2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	Oregon
Population Size:	4,236,400

1. Describe the overarching testing strategy in your state or jurisdiction.

According to the 2019 Annual Oregon Population Report, Oregon's population is 4,236,400. In order to test 2% of our population per month, we must build capacity to test 84,728 people per month. In order to meet this target, the Oregon Health Authority and the Oregon State Public Health Laboratory (OSPHL) have partnered with local public health authorities (LPHAs), healthcare systems, academic institutions, commercial laboratories and retail sites. Through these partnerships, we have created a network of laboratories which can perform up to 140,000 tests per month. Broadly, our testing strategy assumes that patients with health care access (i.e. insurance) will be tested through this existing access, while patients without access (i.e. without insurance), estimated at 7.2% of Oregonians, will have COVID-19 testing subsidized through ELC Enhancing Detection supplemental funding.

On May 1, 2020, the Oregon Health Authority published its updated COVID-19 Strategic Testing Plan for Oregon recommending that health care providers test all people with symptoms consistent with COVID-19. In cases of limited resources, this plan prioritized testing in the following at-risk populations: workers who provide direct care or service; residents, staff, children or others in a care facility or group living setting; essential frontline workers; patients 60 years and older; patients with underlying medical conditions; patients who identify as black, African American, Latinx, Hispanic, American Indian/Alaska Native, Pacific Islander or as having a disability; patients from linguistically diverse populations; pregnant women; patients requiring hospitalization; and patients with exposure to a suspect or confirmed COVID-19 case. The COVID-19 Strategic Testing Plan will be revised as our testing strategy evolves and key stakeholders will be notified of updates to this document by health alert network emails.

The Oregon State Public Health Laboratory (OSPHL) has been designated the priority laboratory in Oregon. The OSPHL is capable of testing 600 specimens per day with two Panther instruments, six ABI Fast Dx instruments and two Thermo Fisher QuantStudios. Testing at OSPHL has been prioritized for public health surveillance, at-risk and vulnerable populations without access, and outbreak response. The CDC SARS-CoV-2 molecular assay has been used since Oregon's first case was identified at the OSPHL on February 28, 2020. In order to rapidly scale up COVID-19 testing, the OSPHL has validated several extraction platforms, including the QiASymphony, the QiaCube, the Roche MagNApure Compact, manual extraction QiAmp RNA Mini. The OSPHL has validated the Agpath Enzyme as a back-up to the TaqPath Mastermix supplied by the CDC. In response to supply chain shortages, the OSPHL validated the use of saline for viral transport, allowing for continuity of testing capacity in the absence of essential supplies. The OSPHL intends to use the CDC SARS-CoV-2/influenza multiplex assay when it becomes available as well as the BioFire Respiratory 2.1 Panel with SARS-CoV-2 during the 2020-2021 influenza season. The OSPHL will continue to incorporate new COVID-19 assays as their value is assessed by the U.S. Food and Drug Administration and guidelines for their use evaluated.

In order to effectively increase capacity across Oregon, we will leverage the Regional Health Care Coalition (RHCC) structure and create new public-private partnerships to provide testing at non-traditional sites. This testing framework will expand our reach to at-risk populations and address

disparities, ensuring equitable statewide access to testing. There are five RHCCs in Oregon following the Area Trauma Board Advisory Regions that are in statute, which together cover seven Healthcare Preparedness Program (HPP) regions. Each RHCC consists of membership from four mandatory sectors: local public health, emergency medical services (EMS), hospitals, and other healthcare systems. As part of the COVID-19 statewide hospital surge response, and building upon the Infection Control Assessment and Response (ICAR) Centers of Excellence model developed during the Ebola response, one hospital per region has been designated as a regional hospital and functions as an Emergency Transfer Management System (ETMS). We will provide incentive funds to each regional hospital to lead and coordinate mobile testing in non-medical settings in collaboration with EMS and local public health authorities.

Each regional hospital will be responsible for securing the requisite resources for specimen collection, including structural equipment (e.g., tents), personnel, personal protective equipment, and testing supplies. The regional hospital will also be responsible for establishing and implementing point-of-care (POC) testing or, alternatively, shipment of collected specimens to the appropriate regional laboratories, based on up-to-date information about result turn-around times. The selection of types and locations of testing sites will complement the coverage provided by the contracted pharmacy networks (see below), and be responsive to outbreaks affecting vulnerable populations, such as residents in long-term care facilities, homeless persons, incarcerated/detained persons, migrant and seasonal farm workers, and food processing plant employees. Testing sites may include facilities that house vulnerable populations, and other non-traditional venues such as convention centers, community centers, places of worship, retail settings, food pantries and drive-through testing sites. Importantly, some of Oregon's regional hospitals have already begun deploying mobile testing sites.

In order to effectively increase testing capacity across Oregon, we will leverage the Regional Health Care Coalition (RHCC) structure and create new public-private partnerships to provide testing at non-traditional sites. This testing framework will expand our reach to at-risk populations and address disparities, ensuring equitable statewide access to testing. There are currently five RHCCs in Oregon following the Area Trauma Board Advisory Regions that are in statute, which together cover seven Healthcare Preparedness Program (HPP) regions. Two additional RHCCs will be created such that each of the seven HPP regions are represented by an RHCC. Each RHCC consists of membership from four mandatory sectors: local public health, emergency medical services (EMS), hospitals, and other healthcare systems. As part of the COVID-19 statewide hospital surge response and building upon the Infection Control Assessment and Response Centers of Excellence model developed during the Ebola response, one hospital per region has been designated as a regional hospital and functions as an Emergency Transfer Management System (ETMS). Based on preliminary discussions, we have identified seven health care systems to serve as RHCC Testing Partners for each HPP region. Some of these partners have been designated as regional hospitals that contribute to the COVID-19 ETMS, while others currently serve as Oregon's ICAR Centers of Excellence.

Each RHCC Testing Partner will be responsible for securing the requisite resources for specimen collection, including structural equipment (e.g., tents), personnel, personal protective equipment (PPE), and testing supplies. The RHCC Testing Partner will also be responsible for establishing and implementing point-of-care (POC) testing or, alternatively, shipment of collected specimens to the appropriate regional laboratories, based on up-to-date information about result turn-around times. The selection of testing employed and the types and locations of testing sites will be responsive to outbreaks affecting vulnerable populations, such as residents in long-term care facilities, homeless persons,

incarcerated/detained persons, migrant and seasonal farm workers, and food processing plant employees. Testing sites may include facilities that house vulnerable populations, and other non-traditional venues such as convention centers, community centers, places of worship, retail settings, food pantries and drive-through testing sites. Importantly, some of Oregon's regional hospitals have already begun deploying mobile testing sites. Each RHCC Testing Partner will be asked to submit a COVID-19 Regional Testing Approach by October of 2020.

To further support this non-traditional component of our testing strategy, OHA is coordinating with commercial partners to launch additional non-traditional testing sites and ensure compliance with federal and state laws. The adoption of temporary rule OAR 333-024-3000 allows registered Oregon pharmacists to order and perform COVID-19 POC testing (Abbott ID, Xpert Xpress, and Accula SARS-CoV-2). The OSPHL has assisted multiple organizations with navigating the complex regulatory requirement for clinical laboratories including universities, pharmacies, and commercial entities. The OSPHL will continue to provide expertise regarding clinical laboratory regulation for non-traditional laboratories as opportunities arise.

The OSPHL will play a critical role in the coordination of COVID-19 testing outside of its laboratory. The OSPHL has coordinated access to testing resources directed by Health and Human Services for allocation to the state. These include swabs and transport media, 13 Thermo Fisher COVID-19 Workflow kits and 15 Abbott ID NOW instruments and test kits. The Abbott ID NOW instruments were distributed to small hospitals and clinics in order to improve testing access for rural populations, while the Thermo Fisher Workflow kits were sent to larger population centers to strategically increase their testing capacity. Since early March of 2020, the OSPHL has been engaged in frequent COVID-19 conference calls with several of the major hospital laboratories in Oregon including Providence Regional Laboratory, Kaiser Permanente Regional Laboratory, Legacy Health, and the Oregon Health & Science Laboratory to strategize testing expansion in Oregon. This partnership has evolved into a Clinical Laboratory Testing Consortium currently consisting of 13 clinical laboratories, representing most of Oregon's health care systems and academic institutions. The OSPHL has worked with this laboratory consortium to monitor and address supply-chain issues, which have been a significant barrier for all laboratories throughout the pandemic. The Clinical Laboratory Testing Consortium will meet at least weekly to evaluate COVID-19 testing strategies, testing capacity and test characteristics, identify supply chain issues and share resources. Testing supply inventory will be tracked and reported to the OHA and the Governor's office. The OSPHL has identified all instrument platforms in Oregon, including POC instruments, and worked with each laboratory to validate COVID-19 assays on various instruments and will continue to provide this service to laboratories across Oregon.

The primary focus of COVID-19 testing in Oregon at this time is diagnostic; however, we have also developed a robust serosurveillance protocol to estimate the cumulative incidence of SARS-CoV-2 infection in Oregon. Through funding from the CDC Crisis Cooperative Agreement, we are currently conducting a biphasic serosurveillance study. The first phase of this study, a convenience sample, is occurring now; OSPHL will test 900 samples that are currently being collected from 18 medical facilities throughout Oregon between May 11 and June 15, 2020, for SARS-CoV-2 IgG antibodies utilizing the Abbott assay. The second phase of this study, a cluster randomized sample by census tract, will occur in August, 2020, and will test at least 1,100 samples for IgG antibodies. OHA is partnering with OHSU to develop a Dried Blood Spot Assay (DBSA) in order to conduct the second phase of the study by mail. If the DBSA is not developed in time or doesn't meet adequate thresholds for sensitivity and specificity,

public health nurses will travel door-to-door to collect samples using phlebotomy. We plan to utilize ELC Enhancing Detection funding in order to expand serosurveillance in Oregon to a minimum of 1000 samples quarterly in order to assess the cumulative incidence of COVID-19 longitudinally.

In order to monitor progress toward jurisdictional goals, OHA and OSPHL will communicate at least weekly with local healthcare systems, participate in weekly calls with LPHAs, and participate in monthly calls with local health officers. This communication will focus on monitoring test kits, supply and reagent inventory, staffing levels, and other regional support needs. Supply-chain issues will be addressed in order to ensure equitable testing access throughout the state of Oregon. The COVID-19 Strategic Testing Plan will be revised as testing strategy evolves and key stakeholders will be notified of updates to this document by health alert network emails.

Table #1a: Number of individuals planned to be tested, by month

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Diagnostics*	65,000	85,000	100,000	100,000	100,000	100,000	100,000	100,000	750,000
Serology		900		1,100			1,200		3,200
TOTAL	65,000	85,900	100,000	101,100	100,000	100,000	101,200	100,000	

*Each jurisdiction is expected to expand testing to reach a minimum of 2% of the jurisdictional population.

Table #1b: Planned expansion of testing jurisdiction-wide

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
Virginia Garcia Memorial Health Center	Federally Qualified Health Center	LabCorp	22	0	Serving Spanish speaking communities in Washington and Yamhill Counties through 17 clinics and drive-thru screening sites in Washington and Yamhill Counties.
La Clinica	Community-based	LabCorp	10	0	Prioritizes migrant, Hispanic, uninsured, homeless, or those who do not have a primary care provider.
Walgreens Testing site 6215 SE Tualatin	Drug store or pharmacy	PWNHealth	0	0	Drive Thru Site. Testing will be available at no cost to eligible individuals who meet criteria established by the Centers

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
Valley Hwy, Hillsboro OR					for Disease Control and Prevention (CDC) along with state and federal guidelines.
Sky Lakes Medical Center	Hospitals or clinical facility	Labcorp; Qwest	70	0	Drive-up test site for previously symptomatic patients or tose with suspected exposure to COVID-19, any adult can be tested without a provider's order.
Pioneer Memorial Hospital - Heppner	Hospitals or clinical facility	In house; OSPHL;LabCorp;Insight Lab;	3	0	Serves the Morrow County area as well as a Long-term care facility located at the hospital.
Klamath Health Partnership	Community-based	Labcorp	73	0	Remote testing sites in Merrill, Malin, Chiloquin, Bonanza
Klamath County Public Health	Hospitals or clinical facility	LabCorp	0	0	Mobile and satellite testing sites for migrant farm workers in collaboration with Klamath Health Partnerships
St. Charles Medical Center - Bend, Madras, Redmond, Prineville,	Hospitals or clinical facility	In house; Univ of Washington	70	0	Serves the Central Oregon area.

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
Sisters, and LaPine					
Good Shepherd - Hermiston	Hospitals or clinical facility	OSPHL/TriCity Lab/LabCorp	20	0	Serves Hermiston, Oregon (population 16,300) as well as several outlying towns with a total service population of over 35,000 in Umatilla and Morrow counties. These are rural communities with an agriculture-based economy.
Mosaic Medical Mobile Unit	Community-based	St. Charles Medical Center		0	Provides primary care to Central Oregonians primarily on the Oregon Health Plan or uninsured.
Douglas County Health Department	Drive-thru testing site	Quest Diagnostic and LabCorp	43	0	Serves population in Douglas County.
Grant County Health Department	Hospitals or clinical facility	LabCorp	1	1	Serving the populations of Grant County.
One Community Health	Hospitals or clinical facility	LabCorp (primary) and Quest Diagnostic	15	1	Farm Workers Clinics in Mt. Hood, The Dalles, Hood River
Asante	Hospitals or clinical facility	In house	150	0	Anyone in community can be tested with or without insurance using drive-

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
					thru, mobile or in house. Serves Southern Oregon.
One Community Health	Federally Qualified Health Center	Labcorp, Quest Diagnostic, Providence	20	12	Clinics in Hood River and Wasco County serving Spanish/English patients. Planned drive-up sites in Cascade Locks, Odell, and Parkdale and Farm Worker Clinics in Hood River, Mt. Hood, and The Dalles.
Providence Medford Medical Center	Drive-thru testing site	N/A	175	0	Services the Southern Oregon Community.
Malheur County Health Department	Drive-thru testing site	Quest Diagnostic	91	0	Drive up testing on different days at differenct sites resulted in 91 specimen collections.
AFC Urgent Care	Drive-thru testing site	LabCorp	35	35	In partnership with public high schools, testing in Oregon City, Beaverton
Oregon Health & Science University	Hospitals or clinical facility	In house for diagnostic; serology sent to ARUP in Salt Lake City - 5 total	350		Serves communitiess throughout Oregon with drive-thru COVID clinics in Hillsboro and in North Portland, no appointment or provider referral necessary

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Lane County Public Health	Hospitals or clinical facility	Mckenzie Willamette Hospital	100	0	Serves population of Lane County.
McKenzie Willamette Hospital	Hospitals or clinical facility	In house	90	0	Serves the Willamette Valley region.
Good Samaritan Regional Medical Center	Hospitals or clinical facility	Legacy Hospital	30	0	Serves community members in Benton, Lincoln, and Linn Counties.
Crush the Curve, Idaho	Community-based	Univ of Washington; LabCorp	400	0	Help as many people as they can around them. Provided free testing for food processing plant/farms in Weizer and Ontario. for outbreak situation and close contacts in Ontario only.
Asher Community Health Center	Federally Qualified Health Center	Quest Diagnostic and Interpath	2	0	Only health care provider in county with an outpatient primary clinic in Fossil and satellite clinics in Mitchell and Spray. High population of residents at or below 200% of the Federal Poverty Line. Serving all residents which includes: Hispanic/Latinx American Indian, Asian, and Pacific Islander.

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
Community Health Centers of Benton and Linn Counties	Federally Qualified Health Center	Quest	3	0	Serves vulnerable populations in Benton and Linn Counties.
Coastal Family Health Center	Federally Qualified Health Center	LabCorp			Provides services to community regardless of ability to pay.
Waterfall Community Health Center	Federally Qualified Health Center	LabCorp	1	0	Safety-net clinic in North Bend / Coos Bay serving the people of Coos, Curry and Douglas counties on the Southern Oregon Coast.
La Pine Community Health Center	Federally Qualified Health Center	Interpath Lab	2	0	Providing services to the underserved population of the La Pine community area.
Rogue Community Health Center	Federally Qualified Health Center	Asante/Providence		0	Serving the communities in Ashland, Butte Falls, Medford, Prospect and White City.
Siskiyou Community Health Centers	Federally Qualified Health Center	Labcorp and local hospital (Asante)	18	0	Serving communities in the Grants Pass and Cave Junction areas.

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
CHCs of Lane County	Federally Qualified Health Center	McKenzie Willamette Hospital	100	0	Serving communities in the Lane County area.
White Bird Clinic	Federally Qualified Health Center	Quest Diagnostic and testing center at McKenzie Willamette Hospital	2	0	Provides services to all members of the Eugene area community.
Northwest Human Services, Inc.	Federally Qualified Health Center	In house	5	0	Serves patients at or below the federal poverty level including homeless individuals and at-risk youth in the West Salem area.
Columbia River Community Health Services	Federally Qualified Health Center	Interpath Lab	1	0	Provides services to everyone in their community.
Central City Concern	Federally Qualified Health Center	LabCorp	5	0	Provide services to adults and families in the Portland Metro area experiencing homelessness, poverty, and addiction.
Multnomah County Health Department	Federally Qualified Health Center	OSPHL; Quest; Molecular Lab for self-administered tests.		0	Provide services to residents of Multnomah County. Has pilot project for East County which resulted in 130-150 tests and is interested in expanding this pilot project to other high risk groups. Partnering with Portland Fire

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
					for a stand up project. FQHC tests patients in clinic setting.
National American Rehabilitation Association fo the NW	Federally Qualified Health Center	LabCorp	1	2	Serves American Indians and Alaska Native people.
St Anthony Hospital Pendleton	Hospitals or clinical facility	Interpath		0	Offering drive-thru testing services, or outpatient clinics for testing. Check with your health care provider for details.
Samaritan Health Services	Community-based	Legacy Hospital		0	All symptomatic patients especially high risk health care workers, first responders, patients in care facilities or other congregate living settings, patients over age 60, pregnant women, patients with underlying meedical conditions, immunosuppressed patients, minorities, and front-line service workers such as grocery, delivery and transportation employees.
Kaiser Regional Laboratory	Hospitals or clinical facility		250	200	All symptomatic patients especially high risk health care workers, first responders, patients in care facilities or

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					other congregate living settings, patients over age 60, pregnant women, patients with underlying meedical conditions, immunosuppressed patients, minorities, and front-line service workers such as grocery, delivery and transportation employees.
Providence Regional Laboratory	Hospitals or clinical facility		600		All symptomatic patients especially high risk health care workers, first responders, patients in care facilities or other congregate living settings, patients over age 60, pregnant women, patients with underlying meedical conditions, immunosuppressed patients, minorities, and front-line service workers such as grocery, delivery and transportation employees.
Kashi Laboratories	Hospitals or clinical facility		30	0	Serving cancer patients.
Women Healthcare Associates	Hospitals or clinical facility		200	0	Serving pregnant women

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
Legacy Health	Hospitals or clinical facility		550	200	All symptomatic patients especially high risk health care workers, first responders, patients in care facilities or other congregate living settings, patients over age 60, pregnant women, patients with underlying meedical conditions, immunosuppressed patients, minorities, and front-line service workers such as grocery, delivery and transportation employees.
University of Oregon	Hospitals or clinical facility		0	0	Currently working to imlement large scale testing for Eugene, OR.
Oregon State Public Health Laboratory	Other		600	200	Uninsured, Medicaid, House-less population; long term care facilities, and essential personnel to support outbreak investigations.
Interpath Laboratories	Other		350	200	Incarcerated individuals, Medicaid patients,
Salem Health Laboratories	Hospitals or clinical facility		30	200	All symptomatic patients especially high risk health care workers, first responders, patients in care facilities or other congregate living settings, patients over age 60, pregnant women,

Name of testing entity	**Testing venue** (select from drop down)	**Performing Lab** (if different from testing entity)	**Daily diagnostic through-put**	**Daily serologic through-put**	**Specific at-risk populations targeted** (list all)
					patients with underlying meedical conditions, immunosuppressed patients, minorities, and front-line service workers such as grocery, delivery and transportation employees.
Santium Hospital	Hospitals or clinical facility		13		All symptomatic patients especially high risk health care workers, first responders, patients in care facilities or other congregate living settings, patients over age 60, pregnant women, patients with underlying meedical conditions, immunosuppressed patients, minorities, and front-line service workers such as grocery, delivery and transportation employees.

2020 Direct Expansion of SARS-COV-2 Testing by Health Departments

2. Describe your public health department's direct impact on testing expansion in your jurisdiction.

The Oregon Health Authority and the Oregon State Public Health Laboratory (OSPHL) have partnered with healthcare systems, academic institutions, commercial laboratories and retail sites to create a network of laboratories capable of performing up to 140,000 COVID-19 tests per month. Through these critical partnerships, we will meet the goal of testing at least 2% of Oregon's population per month.

As detailed under question 1, we have updated our COVID-19 Strategic Testing Plan to recommend that all patients with symptoms be tested. This alone has resulted in a dramatic increase in testing by our healthcare systems and academic institutions. In order to further increase capacity across Oregon, we will leverage the Regional Health Care Coalition (RHCC) structure and create new public-private partnerships to provide testing at non-traditional sites. And, the OSPHL has increased its COVID-19 testing capacity while stewarding laboratory best practices across the state. Since early March, the OSPHL has been engaged in daily COVID-19 conference calls with a consortium of the major hospital laboratories in Oregon including Providence Regional Laboratory, Kaiser Permanente Regional Laboratory, Legacy Health, and the Oregon Health & Science Laboratory to strategize testing expansion in Oregon. The OSPHL has identified all instrument platforms, including point-of-care (POC) instruments, and worked with each laboratory to validate COVID-19 assays on various instruments. Testing volume and testing capacity are a routine part of every call and communicated to the Governor's office.

The OSPHL has worked with this hospital laboratory consortium to address supply-chain issues, which have been a significant barrier for all laboratories throughout the pandemic. OSPHL has played a key role in coordinating access to testing resources directed by Health and Human Services for allocation to the state. These include nasopharyngeal swabs and viral transport media, 13 Thermo Fisher COVID-19 Workflow kits and 15 Abbott ID NOW instruments and test kits. The Abbott ID NOW instruments were distributed to small hospitals and clinics in order to improve testing access for rural populations, while the Thermo Fisher Workflow kits were sent to larger population centers to strategically increase their testing capacity. The OSPHL has two Panther instruments and has secured an initial distribution of 20,000 Aptima RUO kits. Currently, the OSPHL has the capacity to perform at least an additional 600 tests/day and is working with six hospital partners and two commercial labs who use Panther instruments to secure supplies and support sharing kits with them as supplies allow.

Using surveillance data from COVID-19 cases, hospitalizations, and deaths, Oregon has identified disproportionately high rates of infection in Hispanic, Black, American Indian/Alaska Native, and Pacific Islander populations; the majority of our hospitalizations have occurred in individuals over the age of 60 with underlying conditions; and the majority of deaths have occurred in long term care facilities (LTCFs). Of the 215 outbreaks between February 26 and May 25 of this year for which setting is known, 76 (35%) occurred in LTCFs, 62 (29%) in workplace settings other than healthcare settings, 16 (7%) in healthcare settings and 14 (7%) in correctional facilities. Based on these data, we have developed Oregon's COVID-19 Strategic Testing Plan, which encourages testing for all symptomatic individuals and prioritizes testing access for at-risk populations (detailed under question 1). As described in Activity 7 of the ELC CARES supplement, we will develop a predictive model for identifying counties at increased risk for COVID-19

infection, morbidity and mortality based on county-level determinants of disease. We will use the social vulnerability index and other data available from the American Community Survey (ACS) such as population density, urban/rural classification, and indicators of socioeconomic status to create a COVID-19 Vulnerability Index for the state to help us further define regional variations in populations at risk in Oregon. Given the density of the populations living and working in LTCFs, as well as the vulnerable nature of these populations, identifying asymptomatic individuals who may be transmitting virus is a high priority. As a result, in response to any case in a LTCF, we test every resident and staff member of that facility. And, on June 12, 2020, Governor Kate Brown released a Long Term Care Facility Testing Plan, which states that all Oregon long-term care facility (LTCF) residents will be screened once by September 30, 2020 and all LTCF staff will be tested monthly.

The expansion of testing in Oregon will provide testing access to all symptomatic individuals in a timely fashion so that infectious individuals can be promptly isolated and their exposed contacts quarantined. By developing capacity to offer testing at non-traditional laboratory sites, we will expand our reach to at-risk and vulnerable populations lacking healthcare access. Using the data from our predictive model, we will focus on building capacity in our most vulnerable counties while ensuring that access is available statewide. It will be critical to intervene quickly to interrupt outbreaks of COVID-19 in high-risk settings such as LTCFs, correctional facilities, migrant and seasonal farmworker camps, and food processing plants. We have already expanded testing efforts in these settings based on needs identified by our outbreak data. As adults return to work and children to daycare and school, we will actively monitor these settings as well as group and congregate care facilities so that testing events can be planned in advance and quickly implemented for residents and employees as soon as symptomatic children, staff, and residents are identified.

We will expand daily stakeholder forums with state agencies, LPHAs, laboratories, and healthcare systems to identify barriers to efficient testing and supply-chain issues and work collaboratively to resolve barriers. The information gathered from our partners will be utilized to update the COVID-19 Strategic Testing Plan, request or redirect resources, and address inequities. Current barriers to testing expansion include reagent, media, and supply availability. Future equipment purchases will be thoroughly researched in order to prioritize the purchasing of equipment without proprietary media in order to prevent shortages. An anticipated future barrier is that as influenza season approaches, the need for influenza testing will directly impact COVID-19 testing capacity. Laboratories will need multiplexing equipment which allows for co-testing. Information technology barriers include small or rural laboratories which are unable to report testing results electronically. The Oregon Health Authority will create an electronic reporting system for these labs to ensure timely and accurate reporting.

Oregon funded a biphasic serosurveillance study through the CDC Crisis Cooperative Agreement as detailed under question 1. We plan to utilize ELC Enhancing Detection funding to expand serosurveillance in Oregon to a minimum of 1000 samples quarterly tested through OSPHL in order to assess the cumulative incidence of COVID-19 longitudinally. Given the high specificity of the test, we will continue to utilize the Abbott SARS-CoV-2 IgG Assay. If seroprevalence in Oregon increases to a threshold at which antibody testing would result in a reasonable false positive rate, we will consider expanding the use of serology to additional settings, such as group and congregate living facilities.

Our COVID-19 core surveillance system will track: (1) overall COVID-19 laboratory test percent positivity; (2) COVID-19 laboratory test positivity in symptomatic patients presenting with COVID-like-illness

(CLI)/influenza-like-illness (ILI) as well as asymptomatic patients at ESSENCE facilities; (3) the proportion of CLI presenting to ESSENCE providers; (4) SARS-CoV-2 in wastewater treatment facilities at 30 sites across Oregon; (5) COVID-19 hospitalizations in the tri-county region as a member of the CDC EIP's COVID-NET hospitalization surveillance system; and (6) COVID-related deaths. This core surveillance system has been designed to detect even small increases in SARS-CoV-2 activity throughout the state of Oregon. The following public health indicators are published on our website daily: (1) COVID-19 laboratory test percent positivity; (2) the proportion of CLI presenting to ESSENCE providers; (3) the number of incident cases; (4) the proportion of cases not traced to a known source; (5) the number of incident cases not traced to a known source; and (6) the number of hospitalized cases. With the support of the CDC Crisis Cooperative Agreement and ELC CARES, we have implemented an ILINet community surveillance expansion for COVID-19. We are currently collecting 200 nasopharyngeal samples for PCR testing from 14 geographically representative sites across Oregon; 100 of these samples come from symptomatic patients with CLI or influenza-like illness and 100 come from asymptomatic patients. This system will be expanded to collect a total of 300 samples per week in June of 2020, and a proportion of these swabs from symptomatic patients will be co-tested for influenza and other respiratory viruses; this data will monitor COVID-19 trends over time and provide invaluable information regarding coinfection. With the support of EIP and ELC CARES, we will implement SARS-CoV-2 wastewater surveillance in order to identify new disease activity in more rural areas of the state. This robust COVID-19 surveillance system will monitor disease activity in all of Oregon's populations, including our most vulnerable residents.

OHA will assemble daily task teams to relay personnel and procurement needs. Procurement of supplies and services will be streamlined through the Finance Section for a 24- to 48-hour response time. Contracts will be streamlined with key agency staff and the Office of Contracts and Procurement. Currently, contracts can take several months to process. The goal is to reduce the contract processing time to less than three weeks. Staffing requests will be streamlined through the Oregon Department of Human Services to expedite hiring. Currently, it can take several months to hire talent. We will streamline the process by coordinating with key agency staff to significantly reduce recruitment time.

Table #2: Planned expansion of testing driven by public health departments

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Number of additional* staff to meet planned testing levels	0	0	3	3	0	0	0	0	6
FOR DIAGNOSTIC TESTING									
How many additional* testing equipment/ devices are needed to meet planned testing levels? (provide an estimated number, and include platform details in narrative above)	0	0	0	0	2	0	0	0	2

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Volume of additional swabs needed to meet planned testing levels[++]	20,000 nasopharyngeal swabs	20,000 nasopharyngeal swabs	20,000 nasopharyngeal swabs	20,000 nasopharyngeal swabs	20,000 nasopharyngeal swabs	30,000 nasopharyngeal swabs	40,000 nasopharyngeal swabs	50,000 nasopharyngeal swabs	0
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels[++]	1,000 Aptima multitest collection Kits; 20,000 VTM;	12,000 Aptima multitest collection Kits; 20,000 VTM;	12,000 Aptima multitest collection Kits; 20,000 VTM;	12,000 Aptima multitest collection Kits; 20,000 VTM;	12,000 Aptima multitest collection Kits; 20,000 VTM;	20,000 Aptima multitest collection Kits; 30,000 VTM;	30,000 Aptima multitest collection Kits; 40,000 VTM;	41,000 Aptima multitest collection Kits; 50,000 VTM;	0

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - Hologic panther; 100k/day - Thermofisher)	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 1,000 ; Qiagen Collection Kits 6000; Thermofisher taqpath COVID-19 workflow kit = 50,000	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 12,000, Thermofisher taqpath COVID-19 workflow kits = 150,000;	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 12,000; Thermofisher taqpath COVID-19 workflow kit = 80,000; Roche Cobas 6800 = 60,000; BD Max = 75,000	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 12,000; Thermofisher taqpath COVID-19 workflow kit = 80,000; Roche Cobas 6800 = 60,000; BD Max = 75,000	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 12,000; Thermofisher taqpath COVID-19 workflow kit = 80,000; Roche Cobas 6800 = 60,000; BD Max = 75,000	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 12,000; Thermofisher taqpath COVID-19 workflow kit = 80,000; Roche Cobas 6800 = 60,000; BD Max = 75,000	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 12,000; Thermofisher taqpath COVID-19 workflow kit = 80,000; Roche Cobas 6800 = 60,000; BD Max = 75,000	Biomerieux Biofire = 5000, Cepheid Xpert = 5000; Abbott ID now = 5000; Hologic Panther = 12,000; Thermofisher taqpath COVID-19 workflow kit = 80,000; Roche Cobas 6800 = 60,000; BD Max = 75,000	Biomerieux Biofire = 40,000, Cepheid Xpert = 40,000; Abbott ID now = 40,000; Hologic Panther = 140,000; Thermofisher taqpath COVID-19 workflow kit = 680,000; Roche Cobas 6800=360,000; BD Max = 450,000
FOR SEROLOGIC TESTING									
Number of additional* equipment and devices	0	0		1	0	0	0	0	1

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
to meet planned testing levels									
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - Hologic panther; 100k/day - Thermofisher)	400 Abbott Architect IgG	2,000 Abbott Architect IgG	3,000 Abbott Architect IgG	4,000 Abbott Architect IgG	5,000 Abbott Architect IgG	6,000 Abbott Architect IgG	7,000 Abbott Architect IgG	8,000 Abbott Architect IgG	35,400 Abbott Architect IgG

* Report new monthly additions only, not cumulative levels

++ For May and June, only include needs beyond the supplies provided by FEMA. Report new monthly additions only, not cumulative levels.