Public Health Division
Emergency Support Function 8: Public Health and Medical Services

High-Impact Pathogen Plan of Operations
HIPPO

This plan replaces the 2008 Pandemic Flu Plan
Updated version: March 1, 2020

Record of Change

This Oregon High-Impact Pathogen Plan for Operations is subject to information updates and changes. This *Record of Change* documents modifications throughout the life of this document.

Change No.	Date	Description	Staff involved
001	May 2017	Consolidation and clarification of Concept of Operations (CONOP)	Torris, Burnette, Cieslak, Leman, Young, Beldavs, Powell, Peters, Nickla
002	December 2019	Incorporated input from comprehensive review by Health Security Preparedness and Response, Acute and Communicable Disease Program (ACDP), and Immunizations Program staff. Added Section 4.3.D, outlining use of Pharmacy-Public Health Memorandum of Understanding (MOU) during medical countermeasures response and Section 5, Communications	Garrott, Peters, Powell, Saito, Leman, Luther, Bash, Nickla
003	February 2020	Editing and clean up for release	Garrott, Allain, Gebbie

Background

Context for the development of the Oregon High-Impact Pathogen Plan for Operations

We live in a global village. Novel influenza and other communicable emerging pathogens such as Ebola virus or Middle East Respiratory Syndrome (MERS) could devastate communities if they develop the capacity for sustained person-to-person or vector-to-person transmission and are allowed to spread, unchecked. This plan reviews the nature and effective use of the various assets available within the Oregon Health Authority (OHA) Public Health Division (OPHD) to prepare for, detect, and mitigate spread of such pathogens, and prevent subsequent morbidity and mortality.

The plan will continue to evolve, incorporating lessons learned from relevant incidents, our evolving hazard vulnerability assessments, ongoing planning efforts, training and exercise activities, and federal guidance. This plan was developed by the Acute and Communicable Disease Prevention (ACDP) Section, the Health Security, Preparedness and Response Program (HSPR), the Oregon Immunization Program (OIP), and the Oregon State Public Health Laboratory (OSPHL) and incorporates CDC guidance.

Acknowledgements

The staff listed below are the subject matter experts and reviewers from the Oregon Health Authority-Public Health Division who assisted in developing and updating this plan.

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1 Purpose and Scope

1.1 Purpose

To inform local, state, tribal, and federal governments, relevant agencies and organizations, and other stakeholders of the assets OHA-OPHD has identified for use in planning for and identifying high-impact communicable pathogens, monitoring related health effects, and mitigating spread to limit the health burden from outbreaks of these pathogens. The plan further describes how these assets would be used in response to pathogens with specific characteristics and modes of transmission.

1.2 Scope

This plan outlines:

1) Strategies to recruit and consult advisors to the OPHD Director from the broader health community to guide public health response;

2) Criteria that could be used to determine whether a public health emergency should be declared, or the extent to which the *Oregon Crisis Care Guidance* (www.theoma.org/CrisisCare) should be implemented;

3) Considerations for epidemiological response and surveillance;

4) Guidance for laboratory testing, if available, before the high-impact pathogen in questions has been identified in Oregon, after it has been identified in an isolated region of Oregon, and once it is widespread;

5) How medical countermeasures and non-pharmaceutical interventions (including healthcare infection control strategies) would be used, based on availability of medical countermeasures and modes of transmission;

6) When the number of patients is limited, illness is anticipated to be severe, and resources are available, options for transport of patients suspected to be ill with a high-impact pathogen to an out-of-state hospital designated as a high-impact pathogen treatment facility; and

7) Assets for communication to key audiences and how they might be used.

2   Situations Triggering Plan Activation

This plan would be implemented primarily in the setting of an outbreak of a virulent communicable disease, either from person to person or through vector-mediated transmission, in which case fatality is 2% or higher, and in which, after review of available information in a Health Intelligence Briefing, the decision is made to implement. Planning for these diseases is best done by considering the route of transmission. Accordingly, non-pharmaceutical response activities are categorized based on whether the pathogen is transmitted through fine aerosols, through respiratory droplets, through contact transmission, or through particular vectors. Many infectious diseases can be transmitted by multiple routes. By preparing our healthcare systems to identify and manage these types of diseases, and helping our communities to mitigate spread, we will increase our ability to respond quickly, protect healthcare staff and other patients, and limit the rate of spread and the absolute burden of disease in our communities.

3 High-Impact Pathogen Response – Governance and Decision Support

3.1 Activation of Incident Management System

OPHD has multiple staff trained in the Incident Management System and uses the process regularly in exercises and incident response. Oregon Public Health Division (OPHD) will convene a health intelligence briefing in accordance with the Health Intelligence Briefing SOP as soon as possible after receiving information suggesting an imminent public health threat from a high-impact, communicable pathogen. An incident management team will be activated when warranted by the situation.

3.2 Convening of Medical Advisory Group

If indicated by the situation, a *Medical Advisory Group* (MAG) will also be convened by the Public Health Director and facilitated by the SHA or designee to advise OPHD on policy issues. The MAG will include representatives of the healthcare community, the Conference of Local Health Officials, relevant health professional organizations, and appropriate infectious disease subject matter experts, and will contain members from around the state. The MAG will advise the Public Health Director on policy issues using the process described in *Medical Advisory Group Charge – Purpose and Activity Templates*. As needed, sub-committees can be formed to address specific issues. In most responses to high-impact communicable pathogens, a standing *Technical Advisory Sub-committee* will be established to develop, review, and help finalize guidance related to clinical management, infection control, and non-pharmacological interventions.

3.3 Criteria of Declaration of a Public Health Emergency

The Public Health Director may request declaration of a public health emergency by the Governor under ORS 433.441, and can, in consultation with the MAG and the Governor's Office, make such a request, based on criteria described in *Criteria for Requesting Declaration of Public Health Emergency.*

3.4   Activation of the Oregon Crisis Care Guidance

The Public Health Director, based on metrics outlined in the *Oregon Crisis Care Guidance* (OCCG), page 12 can, in consultation with the MAG and the Governor, activate the OCCG for surge strategy implementation, or if surge strategies have been implemented and health systems are still overwhelmed, for implementation of crisis care triage strategies.

3.5   Request for Strategic National Stockpile Assets

Within the State of Oregon, only the Governor, or his/her designee, may formally request Strategic National Stockpile (SNS) assets from CDC. Criteria for requesting and receiving SNS assets is described in the *Oregon ESF-8 SNS Plan Annex*. If vaccination is part of the response, an SNS request would also likely trigger activation of the *Vaccine Education and Prioritization Plan*.

4   Oregon High-Impact Pathogen Response Tools

The following tools for response might or might not be applicable in response to outbreaks of a given pathogen. In each case, the OHA Incident Management Team (IMT) should determine availability and applicability. If a given tool is available and judged to be of value in response, IMT should pursue implementation.

4.1   Epidemiology and Surveillance

Tracking illness associated with the high-impact infection helps assess health burden, monitor the tempo and magnitude of the outbreak, and evaluate the effectiveness of control measures.

1)   Establish a case definition based on symptoms, exposure history, and epidemiology to guide surveillance and testing.

2)   Testing strategy

   a.   Sentinel period: No known cases in Oregon. Consider testing of any ill person meeting case definition.

   b.   Early introduction: Sporadic cases in Oregon. As allowed by resources, continue aggressive testing of those who meet case definition, including for patients in areas without previous cases.

   c.   Established epidemic: Cases widespread. Universal testing not indicated. Drive testing based on epidemiology (severe suspect cases, suspect cases believed to have exposed many others, etc.)

3)   Request MAG Technical Advisory Group to work with the IMT to develop guidance on testing recommendations; share guidance with clinicians in accordance with the Clinician Communications Plan.

4)   Use existing surveillance systems (ESSENCE, Electronic Death Reporting, ILI-Net) to assess burden from illness compatible with infection by the high-impact pathogen causing the outbreak.

5) As needed, use emergency administrative rules to require reporting of hospitalizations and deaths associated with the high-impact pathogen. This will help track and characterize serious illness and death associated with the outbreak, while not overwhelming surveillance system with reports of less severe illness.

4.2   Laboratory and Diagnostic Testing

Notification of emerging or high-risk pathogen detection outside of Oregon will likely be disseminated through information channels from CDC (e.g., Health Alert Network, Morbidity and Mortality Weekly Report, Epidemic Information Exchange (Epi-X)), the World Health Organization (WHO), the Laboratory Response Network (LRN), the Association of Public Health Laboratories (APHL), or by other distribution lists such as ProMed. Several staff in key positions within OHA currently subscribe to relevant distribution lists and would automatically receive important notifications of national or global emerging infectious disease threats.

Within Oregon, frontline sentinel clinical laboratories within the Oregon Laboratory Response Network would likely be the first to suspect or detect an emerging or high-risk pathogen through their diagnostic testing services. Sentinel clinical laboratories will report and transfer emerging or high-risk pathogens as required in the Oregon Revised Statutes 433.004 for disease reporting to OHA and will submit isolates to OSPHL.

The CDC, the Department of Defense (DoD), and the LRN work closely with the FDA to develop assays for emerging and high-risk pathogens and to obtain Emergency Use Authorizations (EUA) to quickly deploy developed tests (e.g., Ebola and Zika virus RT-PCRs) to LRN Reference Laboratories. The OSPHL is the only LRN Reference Laboratory in Oregon and maintains the capabilities to provide rapid presumptive molecular and confirmatory testing for many high-risk and emerging pathogens. OSPHL communicates regularly with the CDC and LRN to validate and operationalize newly developed tests.

If diagnostic tests do not exist or are not yet available for a particular emerging or high-risk pathogen, OSPHL and ACDP will monitor timelines for development and deployment from the CDC and LRN. If diagnostic testing exists, determine where testing is available, its sensitivity and specificity, requirements for specimen collection and shipping, capacity for testing, and expected timeline to receive results. Guidance around shipping and handling should be shared with the MAG Technical Advisory Group and posted on the OSPHL website. This information should be shared with clinicians and hospitals in accordance with

the *Clinician Communications Plan*.

All approved laboratory test methods must meet appropriate validation and verification requirements, but some may be temporarily waived if the assay is covered by an Emergency Use Authorization. ACDP will work closely with OSPHL to assure the specimen requirements for testing are understood for any newly developed assays including the proper collection, handling, and transport of acceptable sample types. OSPHL will provide ACDP with information regarding testing capacity, expected turn-around times, and sample rejection criteria.

4.3   Medical Countermeasures

Medical countermeasures are FDA-regulated medications or products. Some might be useful in specific public health emergencies involving a high-impact pathogen. Countermeasures can be acquired through a number of resource networks, including the normal pharmaceutical supply chain. The CDC-maintained Strategic National Stockpile (SNS) is another source of countermeasures that can be requested during an emergency. The SNS is a national repository of antibiotics, chemical antidotes, antitoxins, life-support medications, IV administration and airway maintenance supplies, and medical/surgical items. Criteria and procedures for requesting and receiving SNS assets can be found in the *Oregon ESF-8 SNS Plan Annex*.

4.3.A   Vaccine

1) If a relevant vaccine exists, assess quantity available to Oregon healthcare community. Possible sources include directly from manufacturers, commercial vendors/distributors, state stockpile if any, the Strategic National Stockpile, and appropriation of vaccine by the Governor (or, upon approval from the Governor, by the Public Health Director) for response during a declared emergency. As needed, activate the Vaccine Education and Prioritization Plan in accordance with ORS 433.040, OAR 333-48-0100 through 0030 and as outlined in *Vaccine Shortage Plan SOP 001*.

2) Determine priority groups, if any, for receipt of vaccine based on federal guidance, MAG and other subject matter expert input. Priority recipients might include essential personnel or groups at high risk for illness, based on exposure history or other objective characteristics.

3) Based on amount available and prioritization, allocate vaccine to tribes and counties. Refer to *Vaccine Shortage Plan SOP 002*, Allocation and Population Enumeration Methodology.

4) Arrange transport to county and tribal designated points of distribution. Depending on the scope of the emergency, distribution and transport of vaccine may be handled via existing CDC vaccine distribution channels or out of a state-run depot or warehouse with supporting state agencies such as Oregon Department of Transportation or the Oregon National Guard (reference *SNS Plan Annex*).

5) Supply guidance on vaccine storage and administration, as well as the relevant Vaccine Information Sheet to tribal and local health authorities receiving vaccine.

6) Provide guidance on tracking and inventory requirements for federal stockpile vaccines, which may include tracking inventory and doses administered in the ALERT Immunization Information System (IIS). Ensure that end users are enrolled with OHA and have appropriate methods in place for submitting data to ALERT IIS. The IMT should track and inventory all resource requests received through the ESF-8 Agency Operations Center (AOC), and assets distributed during the incident, using the Ops Center logistics system. SNS assets may have specific requirements around tracking and inventory management. (See the SNS Plan Annex.)

7) If vaccine is plentiful and resources allow, vaccine allocation can be expanded to include clinics, hospitals, pharmacies, and other vaccinators as appropriate. Consider recommending activation of county and tribal Point of Dispensing (POD) plans as outlined in the *POD Field Operations Guide* to speed uptake of the vaccine. In addition, OPHD is evaluating the utility and feasibility of developing a closed POD plan for OHA essential personnel.

4.3.B   Antibiotics or Antitoxins – Treatment or Prophylaxis

1) If medications effective against the pathogen exist, assess quantity available to Oregon healthcare community. Possible sources include commercial vendors, state stockpile if any, the strategic national stockpile, and appropriation of antibiotics by the Governor (or, upon approval from the Governor, by the Public Health Director) for response during a declared emergency in accordance with ORS 431A.015 (2)(i).

2) Determine priority groups, if any, for receipt of treatment or prophylaxis based on federal guidance, MAG and other subject matter expert input. Priority recipients might include essential personnel or groups at high risk for severe illness and death, based on exposure history or other objective characteristics.

3) Request MAG Technical Advisory Sub-committee to work with OPHD to develop guidance on proper use; disseminate this guidance to clinicians in accordance with the *Clinician Communications Plan*.

4) If state or Strategic National Stockpile medications are used, arrange transport to designated points of distribution. Receive and distribute SNS assets in accordance with the *SNS Plan Annex*.

5) Provide guidance on tracking and inventory requirements for federal stockpile antibiotics. The IMT should track and inventory all resource requests received through the ESF-8 Agency Operations Center (AOC) and assets distributed during the incident using the Ops Center logistics system. SNS assets may have specific requirements around tracking and inventory management. (See *SNS Plan Annex*.)

4.3.C PPE or other medical/surgical supplies, IV fluids relevant to the response

1) Request that HSPR HPP staff assess quantity of relevant PPE and other ancillary supplies available to Oregon healthcare community. Determine speed of supply uptake in healthcare systems based on high-impact pathogen qualities and required ancillary supply. Possible sources include commercial vendors, state stockpile if any, the strategic national stockpile, or other federal resources (by request), and appropriation of supplies by the Governor (or, upon approval from the Governor, by the Public Health Director) for response during a declared emergency.

2) Determine priority provider groups, if any, for receipt of PPE and/or supplies, based on federal guidance, MAG and other subject matter expert input. Priority recipients of PPE and medical/surgical supplies will vary widely based on the type of high-impact pathogen and nature of the incident.

3) Request MAG Technical Advisory Group to work with IMT to develop resource allocation strategies.

4) If state or SNS PPE or other medical/surgical supplies or IV fluids are used, arrange transport and distribution to healthcare community groups. SNS assets will be received in accordance with the *SNS Annex Plan*. Distribution of ancillary supplies to the healthcare community may differ from antibiotic and vaccine distribution methods based on the type of ancillary countermeasure distributed.

5) The Incident Management Team should track and inventory all resource requests received through the ESF-8 Agency Operations Center (AOC) and assets distributed during the incident. SNS assets may have specific requirements around tracking and inventory management (reference the *SNS Annex Plan*).

4.3.D   Pharmacy-Public Health memorandum of understanding (MOU).

The Pharmacy-Public Health MOU provides a framework for pharmacies to participate in public health responses. The MOU establishes roles and responsibilities for pharmacies, county and tribal public health and state public health. During a declared emergency, under Oregon Board of Pharmacy Administrative Rules Division 7 (OAR 855-007-0010), pharmacies can:

1) Assist with mass-dispensing of medications, including vaccines

2) Staff public PODs

3) Dispense emergency refills of a prescription drug in the absence of a valid prescription

4) In consultation with a provider who has prescribing authority, Initiate or modify a drug therapy, and dispense the drug to meet immediate needs

5) Set up temporary pharmacies: Working with the OHA, tribal and county public health can request pharmacy support using the MOU.

4.4   Clinical Management and Transport of Patients with High-Impact Pathogen Infections

4.4.A   Assessment Hospitals.

When infection is widespread, healthcare surge would be pervasive, and Oregon healthcare facilities would provide care in accordance with the OCCG. When high-impact infections are few and sporadic (e.g., isolated Ebola cases), Oregon has two designated Infection Control, Assessment, and Response (ICAR) Center of Excellence hospitals (subject to change). These facilities, Asante Ashland Community Hospital and Legacy Good Samaritan Medical Center (Portland), are also Tier 2 Ebola assessment facilities, and are prepared to receive and assess suspect Ebola patients early in the course of disease. The ICAR hospitals are also prepared to accept transfers from other frontline facilities of patients with suspected

infections involving other high-impact pathogens.

4.4.B   Transport to Definitive Treatment Facilities

Depending on the severity of illness, the likelihood of the diagnosis, and the infectivity of the pathogen, OPHD could consult with the ICAR facility, with CDC, and with designated Tier 1 Ebola treatment centers to determine if prompt transfer to the Tier 1 facility or one of the other specialized isolation facilities around the country would be the most appropriate course of action.

Designated EMS agencies will transport patients with suspected high-impact communicable diseases statewide (agencies subject to change). EMS agencies in counties are also prepared, trained, and willing to transport patients to frontline or assessment hospitals within their service areas. Response time and activation will be dependent upon system levels and availability. EMS agencies will outfit the transport vehicle as needed.

If air transport is required due to distance between facilities, acuity of patient's condition, or other timeliness issues, Oregon currently plans to request transport from Phoenix Air, via our federal partners. EMS is reviewing agreements with ground transport EMS agencies to provide facility-to-airport and back-up, long-range ground transport of infected patients.

4.4.C   Ethical Considerations in Response to Outbreaks of High-Impact Pathogens

The ethical framework of the *Oregon Crisis Care Guidance* (pages 4-8) outlines key ethical considerations when planning response activities. Additionally, the *Crisis Care Guidance* Development Ethics Workgroup, at the request of the Public Health Director, provided additional specific guidance on specific issues identified during the 2015 Ebola response. This guidance has broad application to outbreaks of other High-Impact Pathogens. (See *Crisis Care Guidance, Appendix G, Ethical Guidance for Health Response during Epidemics of Severe Communicable Disease and other Public Health Emergencies.*)

4.5   Non-Pharmacologic Interventions, by Mode of Transmission

The utility of isolation, quarantine, social distancing, and other non-pharmacologic measures varies depending on the mode of transmission of the pathogen, as well as the stage of the outbreak or incident. Steps that might be useful when an outbreak is just beginning to affect a region might not help once it is established. Similarly, mitigation measures aimed at decreasing contact transmission might not be effective in preventing arthropod-borne or respiratory transmission.

In general, during patient care, standard precautions should be used. These include hand hygiene, use of gloves, gowns, or facemasks as appropriate, depending on the anticipated exposure, respiratory hygiene and cough etiquette, and safe handling of potentially contaminated equipment or surfaces in the patient environment. Further information on standard precautions and the mode-of-transmission-specific infection control precautions described below is available at: www.cdc.gov/infectioncontrol/guidelines/isolation/index.html . Below are potential tools to mitigate disease spread, by mode of transmission.

4.5.A   Airborne Aerosol transmission

Applies to measles, TB, MERS-CoV for now, and other airborne-spread pathogens. Weaponized anthrax and tularemia, while not spread person-to-person, can also be spread through aerosols.

1) Isolation and Quarantine

   a. **Isolation** (use of environmental measures, personal protective equipment, and restriction of movement to prevent spread of infection from an ill, contagious person) is standard practice and would remain so, to the extent possible, during an airborne outbreak. (See 4.5.A.5) Infection Control, below.)

   b. **Quarantine** (restriction of movement of well people who might have been exposed to illness or contaminated by a pathogen) might be considered early in an airborne outbreak when people from an affected region are traveling to areas without known illness. There is questionable value if widespread transmission in Oregon is already established.

2) Community Strategies

   a. **Social distancing** is challenging with organisms spread by airborne aerosols, since they remain in the air for extended times and can drift great distances. Encourage telecommuting, especially for key resource/critical infrastructure agencies and personnel. Critical infrastructure organizations might cohort and sequester key personnel, giving them a place to stay at work that is separate from other employees.

   b. **Cancellation of events and closure of facilities** can help slow spread of illness. Benefits must be weighed against disruption to community activities, but with severe, easily spread illness, this could be a useful strategy. If spread is primarily

limited to when a person is symptomatic, an alternative is strict exclusion of ill people from congregate settings.

3) **Environmental Strategies**. Routine cleaning of frequently touched surfaces with a bleach solution (10 tablespoons/gallon of water) or other disinfectant active against the pathogen will help prevent spread.

4) **Personal Strategies**. Encourage people to cover coughs, wash hands regularly, and stay home when sick.

5) **Infection Control**. If possible, have patient wear a mask. House patient, whenever possible, in an airborne infection isolation room (AIIR), or, if not available, a private room with door closed. If this isn't possible, cohort patients with the same airborne infections in areas separate from others, and, ideally, in areas that don't share HVAC with wards housing non-infected patients. During patient care, use fit-tested, NIOSH-approved respirators of rating N95 or higher. During transport outside AIIR, have patient wear a surgical mask to minimize aerosol dispersion.

4.5.B Droplet transmission

Applies to novel influenza (unless airborne transmission is suspected), severe acute respiratory syndrome (SARS), and meningococcus.

1) **Isolation and Quarantine.**

    a. **Isolation** (use of environmental measures, personal protective equipment, and restriction of movement to prevent spread of infection from an ill, contagious person) is standard practice and would remain so, to the extent possible, during a severe droplet-mediated outbreak. (See 4.5.B.5 Infection Control, below.)

    b. **Quarantine** (restriction of movement of well people who might have been exposed to illness) might be considered early in an outbreak of highly communicable, droplet-spread illness when people from an affected region are traveling to areas without known illness. There is questionable value if widespread transmission is already established in Oregon.

2) **Community Strategies**

    c. **Social distancing.** For the duration of the outbreak, encourage people to avoid unprotected, direct contact with others, particularly with ill people. Promote a

policy of staying three or more feet from others. Encourage telecommuting, especially for key resource/critical infrastructure agencies and personnel. Critical infrastructure organizations might cohort and sequester key personnel, giving them a place to stay at work that is separate from other employees.

 d. **Cancellation of events and closure of facilities** can help slow spread of illness. Benefits must be weighed against disruption to community activities, but with severe, easily spread illness, this could be useful. If spread is primarily limited to when a person is symptomatic, an alternative is strict exclusion of ill people from congregate settings.

3) **Environmental Strategies.** Routine cleaning of frequently touched surfaces with a bleach solution (10 tablespoons/gallon of water) or other disinfectant active against the pathogen will help prevent spread.

4) **Personal Strategies.** Encourage people to cover coughs, wash hands regularly, and stay home when sick.

5) **Infection Control.** If possible, have patient wear mask. Whenever possible, house patient in a private room. If this isn't possible, cohort patients with the same droplet-spread illness in the same section of the healthcare facility, away from other patients. Don surgical mask on entering room of potentially infected patients. During transport outside patient's room or ward, have patient wear a surgical mask.

4.5.C Contact transmission (For pathogens in which infection results from exposure to blood, feces, or other bodily fluids).

1) **Isolation and Quarantine**

 a. **Isolation** (use of environmental measures, personal protective equipment, and restriction of movement to prevent spread of infection from an ill, contagious person) is standard practice and would remain so, to the extent possible, during an outbreak of contact-spread illness. (See 4.5.B.5 Infection Control, below.) Isolation may need to continue after symptoms have resolved, if there is evidence of on-going shedding and potential transmission during the convalescent period.

 b. **Quarantine** (restriction of movement of well people who might have been exposed to illness) might be considered early in an outbreak of communicable, severe, contact-spread illness, such as Ebola, particularly when people from an affected region are traveling to areas without known illness. An alternative is

active monitoring of asymptomatic, exposed people, particularly if the person's risk of developing illness from the exposure is considered low, and there is minimal likelihood of transmission while the person remains asymptomatic. (See 4.6 below.)

2) **Community Strategies**

   a. **Social distancing.** For the duration of the outbreak, encourage people to avoid unprotected, direct contact with others, particularly with ill people. For very virulent or infective pathogens, encourage telecommuting when possible, especially for key resource/critical infrastructure agencies and personnel. Critical infrastructure organizations might cohort and sequester key personnel, giving them a place to stay at work that is separate from other employees.

   b. **Cancellation of events and closure of facilities** can help slow spread of illness. Benefits must be weighed against disruption to community activities, but with severe, easily spread illness, this could be useful.

3) **Environmental Strategies**. Routine cleaning of frequently touched surfaces with a bleach solution (10 tablespoons/gallon of water) or other disinfectant known to kill the pathogen will help prevent spread.

4) **Personal Strategies**. Encourage people to wash hands regularly, and, if they are sick, to avoid activities that might expose others. Encourage people to stay home when sick, and for a time after recovery if there is a known period of shedding during convalescence.

5) **Infection Control**. If possible, use a private room for affected patients. If this isn't possible, cohort patients with the same contact-spread illness in the same section of the healthcare facility, away from other patients. During any patient care, wear impermeable gloves and gown. If there is the possibility of dispersion of infected material through vomiting, sneezing, and coughing, add a surgical mask and eye shielding. Don this personal protective equipment before approaching the patient, and doff and discard on exit. If transport to other areas of the health facility can't be avoided, cover and contain infected or colonized areas of the patient's body or potentially infective body fluids. Use disposable or dedicated patient care equipment (e.g., blood pressure cuffs). If sharing is unavoidable, clean and disinfect between uses, and use only for patients with the same illness. Clean and disinfect rooms frequently, focusing on regularly touched surfaces.

4.5.D   Vector-borne transmission.

Applies to pathogens spread through tick bites (tularemia, Rocky Mountain spotted fever), mosquito bites (Zika, dengue, malaria), Fleas (plague), and rodents (hantavirus], or other animal exposures.

1) **Social distancing**. If tick-, flea-, or mite-borne transmission is suspected, some level of social distancing might make sense, although mainly from vector-carrying animals. Social distancing between people probably wouldn't be of benefit.

2) **Cancellation of events and closure of facilities**. Planned activities in vector-infested areas should be discouraged.

3) **Environmental Strategies**. Removal of reservoirs or breeding grounds for vectors to mitigate spread. Examples include removal of standing water to control mosquitoes, rodent control for fleas or rodent-spread diseases, or treatment of pets to decrease or eliminate vector infestation.

4) **Personal Strategies**. Avoidance of vectors and animal hosts, covering up with long sleeves and pants when arthropod vector-prone areas can't be avoided, and regular use of repellents to decrease exposure to arthropod vectors are reasonable strategies.

5) **Infection Control**. Not applicable, although it is important to avoid exposure to any patient-borne vectors, like fleas or mites.

4.6   Monitoring of and Communication with Those Potentially Exposed

In some situations, for instance, Ebola, Oregon might have no (or very few) cases. People who have been exposed might be at increased risk for infection. In that situation, active monitoring of people who are thought to be at increased risk could be indicated to 1) ensure prompt entry into appropriate care for people who subsequently become ill and 2) promote prompt isolation and lessen the likelihood of exposure to others if illness develops. Procedures for establishing a monitoring program are available in *Ebola: Interim Monitoring Guidance for Local Health Departments*.

5   Public Information and Warning, Risk

Communication

Public information officers should consult the *ESF-8 base plan's external affairs annex*. It provides a detailed operational plan for public information and warning, risk communications and the joint information center. A detailed, event-specific communication plan will be developed based on the circumstances of the particular event. Public Information Officers (PIOs) should consult the *High-Impact Pathogens Crisis Communication Template* in developing an incident-specific communication strategy. Below is an overview of initial steps for activation of the Joint Information System, communication principles to be followed, and key response and resource documents.

During the Health Intelligence Briefing, the Risk Communications Analyst and OHA External Affairs Officer should outline the public affairs needs of the event. Public information should support evidence-based practice. However, it is important to recognize and address perceived risk among members of the public, even if it is not borne out by available evidence. Pages 1-4 of the CDC CERC Assessment Tool should be used to ensure that both the scientific risk and the public's perceived risk are considered.

Upon activation of an IMT, the Lead PIO will activate the Joint Information System, implement a Joint Information Center, if needed, and apply Crisis and Emergency Risk Communications principles are applied.

To support the work:

1) The Lead PIO should ensure that the necessary resources are requested through the standard incident management resource request processes. The OHA-adapted FEMA External Affairs Organizational Chart provides guidance on the Joint Information Center structure and triggers for activation of each team identified in the structure.

2) PIO will arrange analysis of needs of key audiences, and to develop and prioritize messages. This will guide staffing. Key audiences might include people who are directly affected (victims), indirectly affected individuals (first responders and families of responders and ill citizens), and onlookers. An analysis plan is included in the High-Impact Pathogens Crisis Communication Template.

3) Outline staffing and resource needs using the ICS 215 form.

4) Activation of the Joint Information System includes notification of partners. The event-specific analysis of key audiences will help guide notifications.

Goals of the joint information center (JIC):

1) Inform the public and key audiences,

2) Support their ability to make informed decisions about how to protect themselves, reduce morbidity and mortality, and increase community resilience.

Crisis and Emergency Risk Communication principles should be applied to risk communication and public information. These include:

1) Be first: Provide the public with information as soon as possible without compromising accuracy. In a crisis, the first source of information often becomes the preferred source of information for the public.

2) Be right: Accuracy helps establish credibility. Describe what is known, unknown and what is being done to fill in the gaps.

3) Be credible: Honesty and truthfulness should not be compromised. Promise only what can be delivered.

4) Express empathy: Empathy establishes trust and rapport. Acknowledge the public's feelings and challenges in words early and often. Use language that indicates that the agency is meeting people where they are. Use of personal pronouns to describe the agency will convey that response agencies are not bureaucratic organizations, but rather organizations comprised of caring human beings serving and protecting those in Oregon.

5) Promote action: Giving people meaningful things to do to protect themselves and their community promotes some sense of control and can help them better manage their emotional response. Tangible actions offered should be evidence based and achievable. Where possible, multiple options should be offered. Symbolic actions, such as vigils or public meetings, have value in helping promote a sense of control and order.

6) Show respect: Promote cooperation and rapport. Community-based organizations, key audiences, and the public are legitimate partners in the response. If we don't engage them in planning and acknowledge this, response agencies may appear paternalistic and offer solutions that are out of touch with the values and ability of our audiences. When there is elevated risk for illness in particular communities or geographic areas and this could lead to stigma, establish direct channels of communication with those

potentially affected rather than broadcasting about the affected community or region on mainstream and social media. Use the same approach in any post-event communication. This includes, but is not limited to, images, presentations, and papers demonstrating lessons learned from the event and information documenting the facts of the event.

Risk communication toolkits for some pathogens have already been translated. PIOs can consult www.healthoregon.org/cerc to find those toolkits. As the response communications are developed, post them to the OHA CERC website for local and tribal health authority, and ESF-8 partner use. These include FAQs, fact sheets, graphics, social media videos, press templates talking points, letter templates, media release templates, translations, and other communications.   Stewardship of funds is important, even during a response. Information that is fluid should be contained in live press releases, websites, social media post text and talking point documents. FAQs, fact sheets, graphics, social media videos and any translated documents should be written in a way that they will not require frequent revision (e.g., by avoiding case counts or other information that could quickly become outdated). During recovery, press releases, social media posts, and talking points should be reviewed and turned into templates that can quickly be adapted during similar events in the future. These templates should, again, avoid information that will likely require frequent revision, and can include fill-in fields for future customization.

6 Acronyms

ACDP	Acute and Communicable Disease		LRN	Laboratory Response Network
AOC	Agency Operations Center		MAG	Medical Advisory Group
APHL	Association of Public Health Laboratories		MCM	Medical Countermeasures
CDC	Center for Disease Control and Prevention		OCCG	Oregon Crisis Care Guidance
CERC	Crisis and Emergency Risk Communications		OHA	Oregon Health Authority
EMS	Emergency Management Services		OPHD	Oregon Public Health Division
EPI-X	Epidemic Information Exchange		ORS	Oregon Revised Statutes
ESF	Emergency Support Function		OSPHL	Oregon State Public Health Lab
FDA	Food and Drug Administration		PODS	Points of Dispensing
HPP	Hospital Preparedness Program		PPE	Personal Protective Equipment
HSPR	Health Security Preparedness and Response		SHA	Senior Health Advisor
ICAR	Infection Control Assessment and Response		SNS	Strategic National Stockpile
ICS	Incident Command System		SOP	Standard Operating Procedure
IIS	Immunization Information System		WHO	World Health Organization
IMT	Incident Management Team			