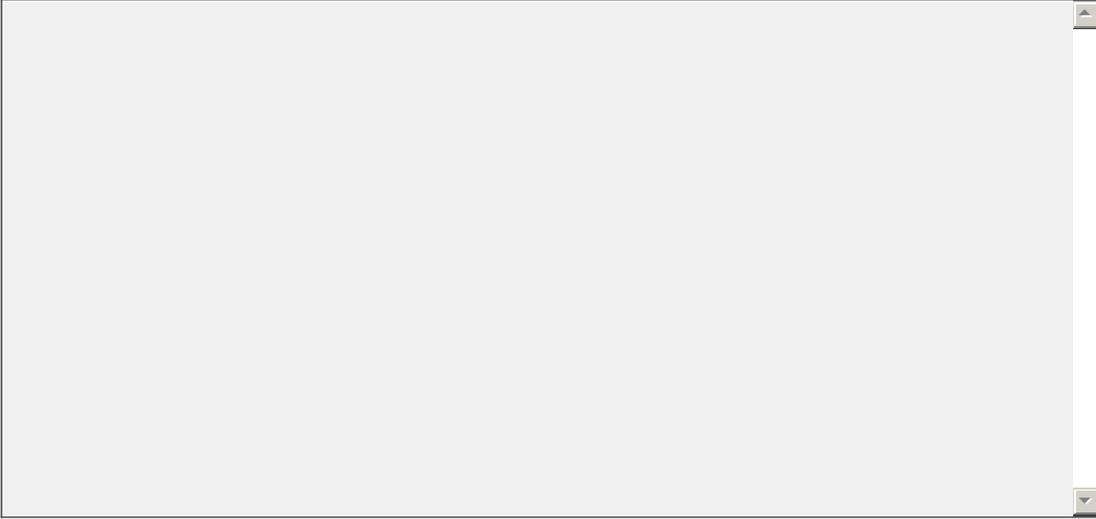
10. To what extent are you aware of the state Public Health Division's activities in this area?

◯ Not at all

◯ A little

◯ Somewhat

◯ Well aware

◯ Very aware

11. Please tell us about what works well at the state level for this essential service:

12. Please identify gaps you have observed or areas for improvement for this essential service.
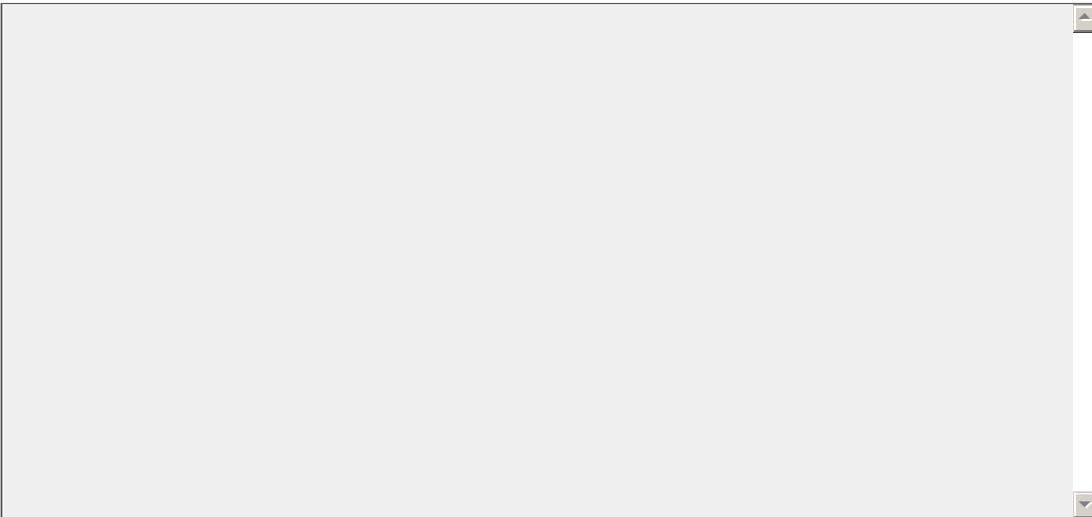
Essential Public Health Service

#5 Develop Policies and Plans that Support Individual and Statewide Health Efforts

This includes: Systematic health planning that relies on appropriate data, develops and tracks measurable health objectives, and establishes strategies and actions to guide community health improvement at the state and local levels; development of legislation, codes, rules, regulations, ordinances and other policies to enable performance of the Essential Public Health Services, supporting individual, community, and state health efforts; the democratic process of dialogue and debate between groups affected by the proposed health plans and policies is needed prior to adoption of such plans and policies.
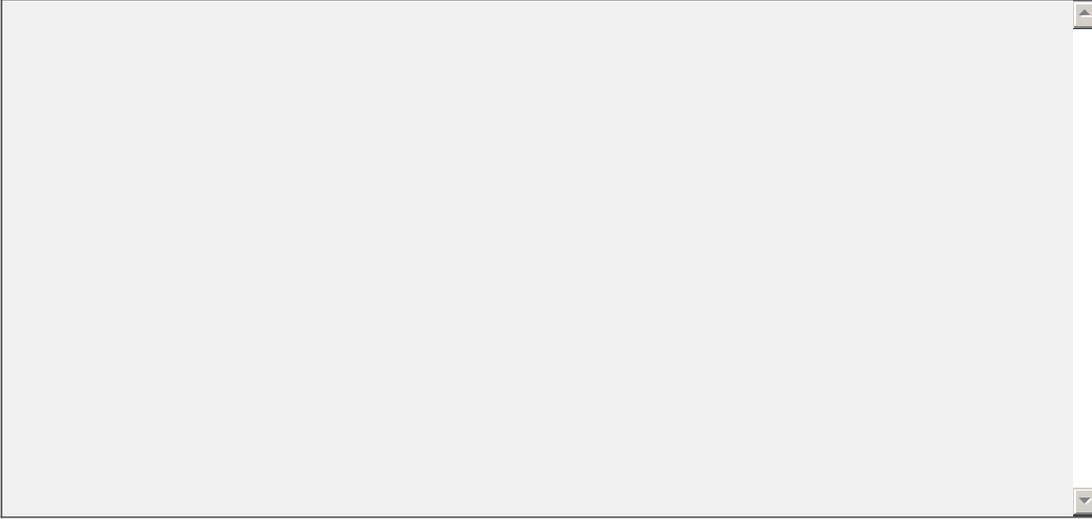
13. To what extent are you aware of the state Public Health Division's activities in this area?

◯ Not at all

◯ A little

◯ Somewhat

◯ Well aware

◯ Very aware

14. Please tell us about what works well at the state level for this essential service:

15. Please identify gaps you have observed or areas for improvement for this essential service.

Essential Public Health Service

#6 Enforce Laws and Regulations that Protect Health and Ensure Safety

This includes: The review, evaluation, and revision of laws and regulations designed to protect health and safety to assure that they reflect current scientific knowledge and best practices for achieving compliance; education of persons and entities obligated to obey or to enforce laws and regulations designed to protect health and safety in order to encourage compliance; enforcement activities in areas of public health concern, including, but not limited to the protection of drinking water; enforcement of clean air standards; regulation of care provided in health care facilities and programs; reinspection of workplaces following safety violations; review of new drug, biological, and medical device applications; enforcement of laws governing the sale of alcohol and tobacco to minors; seat belt and child safety seat usage; and childhood immunizations.

16. To what extent are you aware of the state Public Health Division's activities in this area?

◯ Not at all

◯ A little

◯ Somewhat

◯ Well aware

◯ Very aware

17. Please tell us about what works well at the state level for this essential service:

18. Please identify gaps you have observed or areas for improvement for this essential service.
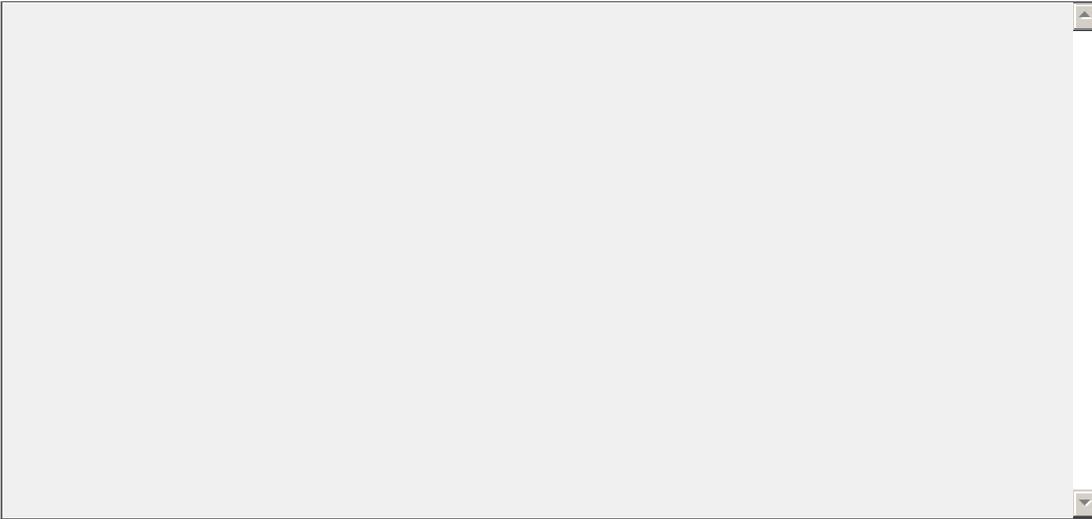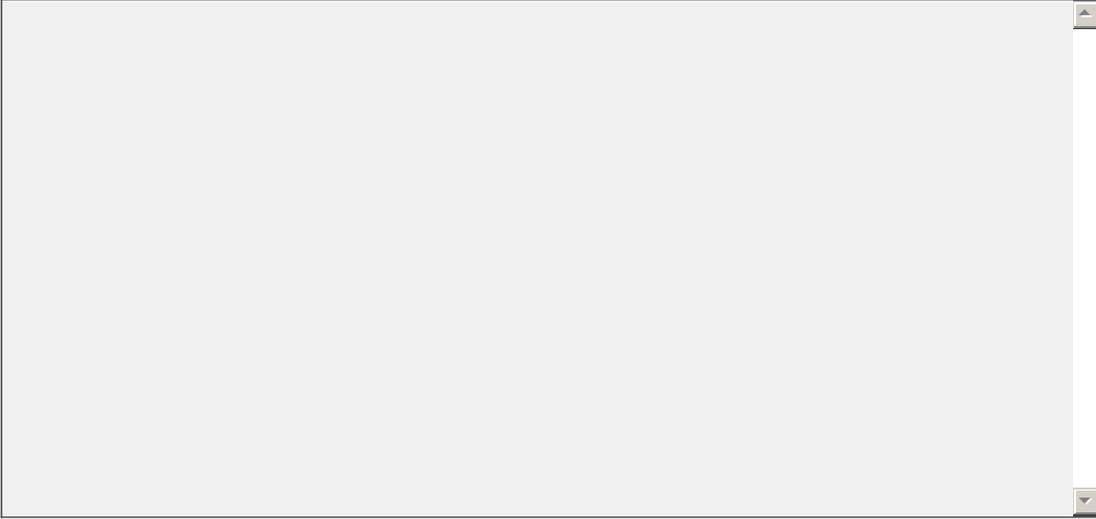
Essential Public Health Service

#7 Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable

This includes: Assessment of access to and availability of quality personal health care services for the state's population; Assurances that access is available to a coordinated system of quality care which includes outreach services to link population to preventive and curative care, medical services, case management, enabling social and mental health services, culturally and linguistically appropriate services, and health care quality review programs; partnership with public, private, and voluntary sectors to provide populations with a coordinated system of health care; development of a continuous improvement process to assure the equitable distribution of resources for those in greatest need.

19. To what extent are you aware of the state Public Health Division's activities in this area?

○ Not at all

○ A little

○ Somewhat

○ Well aware

○ Very aware

20. Please tell us about what works well at the state level for this essential service:

21. Please identify gaps you have observed or areas for improvement for this essential service.

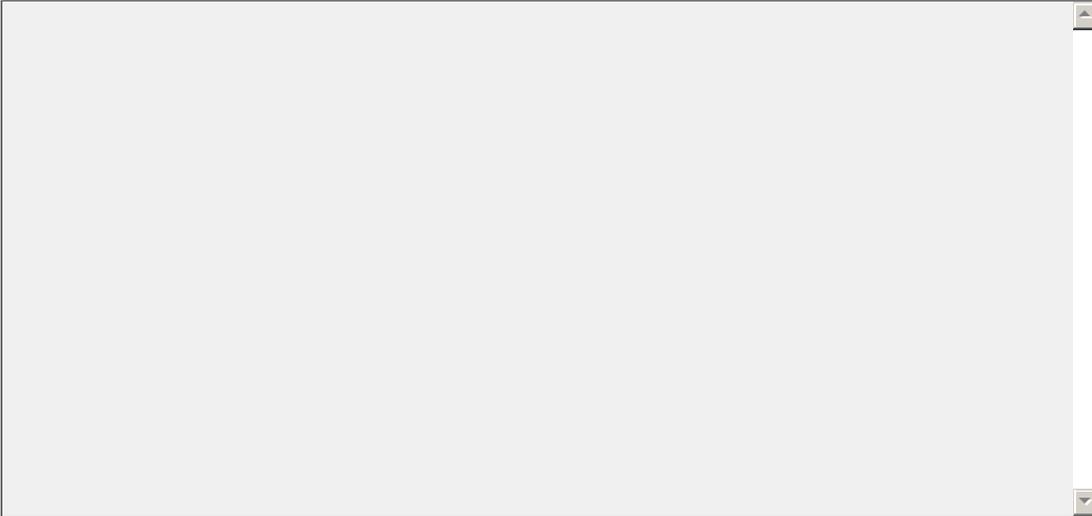## Essential Public Health Service

#8 Assure a Competent Public and Personal Health Care Workforce

This includes: Education, training, development, and assessment of health professional - including partners, volunteers and other lay community health workers - to meet statewide needs for public and personal health services; efficient processes for credentialing technical and professional health personnel; adoption of continuous quality improvement and life-long learning programs; partnerships with professional workplace development programs to assure relevant learning experiences for all participants; continuing education in management, cultural competence, and leadership development programs.
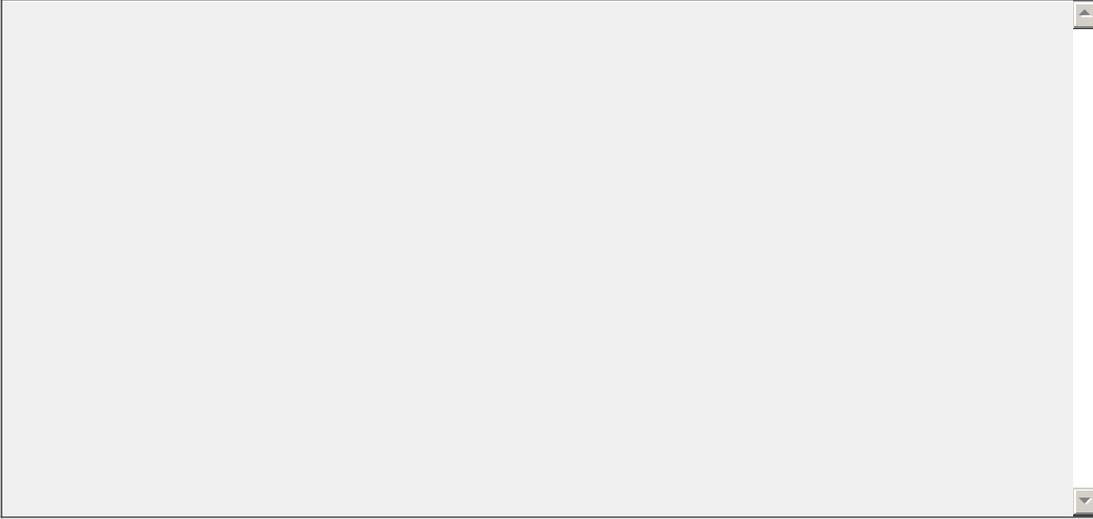
22. To what extent are you aware of the state Public Health Division's activities in this area?

◯ Not at all

◯ A little

◯ Somewhat

◯ Well aware

◯ Very aware

23. Please tell us about what works well at the state level for this essential service:

24. Please identify gaps you have observed or areas for improvement for this essential service.

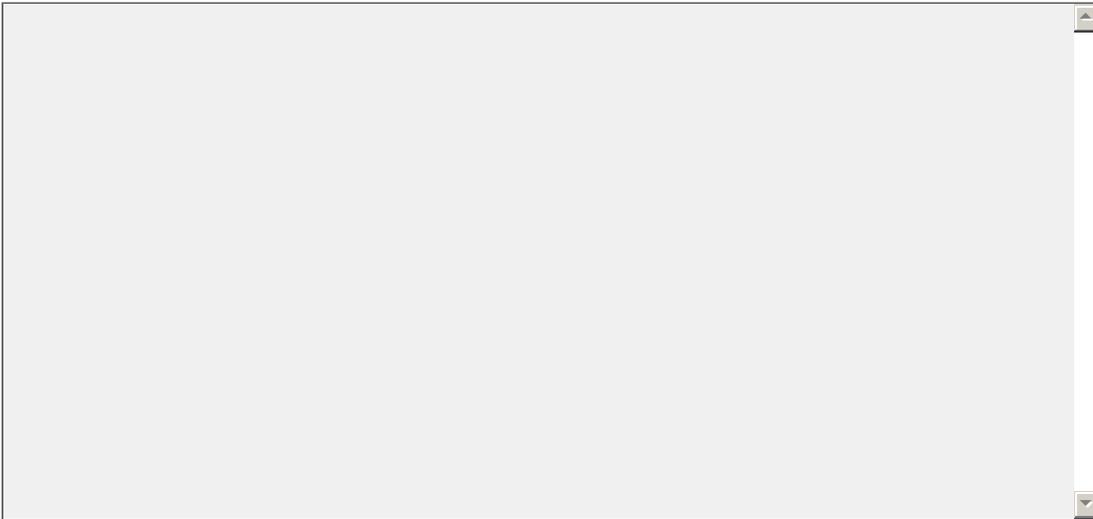## Essential Public Health Service

#9 Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services

This includes: Evaluation and critical review of health program, based on analyses of health status and service utilization data, are conducted to determine program effectiveness and to provide information necessary for allocating resources and reshaping programs for improved efficiency, effectiveness, and quality; assessment of and quality improvement in the State Public Health System's performance and capacity.
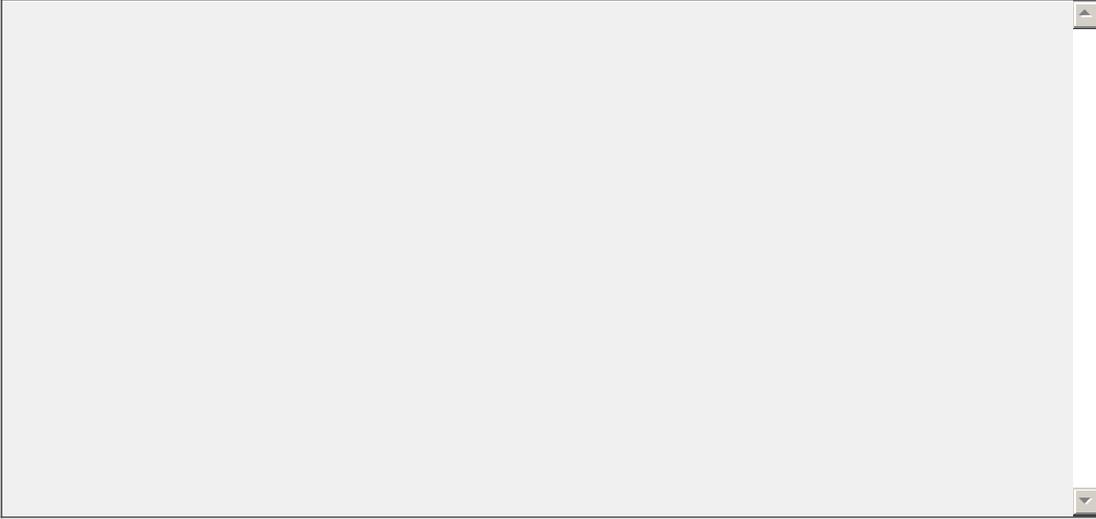
25. To what extent are you aware of the state Public Health Division's activities in this area?

◯ Not at all

◯ A little

◯ Somewhat

◯ Well aware

◯ Very aware

26. Please tell us about what works well at the state level for this essential service:

27. Please identify gaps you have observed or areas for improvement for this essential service.

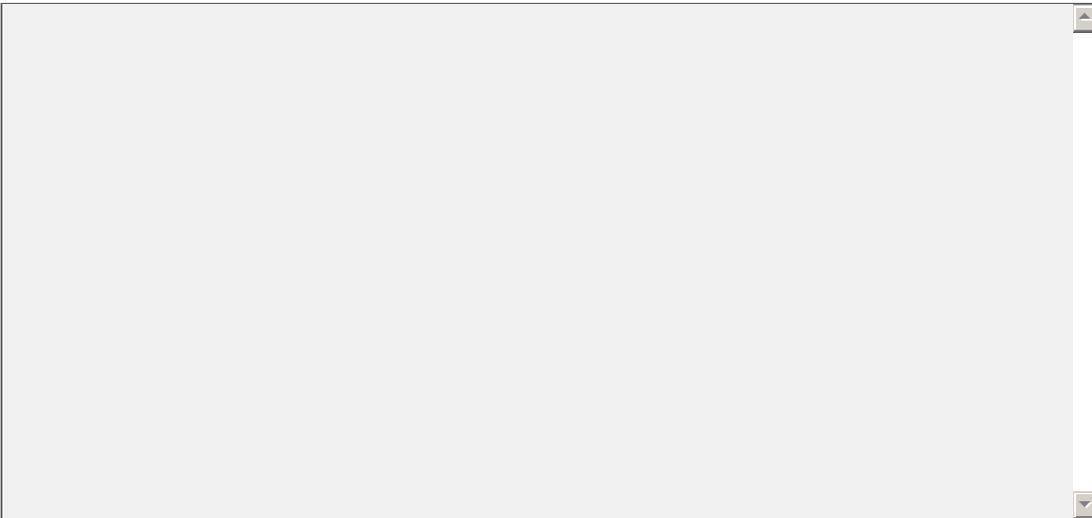## Essential Public Health Service

#10 Research for New Insights and Innovative Solutions to Health Problems

This includes: A full continuum of research ranging from field-based efforts to foster improvements in public health practice to formal scientific research; linkage with research institutions and other institutions of higher learning; internal capacity to mount timely epidemiologic and economic analyses and conduct needed health services research.
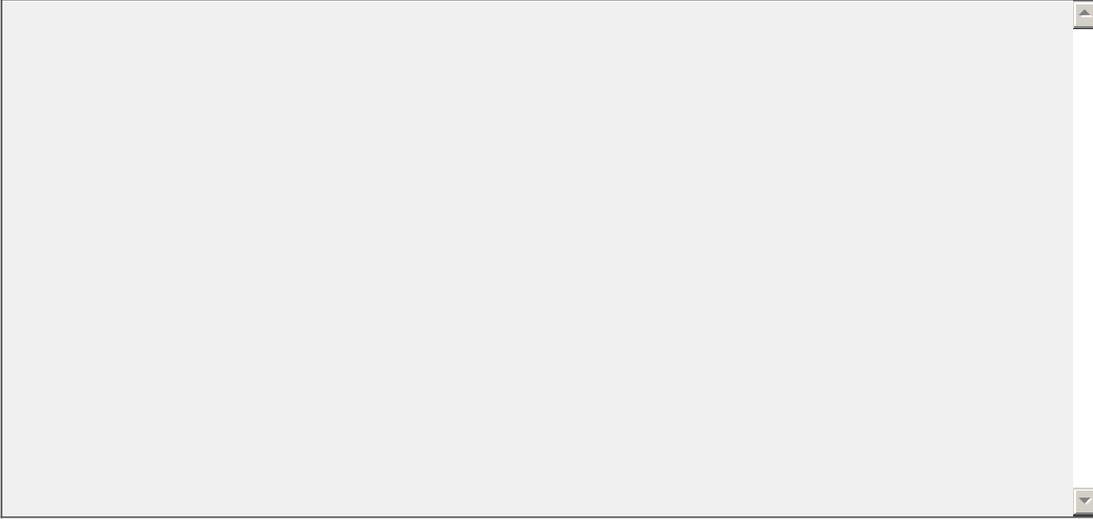
28. To what extent are you aware of the state Public Health Division's activities in this area?

- ( ) Not at all
- ( ) A little
- ( ) Somewhat
- ( ) Well aware
- ( ) Very aware

29. Please tell us about what works well at the state level for this essential service:

30. Please identify gaps you have observed or areas for improvement for this essential service.

31. My primary affiliation as it relates to public health activities is:

○ Local (county or tribal) health department

○ Not-for-profit organization

○ Healthcare provider

○ Healthcare administrator

○ State Public Health Division staff

○ Other state office

○ State legislature (e.g. elected official, staff)

○ University/education

Appendix IV:

10 Essential Public Health Services Assessment

2012 State of Oregon Public Health System Assessment: Summary of Stakeholder Input

Background

The strength of our public health system in Oregon lies in our capacity to deliver the ten Essential Public Health Services efficiently and effectively. Those services are:

1. Monitor health status to identify and solve community health problems.

2. Diagnose and investigate health problems and health hazards in the community.

3. Inform, educate, and empower people about health issues.

4. Mobilize community partnerships and action to identify and solve health problems.

5. Develop policies and plans that support individual and community health efforts.

6. Enforce laws and regulations that protect health and ensure safety.

7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.

8. Assure competent public and personal health care workforce.

9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.

10. Research for new insights and innovative solutions to health problems.

This report summarizes data collected from public health stakeholders in Oregon to ensure adequate delivery of these essential services by Oregon Public Health (PH).

Methods

In 2012, on online-survey was conducted with public health stakeholders. Additionally, interviews were conducted with key informants within public health organizations about the nature of PH.

Content for the online survey was based on material developed by the National Public Health Performance Standards Program (NPHPSP) to assess how well the 10 Essential Public Health Services are delivered within a state, though the Oregon assessment

did not follow the entire NPHPSP methodology. The survey was administered through Survey Monkey, and offered participants no monetary compensation or incentive.

The survey gathered close-ended data on stakeholder awareness of State PH activities related to each of the ten essential services. Open-ended data were gathered on perceived strengths and gaps in our State public health system. Specifically, participants were asked the following questions about each of the ten essential services:

1. To what extent are you aware of the state Public Health's activities in this area?

2. Please tell us about what works well at the state level for this essential service

3. Please identify gaps you have observed or areas for improvement for this essential service

In April 2012, a letter was sent to a diverse group of stakeholders in Oregon inviting them to participate in this online survey (see Appendix for letter of invitation to participate). Each stakeholder contacted was encouraged to invite other key stakeholders in their network of public health professionals to participate. Input was received from 129 stakeholders; their primary professional affiliations are described in the following table.

Basic content analysis was conducted on the open-ended responses focused on "what works" at the state level and the "gaps" or areas for improvement for each essential service. Qualitative responses were coded into 15 mutually exclusive categories (see Appendix for complete description of the qualitative coding categories). To maximize stakeholder input and fully use the feedback offered by respondents, each stakeholder response was fully coded into multiple categories; for example, a response on "what works" at the State for Essential Service #1 may have been coded in three different categories – communication, resources, and data capacity.

Open-ended survey data were summarized multiple ways. First, responses were totaled

Affiliation	Number of Respondents
County health department	46
Healthcare providers	12
State Public Health Division	12
Oregon Health Authority (OHA)	7
University/education	5
Not-for-profit organization	4
Other affiliation	4
State affiliation outside OHA	2
Health system administrator	1
Total	129

up within each essential service to produce an overall count, allowing us assess which service generated the most input from stakeholders. Next, each category was tallied up within each essential service to quantify which categories were most relevant for strengths and gaps within that essential service. Finally, responses were totaled up across all services to give each coding category an overall count, offering us an idea of which categories or themes emerged from the data overall. Quotes from stakeholders that exemplify key findings are used throughout this summary report to offer additional context and preserve the stakeholder voice and perspective in the survey data.

Four key informant interviews were conducted with leadership from four different public health entities. A list of categories of sectors from which to solicit interviews was developed in collaboration with Oregon Public Health (PH) staff. Subsequently a list of candidates for key informant interviews was also developed. The sectors identified included PH leadership, hospitals, local health departments, public health organizations, legislators and foundations. Of the four interviews conducted, two were from local health departments, one from a public health non-profit organization and one from within state public health. Most of the interviews were conducted by phone.

Five questions were asked of the key informants that focused on: description of key informant's organization and role, nature of their interactions with PH, strengths of PH, challenges of PH, and future opportunities for PH. Notes were

taken on key informants' responses to the five questions. Interviews were between 30 and 40 minutes long.

Notes from the interviews were examined for commonalities and differences from responses to the stakeholder survey. The flow of the key informant questions did not follow the format of the ten essential services making direct comparison with the survey challenging. For this reason, results of the analysis of the interviews are included in a separate results section.
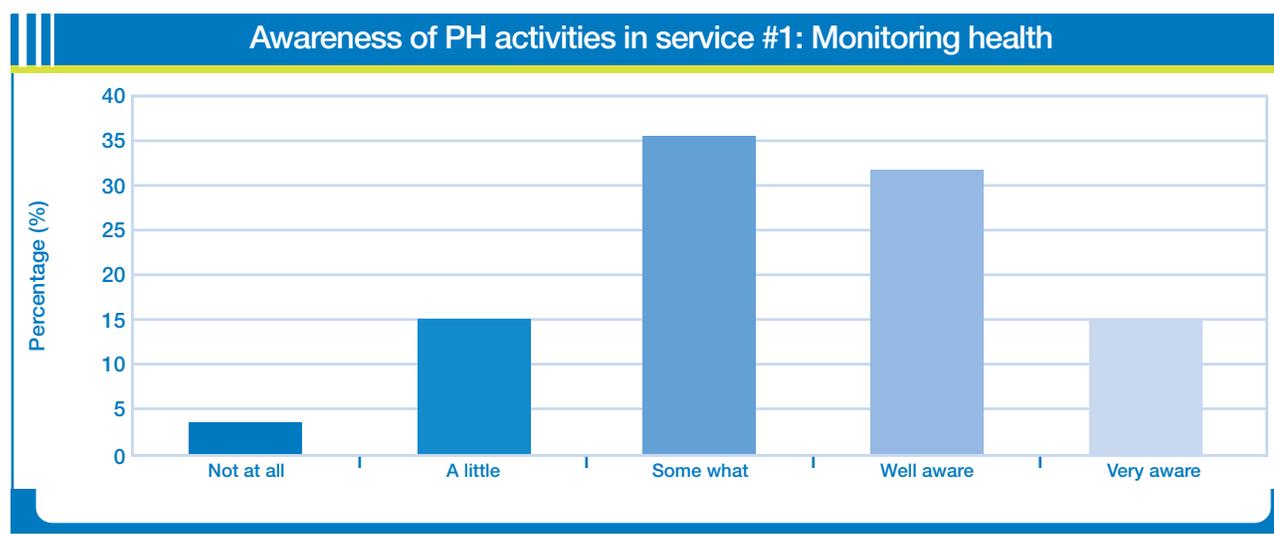
Online Survey Results

Stakeholders offered the most feedback on the first three essential services, and the least amount of feedback offered on the last two services, as demonstrated in the table below.

Quantity of Feedback Coded in Open-Ended Survey Responses by 10 Essential Services*			
	What Works	**Gaps**	**Totals**
1. Monitor health status	119	124	**243**
2. Diagnose & investigate	101	62	**163**
3. Educate & empower public	74	63	**137**
4. Mobilize partnerships	38	55	**93**
5. Develop policies & plans	42	38	**80**
6. Enforce laws & regulations	53	36	**89**
7. Linkage to health services	34	51	**85**
8. Assure competent workforce	45	50	**95**
9. Evaluation of health services	27	45	**72**
10. Research & innovation	17	33	**50**

Findings by essential service

1. Monitor health status to identify community health problems.

Awareness of PH activities in service #1: Monitoring health

Stakeholders demonstrated relatively high awareness of the state public health activities related to this essential service, with almost half of the respondents "well aware" or "very aware" of State activities. Indeed, stakeholders offered the most open-ended feedback about the strengths and gaps related to monitoring the health of communities in Oregon, with feedback from stakeholders fairly evenly split between what works and the areas for improvement.

Respondents focused their input on State data capacity and data systems as well as communication issues and resources, both as strengths and as areas for improvement related to this essential service. County health department stakeholders emphasized the importance of various data systems supported by the State, both from a functionality standpoint (e.g. how well the data system works) and from a utility standpoint (e.g. how useful the data system is for counties). These viewpoints are summarized in the following quote: "The integration and managing of public health information systems is evident in the development of ORPHEUS, the CD [communicable disease] database. It gives instant information to state from county or county to state."
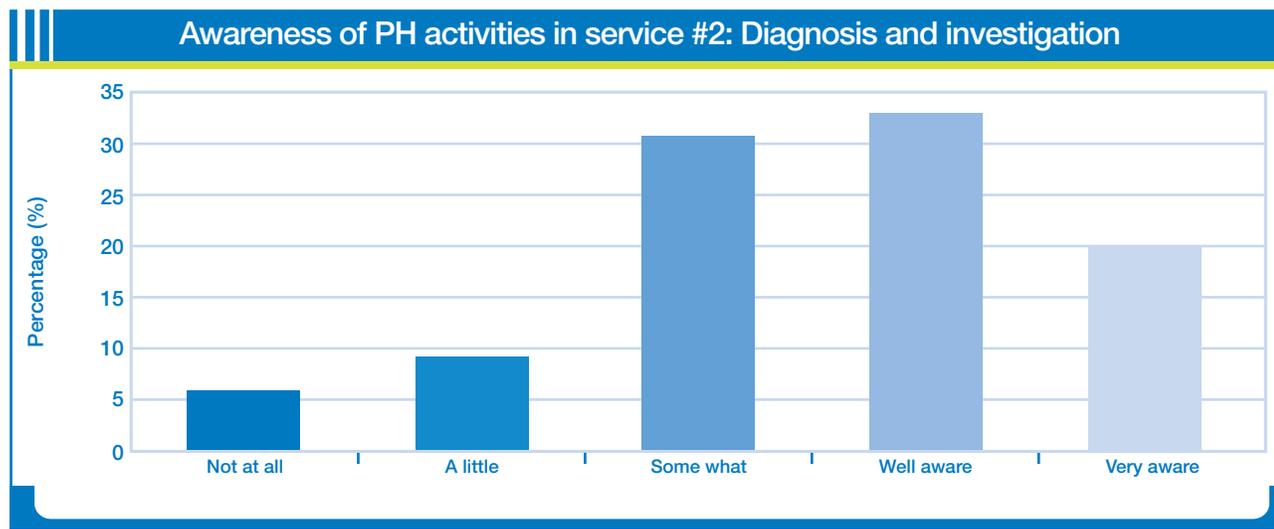
The importance of data for program planning, implementation, and monitoring was emphasized, particularly by county respondents, who focused on the state's commitment to sharing data with counties so they are able to "establish goals and priorities for future direction" using the county-level reports. Without available data, counties conduct their activities in a vacuum, and

stakeholders repeatedly emphasized their use of data from the State "to implement appropriate activities" at the county level.

Because of the relative importance of data for county activities, stakeholders focused both negative and positive feedback on communication issues and different data-related resources from the State so they have access to timely, accurate data and useful resources. Stakeholder input focused on numerous communication mechanisms such as faxes, emails, and "updates" from the State, as well as resources like the CD Summary and newsletters or reports. While many of these communication mechanisms and resources were positively mentioned as "helpful" or "easily accessible" there were also a number of gaps identified around the timeliness and accessibility of data across all PH programs, as seen in the following quote from a county stakeholder:

> *"The state does not have standard for disseminating information. It often is selective. Different programs disseminate information differently. Some not at all. LHA should be able to access their own data and not be dependent on the state."*

2. *Diagnose and investigate health problems and health hazards in the community.*

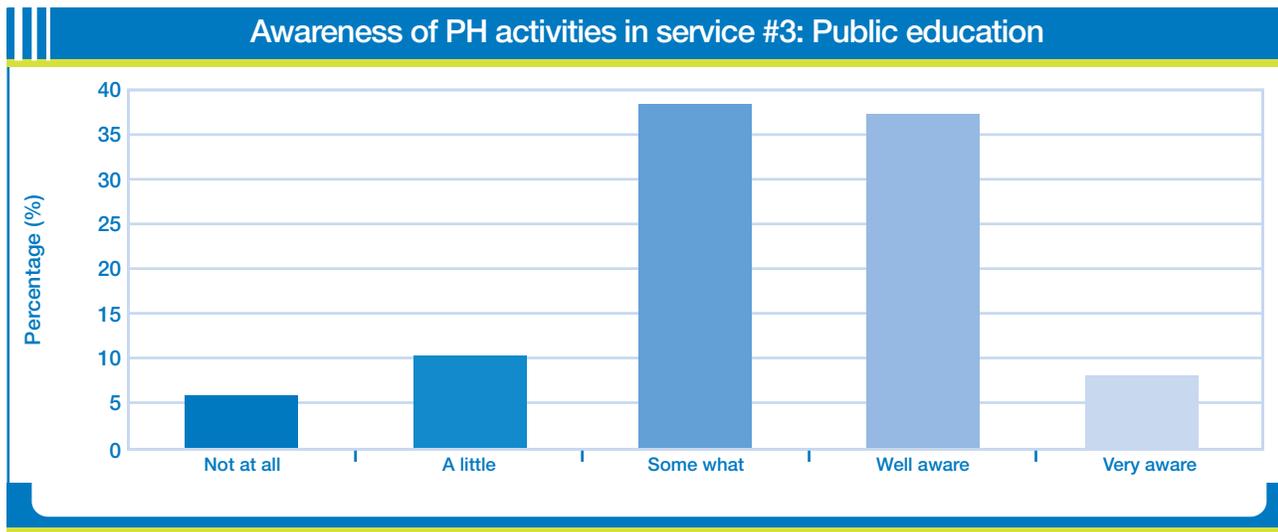### Awareness of PH activities in service #2: Diagnosis and investigation

Stakeholders were most aware of the State's activities related to diagnosing and investigating health issues in the community, with outbreaks offering the State the most visibility and media. Respondents offered extensive input on what works well related to this essential service, focusing on the support and technical assistance received around outbreaks and disease investigations. Stakeholders described competent, helpful, accessible State staff and the useful resources and communication systems in place for this essential service.

> *"The state is very proactive on recognizing and responding to outbreaks and always is helpful with investigations, statistical analysis, and public information. The staff has much expertise in what they do."*

Though communication and resources were also areas of great strength, some respondents identified these as areas for growth as well. From decreasing the "lag in time between the collection of data and dissemination of the results" to improving written and published material that "demonstrate compelling public health messaging," respondents emphasized the importance of communication systems and products related to this essential service. Stakeholders also identified resource challenges across the state, from funding to personnel. Open-ended data on this essential service reflect limited resources available for public health activities on the local and the state level.
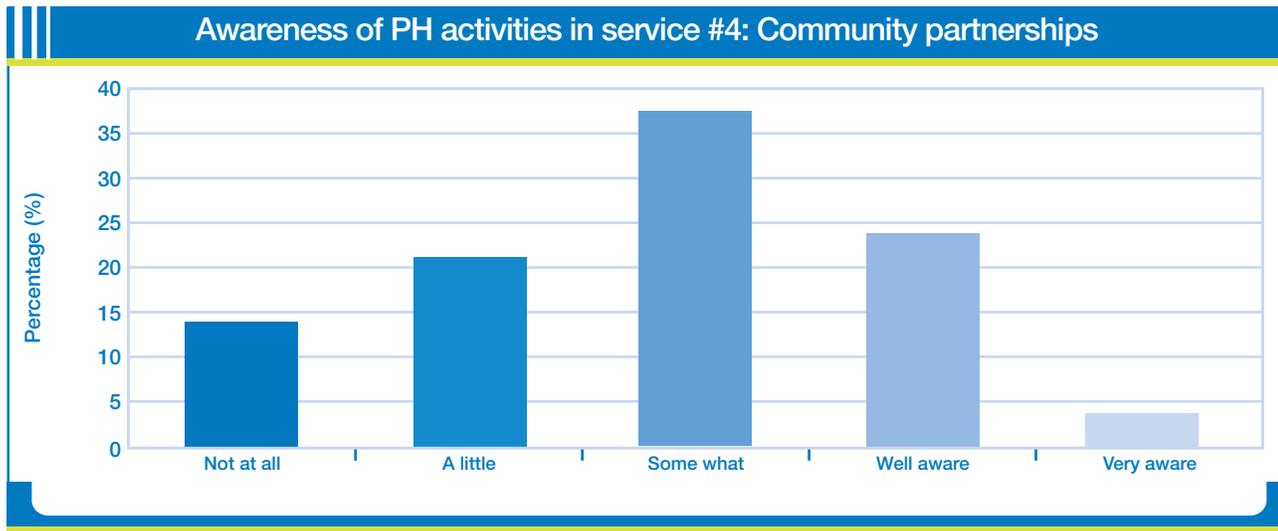
3.   *Inform, educate, and empower people about health issues.*

Awareness of PH activities in service #3: Public education

Percentage (%)

Not at all	~6
A little	~10
Some what	~38
Well aware	~37
Very aware	~8

The third service related to informing and educating the public about health issues shared similar visibility and awareness as the first two services, with nearly half of the respondents reporting they were "very or well aware" of public education activities conducted by the State.

Open-ended comments were balanced between areas of strength and growth related to this essential service. Stakeholders focused primarily on tangible resources produced by the State that facilitate public education on health issues, such as website content, social marketing tools, written materials, and social media. On the other hand, respondents identified resources as the biggest gap, emphasizing the need for additional funding and the "development of a statewide infrastructure to support and maintain this activity" in a coordinated and strategic way that meaningfully engaged partners statewide.

Community Health Assessments Report

4.   *Mobilize community partnerships to identify and solve health problems.*

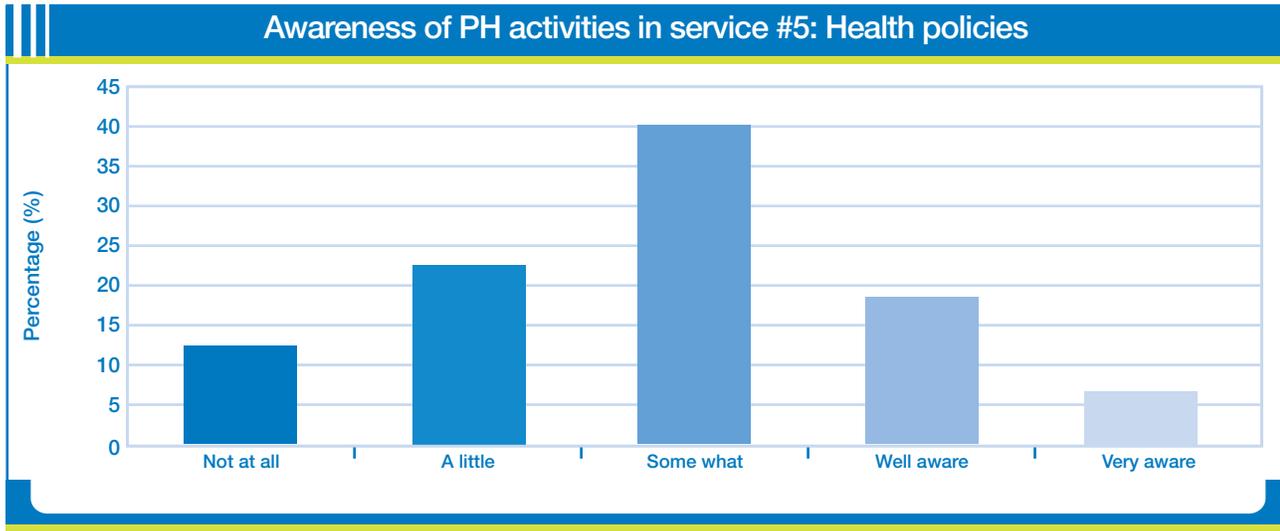### Awareness of PH activities in service #4: Community partnerships

Just over one in four respondents felt they were "very or well aware" of the State's activities related to mobilizing community partnerships around health issues. This is an area for improvement overall, with fewer positive comments from stakeholders than those focused on gaps. Stakeholders identified some programs, systems, and groups that facilitate and support community partnerships, such as the Conference of Local Health Officials (CLHO) and a number of cross-agency programs or initiatives. Indeed, a number of respondents indicated that "growth in this area is ongoing" and that "state level public health is improving in the ability to reach out and form partnerships in other sectors."

Stakeholders focused on the importance of improving the State's ability to genuinely engage with community partners, from county health departments to regional coalitions and public health advocates. One respondent emphasized the need for the State to "reach out to community partners

who are working very successfully on the issues that PH is trying to address" while another focused on better "coordination with local health departments to take advantage of local networks and partnerships." Stakeholders encouraged state public health leaders to solicit genuine input from diverse partners from across the state, noting "this is an untapped resource that would cost the State little and would bring the enthusiasm and passion of individuals and groups to the benefit of all Oregonians."
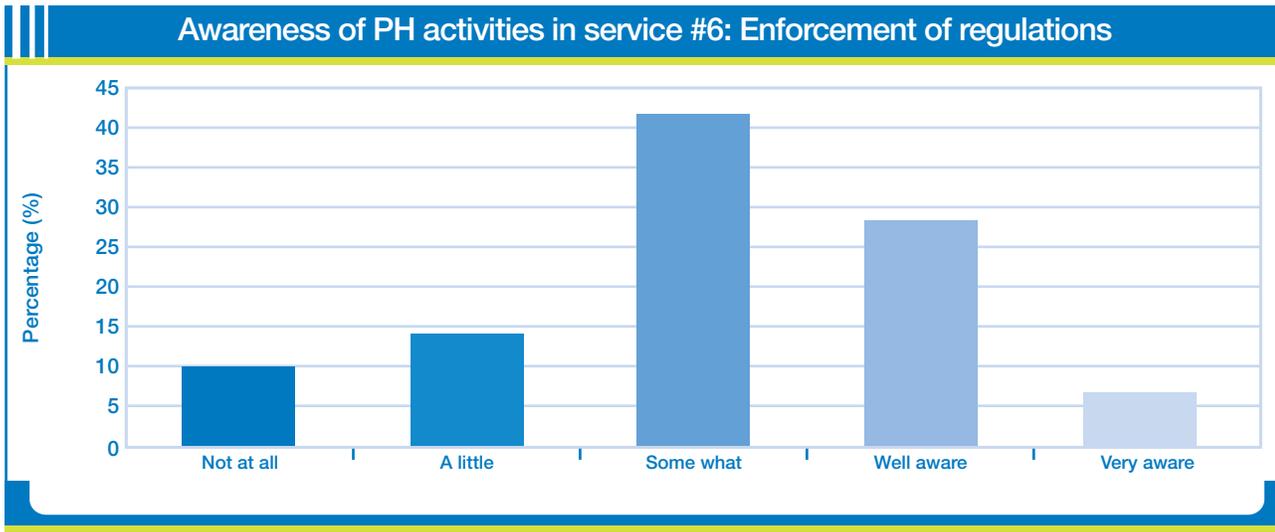
5. *Mobilize community partnerships to identify and solve health problems.*

Awareness of PH activities in service #5: Health policies

One in four respondents felt they were "very or well aware" of the state's work to develop policies and plans that support health. Respondents primarily noted the importance of communication in relation to this essential service, focusing on the state's work to keep partners informed of legislative activities and state priorities related to health policy. Community partners such as the Conference of Local Health Officials (CLHO) play a key role in disseminating information related to this activity, as noted by this respondent from a county health department: "The State requests our assistance to testify in legislative hearings. CLHO committees are well utilized to assure timely and appropriate changes." In addition, respondents noted specific public health policies that have helped raise the visibility of this essential service such as "tobacco laws and environmental health licensing [which] are all examples of good work" on the part of OPHD.

The two areas that respondents noted as gaps were around leadership issues and the limited resources available for public health. One stakeholder reported, "I am eager to see high-level policies that tackle smoking, nutrition and physical activity" while another noted the importance of both "political will and funding" related to this essential service.

6. *Enforce laws and regulations that protect health and ensure safety.*

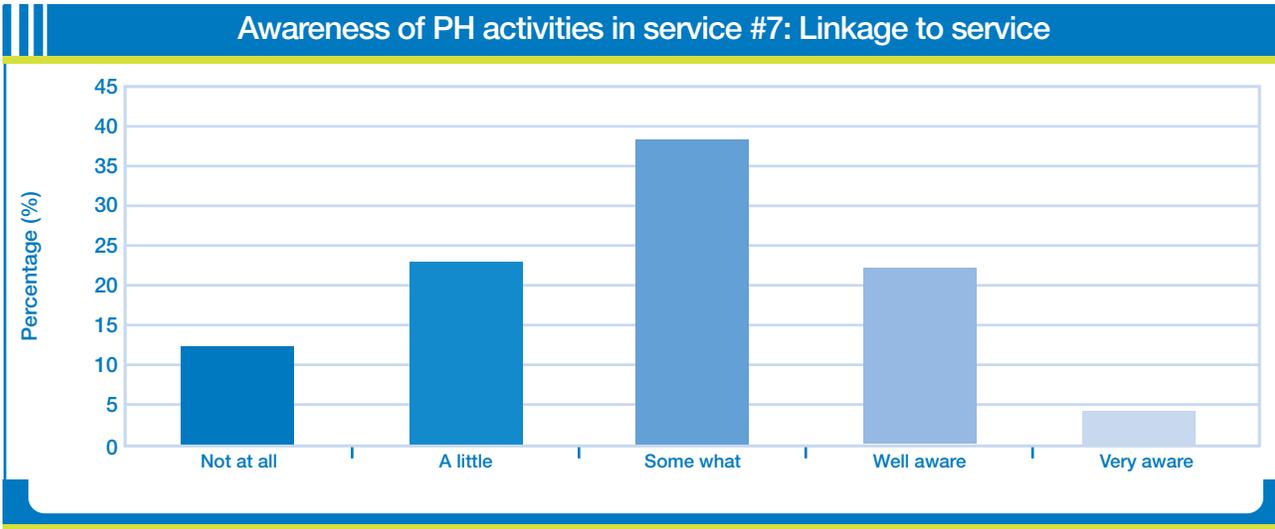## Awareness of PH activities in service #6: Enforcement of regulations

Over one-third of the stakeholders felt they were "very or well aware" of the State's activities related to this essential service. Respondents primarily focused on specific state programs, reporting systems and regulations, and the support and technical assistance they receive from state program staff.

From environmental health efforts to child safety programs and immunization initiatives, stakeholders identified numerous PH programs they felt work well from a regulatory and enforcement standpoint. As one county health department stakeholder said, the State "Public Health is the muscle behind the local health department that enables the local health department to encourage compliance and enforcement to protect the public." Another community stakeholder stated the state is "good at taking the best practice and current science and moving that to action and implementation."

Issues around enforcement were the area needing the most improvement, according to respondents. Some felt there was "not enough enforcement capability" in public health matters and that increased efforts needs to be focused on enforcing existing regulations, particularly related to violations of the clean indoor air act and public health reporting of communicable diseases.

7. *Link people to needed personal health services and assure the provision of health care when otherwise unavailable.*

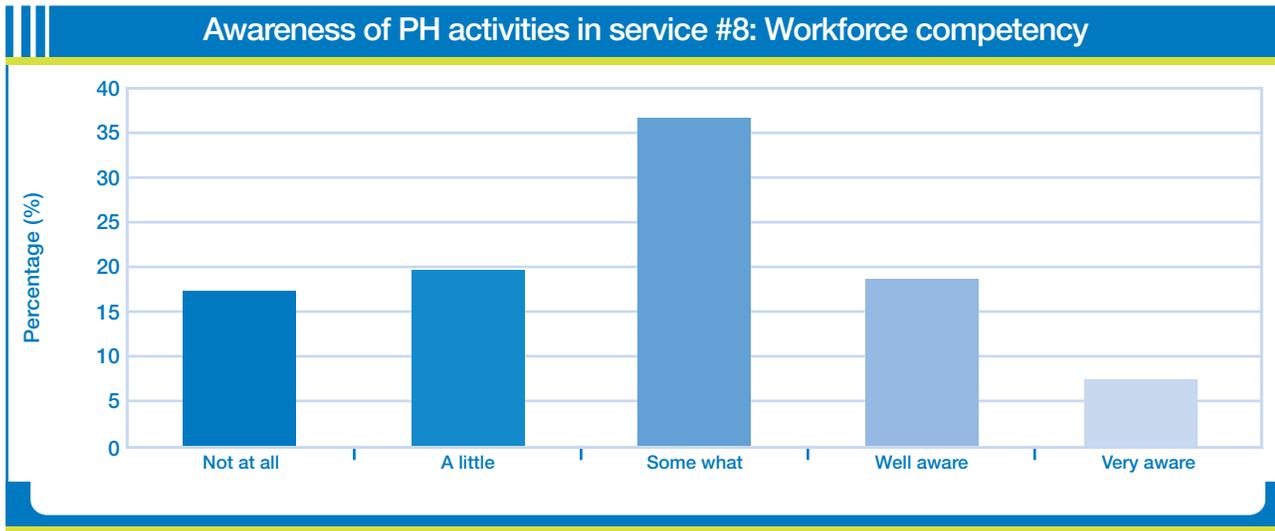**Awareness of PH activities in service #7: Linkage to service**

About one in four respondents were "very or well aware" of the State public health system's activities related to linking people to needed health services. Positive comments about what works well were primarily focused on specific programs and systems. In particular, respondents noted various programs for women and children, as well as other vulnerable populations in Oregon, such as those living with HIV/AIDS. One stakeholder felt that "Oregon seems to be a leader in this realm. Good work making sure children are covered" under the Healthy Kids Oregon program. Another respondent from a county health department reported that the "School Based Health Center program has been a tremendous asset for our county and has poised us to leverage hundreds of thousands of dollars in outside support for care."

Stakeholders focused on limited resources and leadership issues as key areas for improvement. These gaps appeared to be connected to the extensive activities in Oregon related to healthcare transformation. A number of respondents questioned how the state public health system will fit into those transformation activities overall and the role of state public health in health reform. Indeed, one stakeholder noted, "This will be an important time to strengthen this area and to determine exactly what public health's role is during this time when Coordinated Care Organizations (CCOs) are implemented."

8. *Assure a competent public health and personal healthcare workforce.*

Awareness of PH activities in service #8: Workforce competency

About one-quarter of the respondents were "very or well aware" of the State's activities related to public health workforce development. Respondents were most positive about the support, specifically, the training and technical assistance provided by the State. Stakeholders from local health departments emphasized the accessibility, affordability, and quality of the state PH trainings, commenting on the "abundance of educational and professional development opportunities" specifically for county health department staff. Given the geographic diversity in Oregon and the diminishing resources in public health, PH has incorporated new methods and technology for delivering technical assistance to ensure a competent county-level public health workforce throughout the state and conserve scarce resources, as evidenced by the following quote.

> *"I appreciate the State's understanding of the challenges to travelling to attend meetings and trainings. The use of webinars and recorded sessions is really valuable. I appreciate the use of technology. We are able to participate much more easily with the use of technology."*
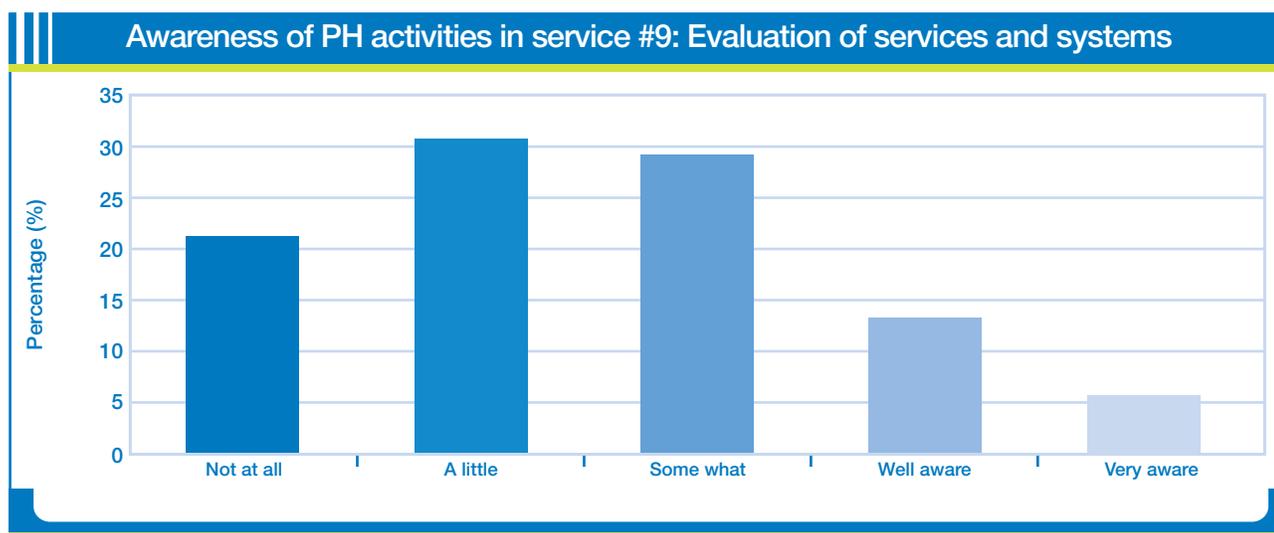
Stakeholders from state and county health departments commented on the value of the annual epidemiology conference, OR-Epi, and incorporating continuing education requirements into licensing programs. In addition, a number of stakeholders from within the Oregon Health Authority commented on the cultural competency trainings and the opportunity for leadership development for State employees.

In contrast to the training opportunities and technical assistance available to County staff, similar training opportunities and professional development for State staff and for the Oregon public health workforce in general were perceived to be relatively limited. One stakeholder from

the State public health division pointed out that "although we do what we can to train people in PH and in local public health agencies, there really is no academic program in Oregon dedicated to training the governmental public health work force."

Indeed, the main areas of improvement were focused on the limited resources available to put toward this service to ensure a competent public health workforce both within the state public health system and across the state.

9. *Evaluate effectiveness, accessibility, and quality of personal and population-based health services.*

Awareness of PH activities in service #9: Evaluation of services and systems

Stakeholders were less aware of state activities related to this essential service, with only 22% being well or very aware of them, even though PH has extensive evaluation activities occurring in many programs and has an independent evaluation unit. More than one in five respondents said they were "not at all aware" of the state activities, and relatively few stakeholders offered open-ended input on what is working well related to this service.

Respondents focused on the overall competence of evaluation products, state staff, and evaluative activities, as well as the annual or triennial reviews the state conducts

of various county programs. These efforts build a "commitment to the science and the field" as well as facilitating a continuous quality improvement (CQI) process with county partners. Though some stakeholders mentioned the need for more accountability and follow-up on the findings from these reviews, a number of stakeholders focused on the utility of the review process, as seen in the following quote:
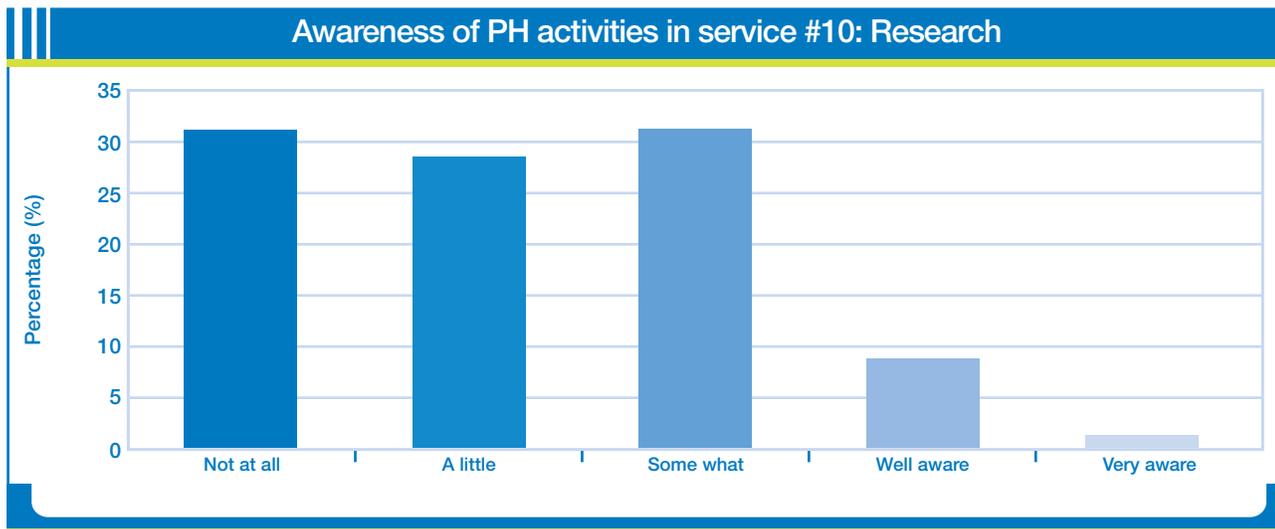
> *"The Triennial reviews are essential to help us continually improve our level of care to the community and ensure we are meeting all standards. I appreciate the education provided during these*

reviews and the advice and resources that are provided."

Respondents identified the need for additional resources and more communication and information related to evaluation and evaluative activities conducted by the state, underscored by the relative lack of awareness of state activities related to this service. In addition, stakeholders noted a lack of leadership around incorporating evaluation findings into state public health activities, particularly around planning and innovation. Indeed, one county health department stakeholder pushed for data-driven decision-making and the importance of incorporating evidence based practices into local planning. "I would like to see the state advocate more strongly with data and guidance regarding evidence based practices that would make a difference for our state's health status."

10. Research for new insights and innovative solutions to health problems.

Awareness of PH activities in service #10: Research

Stakeholders were least aware of the activities related to this essential health service, with over 30% of respondents reporting they were "not at all" aware of PH research activities. A few stakeholders identified particular programs conducting and publishing research findings, with one noting that county health departments and "Program Coordinators depend on state program office to provide the latest and greatest best practice strategies. This is critical to coordinators and very well done by the state."

Most stakeholders, however, commented they had "never heard about this work" and underscored the need for more communication on this essential service. Indeed, one stakeholder believed "Very little is being done at the state level in this area. If it is, the results are not well shared." The gaps identified by stakeholders focused on communication and collaboration, as well as the need for additional resources since there is the perception that "no funding for research" exists.

Results from Key Informant Interviews

The results of analysis of the notes from the four key informant interviews are summarized in this section. Similar to the analysis of the online survey results, this section is organized by topics mentioned in the interviews and the degree to which strengths or challenges are present for Oregon Public Health are highlighted within the topics.

Overall

Overall key stakeholders focused on more systemic issues than the online survey respondents but this may be a function of the format of the questions.

PH Personnel and Working with Local Health Departments

Stakeholders spoke about the strength of PH staff being their high level of content area expertise, collegiality, friendliness and general helpfulness. They spoke of the "national level" of staff and their good balance of oversight of local health departments with letting them work independently. One key informant complained that though staff were very knowledgeable in their content area, in general, PH staff was not hired for their managerial skill set—for managing people or systems—and that this was important given the level of oversight PH had over local health departments. One informant in particular called out the need for a new paradigm of thinking by personnel regarding the role of public health—a thinking that reexamines what is public health and who

benefits and who pays for it—a paradigm where programs are not in silos but can collaborate and be flexible. One informant spoke of the need for more PH staff with direct experience with small/rural local health departments especially with respect to understanding that staff at local health departments often wear more than one hat and provide multiple functions and are not full time devoted to one program. Their hope was that such experience would temper PH staff expectations of staff within local health departments.

One informant mentioned the importance of PH staff having a strengths-based attitude as an important consideration. For example, instead of thinking of 34 different local health departments as a challenge, what strengths could they bring?

Resources

Generally, informants spoke about the limitations of financial resources for funding public health. One specifically mentioned that the challenge was that most of PH's budget is federal pass-through funding or user fees each of which was program specific and that this made it a challenge to tailor programs to needs specific to Oregon. In particular the conflict between federal restrictions on using funding for advertising and the effectiveness of advertising on changing public health behavior was discussed. Another key informant spoke about the need to think outside the box about funding—that since public health provides a public service, then all of the public (including businesses) should pay for

it; even suggesting a specific public health employment tax.

Some informants spoke about resources as the services (data, technical assistance, back up support) provided to local health departments. They appreciated these resources and spoke about they were coordinated well, and understanding the unique needs of each local health department.

One informant said that though resources were meager and that is was challenging to be responsive to mandates and keep essential services, PH had done well for the level of investment committed by the state. A particular challenge was that it was difficult to find resources for programs that addressed quality of life especially when other forces in society framed health issues differently from PH such as promoting the belief that obesity was a "matter of choice."

Data

Key informants lauded PH in its dissemination of public health data and analyses. One informant, though, spoke about the need for outcomes based analysis and monitoring that mirrored outcomes based reporting for healthcare. They encouraged PH to work with other state agencies to provide medical data by outcomes.

One informant cited one gap in PH being the lack of data on school-aged children which limited program development for children. Another informant suggested that PH work more with electronic health data in surveillance and conduct analyses of economic impacts.

Communication

Informants spoke about communication from a couple of different perspectives. One was communication around public health issues such as disease outbreaks. The other perspective was communication about public health itself and the role of public health.

Most informants spoke about the need for public health to communicate better to the public what it does i.e. a better job at self-promotion. They noted that most of PH is staffed by academics who take it as self-evident that public health services are valuable but that this is not really understood by the public. For example, does the public know that PH helps them be able to safely drink their tap water? How does public health create visibility for the success of prevention efforts such as vaccines which are working when nothing is going wrong? And what is the role of PH in such marketing/communication? Do businesses realize how much they benefit from a healthy workforce? Informants encouraged PH to take a leadership role in developing marketing strategies.

With respect to communication about disease information, one informant specifically mentioned that while PH was good at using media to disseminate information, local health departments were at a disadvantage if that information conflicted with their local situation and they did not have access to good media outlets to relay that information to the public.

Collaboration

All the key informants agreed that PH needs to partner with non-traditional

partners (such as business, education, public planners, transportation and so on), both from the perspective of maintaining public health services in a diminishing resource environment and also from the perspective of creating a paradigm shift as to the very nature of public health (i.e. what truly creates healthy communities?).

Informants also spoke about the importance of PH collaborating with the local health departments, especially in a resource diminished environment that tended to promote "territoriality." One aspect of that collaboration looks like PH inviting more feedback from local health departments; for example, soliciting feedback in 360 degree performance reviews for PH staff.

One informant suggested that PH collaborate more with healthcare systems for the surveillance of both chronic and infectious diseases.

Systems Transformation

Informants spoke about accreditation and healthcare reform as "exciting" opportunities for thinking strategically about defining the scope of public health, the role of PH, and how it does its work. One informant spoke about the need for a paradigm shift in PH in being "de-siloized" with respect to programs and more flexible and collaborative in what service providers could do. Informants talked about the critical importance of the timing for PH to define the work of public health relative to CCOs, encouraging the broad definition of what makes a community healthy. One informant spoke about the usefulness of

the accreditation process for strategically redesigning the model framework for public health. Another encouraged the defining of aspirational goals before accreditation. With respect to defining public health informants spoke about the importance of social determinants of health, health equity based on race, ethnicity and socio-economic status, prevention services, surveillance, an outcomes focused reporting and strategic planning and assurance of services for struggling local health departments.

Informants encouraged PH to take the lead in defining the conversation around what creates healthy communities, of who benefits from public health (the public, businesses etc.), and who pays for it, in essence "reframing and rebranding" public health.

Some informants spoke of their concern that public health and especially prevention services will not be part of the healthcare transformation conversation or infrastructure, especially for the smaller local health departments. They spoke of the importance of PH being a strong advocate for public health in all its forms and that prevention services stay at the forefront of the conversation. One informant talked about the concern of unfunded mandates.

Study Limitations

The online survey had several limitations worth mentioning. While all ten essential services received valuable comments from respondents, the volume of input dropped off as the survey went on. Whether this was associated with relatively lack of awareness (respondents in general were less familiar

with the higher numbered essential services) or survey fatigue is not clear. Future assessments could take advantage of other methodologies, targeted surveys or consensus groups (i.e., the full NPHPSP approach).

The survey was distributed to numerous different stakeholder groups throughout the state, with the guidance to forward the survey to other key stakeholders who might be appropriate for participation. This distribution method yielded diverse and varied respondents from many different sectors that interact with and are affected by state public health systems. This method, however, does not allow us to generate an overall denominator for total number of respondents. Because an overall response rate is not possible for this survey, findings should not be generalized to a particular group (such as "all county health department staff") and should be interpreted with caution.

Many more key informant interviews were planned than were actually conducted. Since only four key informant interviews were conducted, the results from those interviews are not generalizable. At least two or three interviews from each of the identified sectors would have added substantially to both the robustness of identified themes and confidence in saturation of knowledge on the extent of issues.

A conspicuous lack in the selection of key informants was representation from rural local health departments geographically distant from the Portland metro region. Despite these limitations, results from the interviews are helpful in highlight important

issues that PH should consider some of which are present in the survey results.

Overall summary of findings

Awareness of the essential services

The first three essential services in public health shared a relatively high level of visibility and awareness, with about half of the respondents reporting they were "very or well aware" of these services. Because these essential services are related to epidemiology and health promotion, they tend to be the most visible activities in the public health division and considerable resources, systems, and media are focused on these activities. Key stakeholders and the respondents in this survey, therefore, would likely interact with and support these essential services most often so the relatively high level of awareness is to be expected.

On the other hand, survey respondents were least aware of research and evaluation activities at the state, indicating an area for improvement for the state around communication and dissemination of information related to systematic and scientific inquiry performed at PH.

Stakeholder feedback by 10 essential services

The amount of open-ended feedback given by stakeholders on each essential service tended to reflect the overall awareness of that particular service. Indeed, respondents offered the most amount of feedback on the first three essential services, the services that also have the highest level

of awareness. Notably, there was as much stakeholder feedback on the first three services as there was on the other seven essential services combined.

Quantity of feedback coded in open-ended survey responses by 10 Essential Services			
	What works	**Gaps**	**Totals**
1. Monitor health status	119	124	**243**
2. Diagnose and investigate	101	62	**163**
3. Educate and empower public	74	63	**137**
4. Mobilize partnerships	38	55	**93**
5. Develop policies and plans	42	38	**80**
6. Enforce laws and regulations	53	36	**89**
7. Linkage to health services	34	51	**85**
8. Assure competent workforce	45	50	**95**
9. Evaluation of health services	27	45	**72**
10. Research and innovation	17	33	**50**

Stakeholder feedback overall

The table below summarizes the content identified in the stakeholder survey across all essential service areas. The various content areas should not necessarily be interpreted as an overall "ranking of importance" of those issues, since respondent feedback on certain topics like data or reporting issues revealed how critical those issues are to stakeholders. Instead, the table indicates the topic areas that generated the most respondent input, feedback and discussion on what is working well and what the gaps are in our state public health system.

The "what works" column can be interpreted as positive feedback from respondents while the "gaps" column can be taken as constructive criticism from stakeholders.

Therefore, the table demonstrates the categories that have more positive or more negative comments overall. In addition, within each category we can create a ratio of positive to negative feedback to identify which topic areas or functions in public health are working well and which areas offer areas for improvement.

Frequency of Categories of Feedback Identified in Open-Ended Responses across the Ten Essential Services*			
Coding Category	**What Works**	**Gaps**	**Totals**
Resources	85	104	**189**
Communication	88	83	**171**
Collaboration - external	43	78	**121**
Support & technical assistance	80	23	**103**
Programs & systems	65	32	**97**
Competence	43	50	**93**
Leadership	13	63	**76**
Data	41	33	**74**
Disparities & equity	8	36	**44**
Reporting & regulation	17	17	**34**
Personnel	18	2	**20**
Enforcement	6	12	**18**
Policy	9	8	**17**
Collaboration - internal	6	6	**12**

* See Appendix for a complete description of each coding category.

Key themes

The content areas generating the **most stakeholder input** focused on resources, communication and PH collaboration with external partners. The considerable input from stakeholders on these specific topics could reflect the fact that over one-third of the respondents were from county health departments where resources are tight, and communication and collaboration with the state are essential to their functions at the county.

Resources were identified as both a strength and a gap for the state public health division. Numerous specific services, data systems, and communication systems were mentioned as resources by stakeholders (see Appendix). Positive comments focused on tangible materials and products like reports and website materials, while lack of financial and programmatic resources was the main gaps identified by stakeholders. The impact of funding challenges and limited resources was emphasized across the essential services, particularly for county health department stakeholders. As one respondent noted, there has been a "lack of funding for programs at the local level. Local Public Health staff is shrinking and cannot support all the programs and state mandates. … Robbed Peter to pay Paul too many times, we can no longer do this." Key informants noted that the expert technical assistance received by PH was a key strength but they echoed too the limitation of shrinking financial resources. Key informants also called out the restrictions on federal funding issued "in silos" as a limitation to what PH could do. However, one key informant called

for leadership to think differently about funding—that since PH provides a service that benefits everyone, then everyone, including businesses, should pay for it like social security.

Communication issues were raised equally by stakeholders as both strengths and areas for improvement. Many respondents pointed to positive experiences with specific programs and systems, as summarized by the stakeholder who reported that "it is easy to call a person at the OHA-public health and ask specific question & get reliable answers." The availability of data at the state level and often at the county level as well was consistently mentioned as a critical issue for stakeholders, with many indicating data-related communications as a consistent strength. Some, however, perceived communications to be inconsistent, program-specific, not timely (i.e. data out of date, or communications lag far behind a decision being made), and at times difficult to access. Several respondents felt that "information flow is primarily one-way" and that counties put considerable effort into reporting to state level offices without having opportunities to offer genuine input to change policy or programmatic direction. A couple of key informants echoed this concern about "one-way" communications. One informant pointed out that, especially in rural areas with weak local media, local health departments can be swamped with messaging coming out of the metro area that may not be appropriate for the local area.
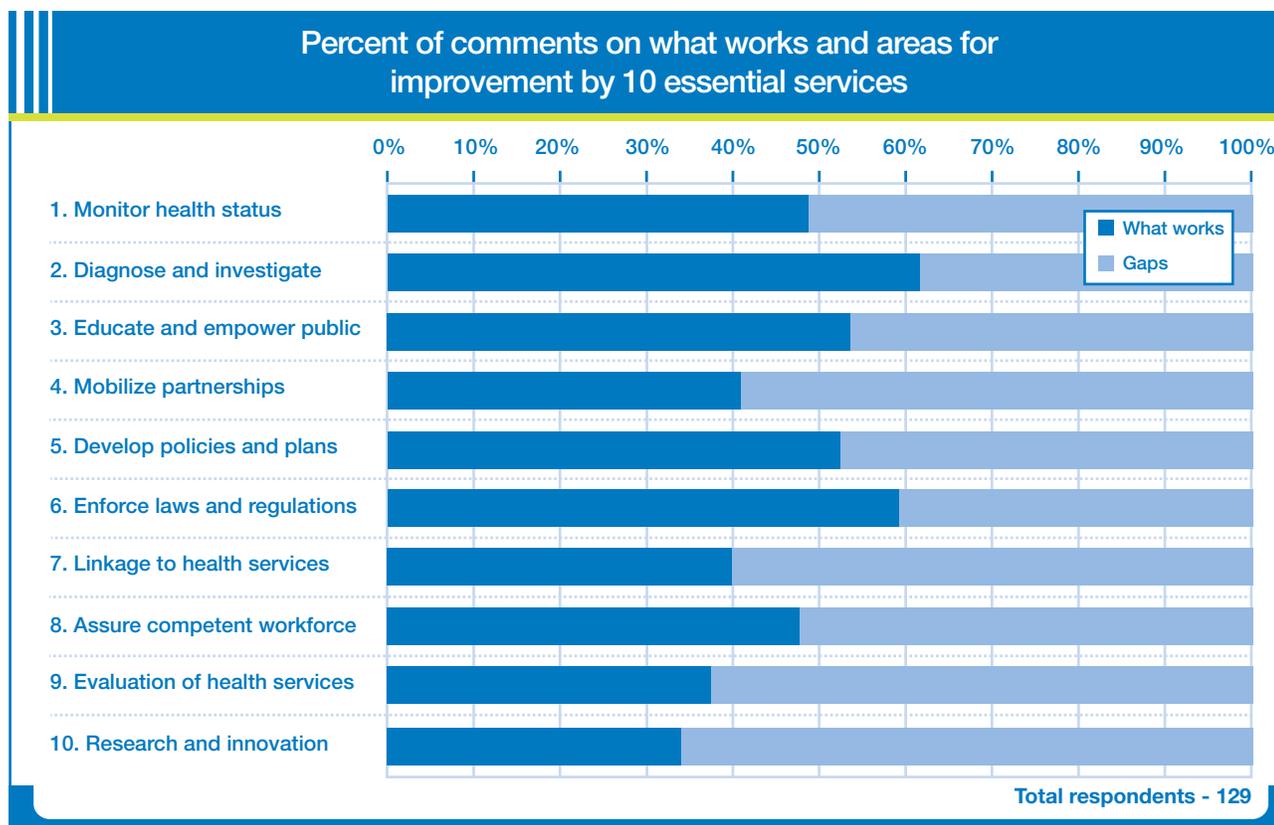
Stakeholders offered considerable input on the importance of **collaboration** and collaborative relationships, within PH and

OHA, but primarily with external partners. Stakeholders focused on the importance of collaboration as a way to maximize resources and manage limited resources more efficiently. Some respondents emphasized how well specific staff, programs, and partnerships in PH work collaboratively with partners, as expressed by the stakeholder who said "There are individuals at PH who place a high value on collaboration and appreciate the value that outside partners bring." That sentiment, however, was not reflected in feedback about the larger state public health division. Indeed, improving the state system's efforts to work collaboratively with external partners and to mobilize and support community partnerships was a gap identified consistently across the essential services. Part of genuine collaboration is valuing partners and having a two-way exchange of ideas and expertise, but the survey revealed the perception that PH does not value the expertise and ideas local public health department. This is a considerable area to address in future work. Key informants called out that collaboration, especially with local health departments was a two way street—that while LHD get lots of oversight from PH they get relatively little chance to provide feedback. One key informant encouraged PH to be proactive about partnerships, especially those outside of the usual ones, saying "you can't sit in your office waiting for people to call." With respect to healthcare system partners, key informants pointed out that PH has to thoughtful and proactive about coming to the discussion table with explicit messages about the value public health provides and the continual reminder that health is not the same as healthcare.

The following table demonstrates the overall ratio of what works well to gaps by each essential service. The services with the highest proportion of positive comments were **diagnosis and investigation** of health problems and health hazards in the community, and **enforcement of laws and regulations** that protect health. The services with the highest proportion of comments on areas for improvement were **research and innovative solutions** to health problems, along with **evaluation of health services**. Primarily, those gaps were related to the lack of stakeholder awareness of those activities and the need for additional communication related to state work in those areas.

We can also look at the **ratio of positive to negative feedback** by categories or topic areas. Three areas with the highest positive to negative feedback were **personnel, support and technical assistance**, and **programs and systems**. Data suggest that staff and programmatic activities are the greatest assets in PH. When offering input on what works well at PH, stakeholders focused on the accessibility and performance of individual personnel and the support provided to stakeholders by PH staff, as well as the utility of specific programs and systems. Respondents offered numerous examples of different programs and systems that work well in PH, "providing training, education, and support to local staff" and partners, emphasizing how "helpful and supportive" staff are within those programs. As one stakeholder said, "They always make time to talk with and advise local

Percent of comments on what works and areas for improvement by 10 essential services

Total respondents - 129

health department staff." That sentiment was echoed throughout survey results when talking about PH personnel, the support and technical assistance offered, and the programs or systems that comprise PH. Key informants echoed this feedback lauding the collegiality and content area expertise of PH staff. One informant, though, called out the relative lack of managerial skill sets with PH staff which was especially important given the level of PH oversight over local health departments. One informant lamented the lack of consideration of input of local health departments in 360 degree performance reviews of PH staff.

Other topic areas had a much higher **ratio of negative to positive feedback**, though some of the categories like disparities & equity did not receive much input overall. These four topics explored below are larger system issues impacting the public health system overall, as opposed to feedback specific to PH programs or staff activities. Specifically:

- Stakeholders identified a number of leadership issues facing public health, as a state system and as a profession in a time of health reform and diminishing resources. One respondent stated, "The state needs to take stronger leadership to advocate for the excellent work that public health is doing." Key informants specifically spoke of the need for public health leadership to highlight the value it provides to the public and that this should be clearly communicated to the public e.g., public health means that you can drink your tap water. One informant said that public health

needs to think of itself like a business i.e., that it provides a valuable service that benefits everyone and therefore everyone should pay for it. They noted that public health leadership is made up of academics who think the value is self-evident but that is not the way that the public thinks. Key informants also spoke of the need for leadership to take the opportunity that healthcare reform is providing to re-invent public health, to think systemically and strategically about the mission of public health and focus on prevention and ensuring service provision in a shrinking financial climate by working collaboratively with a broad base of "out of the box" partners from education, business, transportation, planning and so on.

- Although respondents did not focus on issues of disparities and equity overall, proportionately this topic received more negative than positive comments, typically focused on the perception that PH is "metro-centric" and does not focus enough resources and attention on rural health issues in Oregon. Some key informants echoed the concern with PH being focused too much on the Portland metro region. Some of the key informants did highlight a need for PH to highlight and work to address disparities in health outcomes by race, ethnicity and socio-economic status.

- Other respondents called for additional leadership around enforcement in public health with regard to reporting issues, violations of the clean indoor air act, and

support for local public health authorities to enforce regulations.

- Collaboration with external partners, discussed earlier, was raised as an area of concern by respondents who also focused on issues of leadership and regional equity in public health activities, as demonstrated in the following quote: "Local partners should be seen as stakeholders in this work and actively involved. Not just large counties, but small rural ones as well." This issue was highlighted by key informants as well—that especially in an environment of shrinking economic resources, PH needs to be "de-siloized" and "out of the box" with its thinking about collaboration by collaborating with local health departments, seeing them as an arm of their own goals and activities, by partnering with entities beyond health such as education, business, planning and transportation.

Conclusions

Public health stakeholders provided extensive feedback on awareness of PH's activities in meeting the 10 essential services, what is working well, and areas for improvement. Overall awareness of State activities related to each essential service varied considerably. Stakeholders were most aware of PH activities related to monitoring health, outbreak investigation, and health education services, while the least awareness was around research / innovation and evaluation of health services.

Data suggest that staff and programmatic activities are the greatest assets in PH and our statewide public health system. When offering input on what works well at PH, stakeholders focused on the accessibility and performance of individual staff and the help they provide, as well as the utility of specific programs, systems, data and communications.

In an era of health reform and ongoing, persistent limited resources, considerable challenges face public health leadership related to the overall state system and to the profession as a whole. Data indicate the need for leadership to highlight the value that public health provides to the public and to develop clear, consistent messages to communicate that value to the public. Those messages will increase awareness of the varied and extensive services provided by the public health system in Oregon.

Appendix V:

Qualitative Coding Categories for Survey Responses

1. Collaboration - External: state staff, programs and offices working together with local health departments or other organizations and stakeholders

2. Collaboration - Internal: how well state offices, programs, and systems work together within PH or OHA

3. Communication: transmission of information (findings, news, alerts) in any direction and in any format (formal reports, telephone, interpersonal) or media

4. Competence: technical skills or professional ability to perform duties, responsibilities, maintain systems, and generate products that are useful, timely, and accurate

5. Data: comments focused on the acquisition, accessibility, quality, and timeliness of public health data (could be in relation to planning, monitoring, evaluation, research)

6. Disparities, diversity and equity: comments specifically mentioning group differences in health status, distribution of resources, or issues of health equity, and kinds of diversity (including metro/rural issues)

7. Enforcement: state and local ability to enforce public health regulations and rules

8. Leadership: state public health taking a leadership role in planning, statewide presence, visibility of PH, health care transformation, program design and implementation, regulation — not comments about specific public health leaders but instead about the system overall and the capacity to innovate, improve systems, and be strategic

9. Personnel: comments about specific individuals, offices, staff

10. Policy: issues related to proposing, enacting, and implementing policy or how policy is developed, passed, and implemented

11. Programs and systems: related to specific programs (e.g., TPEP, HIV/STD/TB), classes of programs (e.g., infection control), or PH systems (e.g., HAN system, ORPHEUS, ALERT)

12. Reporting and regulation: content or implementation of regulations and expectations of public health reporting, implementation of public health systems, including feasibility

of reporting or interactions with reporting systems; separate from enforcement of regulations

13. Resources: broadly defined, but inclusive of funding and financial resources, products and materials (e.g., county health reports, CD Summary, website material), as well as technology, financial, staffing, access, facilities; also includes mention of utility and usefulness of products, processes, systems

14. Support and technical assistance: specifically about state staff/offices providing intangible or informational support to others (e.g., local health departments) outside the PH system; for example, technical assistance and support that is active (phone calls to/from PH) as opposed to accessing materials or resources in a passive way through websites or listservs

15. General: comments that provided overarching opinions, or general impressions of a given essential service, not otherwise able to be put in a specific category and not tallied

Appendix VI:

Resources Identified by Stakeholders to Address Issues in the Public Health System in Oregon

General resources

- Tobacco Quit Line
- State Public Health Lab
- Senvoy (lab specimen transportation/delivery system)
- Oregon Public Health website
- Social media campaigns
- Health communications office
- Early Learning Council
- Clean Indoor Air Act
- Public Health Measures
- 2010 Oregon Isolation and Quarantine Bench Book
- Coordinated Care Organizations (CCOs)
- Oregon Care COOrdinatioN (CaCoon) Program
- 2-1-1 info access system
- School-based Health Centers (SBHCs)
- Oregon Healthy Kids
- Section 317 funds
- Oregon MPH Program

Reporting and data systems

- ORPHEUS
- Electronic lab reporting system
- Phoenix and ELHS reporting systems/programs
- Behavioral Surveys (BRFSS, OHT, PRAMS)
- ALERT IIS - Oregon Immunization Registry

Meetings/communication systems

- Monthly calls with program directors for emergency preparedness activities, plans and events
- TB program quarterly meetings
- Coalition of Local Health Officials (CLHO), including various CLHO committees
- HAN system
- IPAT meetings

Reports and data summaries/communications

- Annual vital stats reports
- CD Summary

- Annual Communicable Disease reports

- Monthly newsletter from Acute and Communicable Disease Program

- The "monthly epidemiology report" for counties

- County-level reports

Additional resources, not mentioned by stakeholders

- Oregon Geospatial Enterprise Office (GEO)

- Oregon Office of Equity and Inclusion

- Oregon Health Policy and Research

- Oregon Education Investment Board

- Oregon Office of Rural Health at Oregon Health & Science University

Appendix VII:

Percent of LHDs in Oregon that perform selected activities and services, NACCHO Profiles, 2010

Service	
Adult Immunization	100%
Child Immunization	100%
HIV/AIDS Screening	97%
Other STDs Screening	97%
Other STDs Treatment	97%
Tuberculosis Treatment	97%
MCH Home Visits	97%
Tuberculosis Screening	94%
Tobacco Prevention	94%
Communicable/Infectious Disease Surveillance	92%
Vital Records	91%
Family Planning	91%
WIC	91%
Smokefree Ordinances Regulation	88%
Campground and RV Regulation	85%
Hotels/Motels Regulation	85%
Public Swimming Pools Regulation	85%
Food Service Establishments Regulation	85%
Food Safety Education Activities	85%
Schools/Daycares Regulation	82%
Outreach and Enrollment for Medical Insurance (including Medicaid)	82%
Nutrition Promotion	79%
Children's Camps Regulation	79%
Environmental Health Surveillance	78%
Public Drinking Water Regulation	75%
Chronic Disease Programs Prevention	73%
Unintended Pregnancy Prevention	70%

Service	
Maternal and Child Health Surveillance	63%
Physical Activity Promotion	61%
High Blood Pressure Screening	50%
School–based Clinics	48%
Syndromic Surveillance	46%
Laboratory Services	45%
Cancer Screening	41%
Chronic Disease Surveillance	41%
School Health	41%
Behavioral Risk Factors Surveillance	37%
Lead Inspection Regulation	34%
Indoor Air Quality Activities	31%
Correctional Health	30%
Substance Abuse Prevention	30%
Cardiovascular Screening	29%
HIV/AIDS Treatment	28%
Prenatal Care	28%
Tobacco Retailers Regulation	28%
Diabetes Screening	27%
Injury Surveillance	26%
Blood Lead Screening	25%
Oral Health Services	25%
Solid Waste Disposal Sites Regulation	25%
Groundwater Protection Activities	25%
Surface Water Protection Activities	25%
EPSDT	22%
Behavioral/Mental Health Services	22%
Substance Abuse Services	22%
Injury Prevention	22%
Mobile Homes Regulation	22%
Septic Systems Regulation	22%
Private Drinking Water Regulation	22%
Health–related Facilities Regulation	22%
Asthma Prevention and/or Management	22%
Violence Prevention	21%

Service	
Mental Illness Prevention	**21%**
Well Child Clinic	**19%**
Pollution Prevention Activities	**19%**
Comprehensive Primary Care	**16%**
Solid Waste Haulers Regulation	**16%**
Medical Examiner's Office	**16%**
Housing Inspections Regulation	**13%**
Vector Control Activities	**13%**
Hazardous Waste Disposal Activities	**13%**
Collection of Unused Pharmaceuticals Activities	**13%**
Food Processing Regulation	**12%**
Air Pollution Control Activities	**12%**
Animal Control	**9%**
Occupational Safety and Health	**9%**
Obstetrical Care	**9%**
Hazmat Response Activities	**6%**
Noise Pollution Control Activities	**6%**
Emergency Medical Services	**6%**
Veterinarian Public Health Activities	**6%**
Cosmetology Businesses Regulation	**3%**
Radiation Control Activities	**3%**
Land Use Planning Activities	**3%**
Home Health care	**0%**
Body Art Regulation	**0%**
Milk Processing Regulation	**0%**

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