

Oregon Crisis Care Guidance

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IDSO



Oregon Crisis Care Guidance Co-Sponsoring Organizations

Adventist Health

Asante

Association of Professionals in Infection Control and Epidemiology – Oregon/SW Washington

CHI St. Anthony Hospital

Coalition of Local Health Officials

CLHO County Health Officers' Caucus

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Harney District Hospital

Infectious Disease Society of Oregon

Kaiser Permanente – Northwest

Lane County Medical Society

Legacy Health

Marion-Polk County Medical Society

Medical Society of Metropolitan Portland

Mid-Columbia Medical Center

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Oregon Chapter, American College of Emergency Physicians

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Table of Contents

Introduction and Scope	2
Ethical Framework	
Core Ethical Principles	4
Practical Implementation of the Framework	5
Overview of Guidance Strategies	9
General Principles of Crisis Care Response	9
Planning Strategies	10
Specific Guidance by Healthcare Sector	12
Support for Health Care at Home	
Alternate Care Systems	
Ambulatory Care	
Emergency Medical Services/911 Dispatch	
Hospital Services other than Critical Care	
Critical Care	
Conclusions	18
Appendices	
A – Crisis Care Guidance Development Workgroup Members	
B – Methods for Guidance Development	
C – Legal Framework for Emergency Declaration and Response; Liability Protection	
D – Planning Resources	
E – Oregon Model for Triage and Allocation of Critical Care Resources in a Healthcare Crisis	
F – Ethical Guidance for Health Response	
G – Health Care during a Crisis: Frequently Asked Questions	
H – Glossary	

Introduction

In a public health crisis, healthcare resources may be overwhelmed. Hospitals and other buildings may be damaged. Healthcare workers may be killed, ill or injured. They may be caring for loved ones, or simply unable to reach their work location. At the same time, many in the community would be ill or injured and would need care. A public health crisis like this would be a great challenge to the healthcare community and the people of Oregon. To be ready, we need to plan for it now.

Purpose of the Guidance – Many healthcare workers have asked for statewide guidance on how to respond effectively if a major disaster occurs. Further, emergency managers have a duty to promote ethical allocation of scarce resources in a public health emergency. Such guidance could help identify ways to provide efficient care in challenging circumstances, and help save many people who might not otherwise survive.

Scope – In response, the State’s Public Health Director convened workgroups to develop guidance on this subject. He asked the workgroups for brief, general guidelines that support necessary changes in patterns of care prompted by public health crises. Specifically, the guidance outlines strategies to address two main types of disasters: 1) severe outbreaks of infectious disease, such as an influenza pandemic, and 2) mass trauma events, such as a major earthquake. This guidance applies to allocation decisions made at different levels of government, as well as in the non-profit and private sectors, and encompasses valuable work already done in many regions and health systems in the state. It outlines strategies that help standardize response, but also allow sufficient flexibility that they can be adapted to meet the needs of different facilities and communities.

Who Developed the Guidance? – Workgroups included nurses, physicians, hospital administrators, health officers and administrators from local health departments, emergency medical service and emergency management personnel, representatives of healthcare-related professional organizations, volunteer response organizations, and experts in law, ethics, and other disciplines. People from communities and health facilities around the state participated in developing this document. (See Appendix A for a full list of workgroup members.)

The Need for Fairness and Consistency – The guidance begins with an ethical framework, developed by members of the Crisis Care Guidance Development Project Ethics Workgroup. This framework provides a foundation for the Crisis Care Guidance. It is intended to ensure that ethical principles are addressed in the development of all care strategies included in the Guidance. It also has provided workgroups with a common ground to help assure that the guidance presented here will not only help save lives, but will also be just and equitable. To ensure that the ethical framework is incorporated into all aspects of the Crisis Care Guidance, members of the Ethics Workgroup participated in each of the other content-area workgroups.

After the ethical framework, there is a description of how the guidance strategies are presented, followed by a brief discussion of several overarching principles of Crisis Care response. Next, the reader will find a list of crisis response strategies that are potentially useful across all sectors of health care. These will be followed by specific strategies that are tailored to specific healthcare settings.

Guidance Revision: Providing Input – This is a living document and will be reviewed and revised periodically by the co-sponsoring organizations as new information becomes available. An update log of revisions is included after the appendices. The workgroup members who developed the Guidance are interested in your input. Please share any comments or suggestions by e-mail at: Crisiscare.comments@state.or.us

Ethical Framework for Health Care in Times of Crisis:

1. The Core Principles

Under routine conditions, health care is very much focused on the individual. Patients work with healthcare providers to make their own decisions about what kind of care to receive or refuse. No one does this in complete isolation, of course – we may involve family and friends in these decisions. Still, the focus is the individual patient and what care he or she should receive.

Typically, there are enough healthcare resources available to allow individuals to make these choices. In some crises, however, healthcare resources may be overwhelmed. A severe earthquake or epidemic may damage hospitals or kill or sicken those who usually provide medical care. At the same time, many in the community would be ill or injured and would need care. The fundamental healthcare challenge in such a crisis is to decide who will receive what kind of care when medical resources are overwhelmed. An additional key question is: who should decide?

Most ethicists and public health authorities believe that the common goal in such crises should be to use resources to maximize the number of lives saved. To ensure that the way limited healthcare resources are used in a crisis is fair and acceptable to the public, it is essential that decisions about “who receives what” are made in a reasonable and ethical manner. By definition, crises require critical decisions. In order to facilitate fair and effective crisis response, avoid adding to the burden of crisis decision-makers, and ensure as well-considered a process as possible, the *framework* for such critical decisions should be established in advance.

A workgroup of Oregonians was convened by the State Public Health Director to address these questions. The workgroup, which includes ethicists, clergy, physicians, nurses, lawyers and others, developed this ethical framework to guide healthcare planning and treatment decisions in times of healthcare crisis. The Framework challenges healthcare workers, and all Oregonians, to be accountable for certain fundamental ethical principles, among them:

1) An honest effort to maintain **social solidarity**, so as to preserve our sense of interdependence, our shared beliefs, and our commitment to one another; to preserve the things that hold us together as a community. Decisions in a crisis must support efforts to maintain these relationships, not tear them apart.

2) **Justice**, ensuring that everyone is treated equitably. People in the same circumstances should be treated the same, regardless of who they are. Access to particular types of health care should not be based on social position or relationships.

3) **Respect for persons.** It may not be possible to provide all types of care to all people in a crisis, but basic respect of a person's dignity must be maintained and information about the person's condition and services available must be shared truthfully and candidly.

4) The **common good.** Healthcare decisions and actions in a crisis should serve the good of the whole community, rather than some "few" in the community.

5) **Adherence to professional codes of conduct.** Healthcare workers and others have an obligation to act responsibly and in keeping with the duties and standards of their professions.

Decisions about healthcare treatment and resource use in a crisis must be based on these principles. By taking this approach, we as a community can best assure that, even in a crisis, healthcare decisions will be made in a fair and unbiased fashion.

2. Practical Implementation of the Framework

"Values-based leadership may be the glue that holds society together in an intense crisis. History will judge today's leaders on how well they prepared for and acted during the crisis and whether they treated people in an ethical manner."

-- Ontario, Canada Health Pandemic Influenza Plan, June 2005

1) In the event of a major disaster, the **safety of the public at large** may require measures by public safety and health officials that limit people's choices. This could involve restriction of movement when there is a high risk of serious, contagious infections. It also may limit healthcare choices when many are severely ill and resources are few. This framework requires that any such limitations will be used only if they are essential to promote the saving of the greatest number of lives where many are in peril, and where resources are inadequate to meet the healthcare needs of all. Further, they must be implemented fairly and in a way that respects both the right to information and the dignity of those affected. Decisions about how limited healthcare resources should be used must be designed to do the most good for the most people. They should be made impartially and objectively, and should rely to the greatest extent possible on clinically based evidence.

2) The best way to manage the ethical challenges inherent in triage during a disaster is to **plan now** to maximize available materials and personnel. Local and regional healthcare systems need to anticipate possible shortages and explore new and creative strategies to expand bed capacity, secure access to equipment needed for patient care and, as needed, to expand the job description and responsibilities of healthcare professionals and others. Strategies to expand the healthcare workforce, such as the Medical Reserve Corps and "just-in-time" training programs for some clinical interventions, need to be explored prior to the crisis. Plans

to exercise skills needed in the triage process should be made and implemented. Plans identifying services that can be limited or postponed as needed, such as elective surgeries, are also recommended, as are efforts at the community and family levels to prepare for disaster in ways that increase resilience and decrease the likelihood of sickness and injury.

3) In a crisis, it may be appropriate and necessary to have flexibility in the community standard of care (that is, the practical steps taken to deliver health care), but the ethical requirement to provide quality care remains. Flexibility makes it possible to increase the number of people who can receive care, and to allocate scarce resources fairly across the entire community. Still, every effort must be made to maintain the highest quality of care possible, given the limitations imposed by the crisis.

4) In the event of a true public health crisis, healthcare demands may overwhelm available capacity to offer potentially life-saving care to all who need it. If this happens, there must be a **just plan of resource allocation** ready to be enacted. A widely accepted goal is to adopt a plan that saves the most lives. Priority for treatment of patients should be based to the greatest extent possible on evidence-based, objective measures to predict likelihood of survival. As a general principle, in order to save the greatest number of lives, life-saving interventions should be provided first to those most likely to benefit. (See Appendix E.) This may mean that patient choice for life-sustaining interventions cannot be accommodated when there are others who can more readily benefit from those same interventions.

The State Workgroup recognizes that individual communities and health systems may use different approaches to extend services in the setting of an epidemic or disaster. Nonetheless, to ensure fairness in how healthcare decisions are made, a consistent approach should be used to guide medical triage decisions, and should be deviated from only if additional resource shortages or number of ill patients (i.e., increased demand) preclude its use.

Within Oregon, several communities and hospitals developed plans to guide crisis care in response to the 2009 H1N1 pandemic, and their work has contributed greatly to this guidance. For example, Three Rivers Community Hospital in Grants Pass developed a practical document outlining strategies to increase care capacity and to implement triage when necessary, and obtained feedback on it from the surrounding community. Optimally, planning within a given region should be coordinated so that healthcare facilities, emergency medical services and others can work together effectively and provide care as efficiently as possible in the chaotic conditions of a disaster.

5) As noted above, in a public health crisis, decisions about who should receive critical care and other medical services should be based on clinical experience using objective clinical information, just as they are in non-crisis situations. Care decisions should not be based on non-clinical factors such as race, ethnicity, clinician-perceived quality of life, profession, social position, or ability to pay. As an example, stable patients who use a ventilator on a long-term basis would not lose access to their ventilators as a consequence of implementing crisis care. If a person who is ventilator dependent becomes severely, acutely ill, triage decisions for her/him would be based on the same criteria that would apply to other ill persons in making critical care service allocation decisions.

Further, resource allocation decisions should be made without regard to whether a person's illness or injury was a direct result of the public health crisis. Unrelated injuries and illnesses, such as heart attack and stroke, will continue to occur in a crisis. Those affected by them should be considered for care using the same criteria as people ill with pandemic influenza or who have an earthquake-related injury.

6) To promote the most effective use of limited resources and to save the greatest number of lives, decisions about which patients receive critical care should be made by a triage team or officer. This responsibility should rotate, if possible, among providers with experience in critical care, and where possible, the triage team or officer should be excused from critical care clinical duties while performing the triage function. When multiple severely ill patients present at the same time and resources are insufficient to provide aggressive critical care services for all of them, an objective scoring system, the Modified Sequential Organ Failure Assessment (MSOFA), can be used to help prioritize allocation of resources. For additional details, see Appendix E.

7) The very nature of triage during a crisis will mean **certain people may be excluded from some types of medical attention, perhaps even life-sustaining treatment** (for example, ventilator or ICU bed access). To promote consistency and fairness in resource allocation decisions, clinicians involved in critical care triage around the state should be in regular communication through conference calls or webinars. Through these communications, they can compare how triage decisions are being made and help refine triage criteria based on changing resource availability and any concerns raised by patients, their families, or others in the community about triage decisions.

8) The **highest possible quality of palliative care and symptom management should be offered** to all patients, and especially to those who do not receive advanced life support or ventilator management. Having a prearranged Palliative Care Team in place, consisting of physicians, nurses (preferably with hospice experience), clergy and lay volunteers, is strongly recommended.

9) Individual hospitals and healthcare delivery systems need to **protect the safety and security of employees and their families** during a crisis. Experience with prior epidemics (SARS in Toronto, H1N1 in Oregon) has shown that a shortage of hospital-based nurses due to illness may be an early trigger in the development of crises related to overwhelmed healthcare systems. The professional “duty to serve” must be balanced with the ethical principle of reciprocity, as healthcare workers should be assured of the safety resources they need to do their jobs. (For example, the pregnant nurse working in the ICU during an influenza epidemic, who is likely at higher risk of serious complications, could be relieved of direct responsibility for care of influenza patients.) **Plans to enable healthcare professionals to do their jobs should not, however, extend special treatment to the healthcare professionals’ family members**, and should remind professionals of their obligation to plan for their families’ needs. Leave policies should accommodate workers who must be sent home for reasons of illness or need of quarantine.

10) We support efforts to engage the public early and often in the planning process of any disaster plan. **A thorough and transparent communication process with public input and comment** is essential to earn and maintain the public trust that will be critical in a major health crisis. (See Appendix G.)

11) Members of the workgroup recognize that ethical issues related to practical implementation of the Crisis Care Guidance will emerge from time to time. These issues are addressed in Appendix F, *Ethical Guidance for Health Response during Epidemics of Highly Contagious, Potentially Life-Threatening Infections, and other Public Health Emergencies*.

Overview of Guidance Strategies

There are three principal types of strategies included in the Guidance. Some are *planning strategies* that help prepare for effective response before a crisis occurs. Some are *surge capacity strategies* that help expand the number of people who can receive treatment, either by directly affecting patient count and access or by increasing/extending healthcare resources (e.g., space, staff, equipment, medication and supplies). Some are *triage strategies* that help determine how available resources can be used most effectively to save lives.

Format

Because planning strategies tend to be similar across healthcare disciplines, we present planning strategies as common considerations. We then present surge capacity and triage strategies in a matrix. Strategies are in three columns. The first, called “Conventional,” contains possible responses if there is some warning of a looming public health crisis (for example the early phases of a pandemic). In this situation, trouble lies ahead, but health systems are not saturated. Sudden-onset crises may not offer this slow escalation. The second column, called “Contingent,” involves saturation of available services if usual practices are continued. It primarily includes actions that increase surge capacity. The third column, called “Crisis,” includes strategies that could be used when even expanded capacity is overwhelmed. The definitions for each category are meant to be broad; the criteria are not exhaustive, but represent the most critical (and likely) determinants. Not every listed criterion needs to be met in order to define the stage or implement appropriate strategies.

The "settings" section at the top of each guidance section describes benchmarks from various healthcare sectors that may indicate when a given community has moved from one of these levels of health care surge to another. These benchmarks were chosen because they are broadly applicable and relevant across communities and health systems of different sizes, and typically can be assessed using data that are regularly collected. At least one of these benchmarks, level of activity of non-hospital-based nurse advice lines, could be tracked by local health department or Public Health Division staff, who could call advice lines in different areas of the state to assess their level of activity.

General Principles of Crisis Care Response

In addition to the *Ethical Framework*, several key concepts listed below shaped the Crisis Care Guidance development process:

- *Promote fairness and consistency in health care during a crisis.* If we agree on care strategies and share them broadly *before* a crisis occurs, healthcare workers will have a standard to guide their actions. Consistent implementation of this guidance ensures that resources are allocated using the same priorities and according to the same principles.

- *Ensure an open process in both development and use of the Guidance.* The broader healthcare community and the general public need to be aware of and involved in crisis care planning. Strategies used to decide who receives what kind of care in a crisis need to be available to the public.
- *Recognize the important differences in the medical needs of children and adults, and differences in the nature of the care they receive.* It is essential that Crisis Care guidance addresses the special needs of children and others with special healthcare needs.
- *Ensure availability of factual, current information about any crisis.* Health systems, the media, and public health should coordinate to provide information. In a crisis, they can make it clear when people should seek medical evaluation, and when they can be cared for at home.
- *Employ strategies beyond those used in routine care only when and to the degree required by the crisis at hand.* They should continue only as long as the situation warrants them.

Coordination is vital for effective healthcare crisis response. Communication among health systems, between healthcare providers both inside and outside of hospitals, and across jurisdictions enables a community to use resources more efficiently. We recommend a regional approach to resource management to coordinate activities across the multiple jurisdictions and entities involved in surge response.

The Public Health Division has systems in place to track availability of hospital beds, critical care equipment, and other key resources. These systems will promote effective use of resources, but only if healthcare facilities and personnel meet their responsibility to keep them current with respect to facility status, reportable conditions, potential or actual hazards, and other relevant information. Put simply, resource and clinical tracking systems are worthless without prompt and accurate reporting. Regular reporting to these systems during a public health crisis would help ensure that these resources can be used most effectively. Tracking includes beds and resources available through large healthcare sites outside of hospitals.

Planning Strategies

As defined in this guidance, planning strategies may be employed at any point before the onset of a crisis with the intent of improving response. As with the surge capacity and triage strategies, we present planning strategies as considerations, based on best practices. Some planning strategies are specific to health care, and some even to discipline, but most are broadly applicable.

- Develop plans to support continuity of critical functions during a crisis.
- Identify potential alternate care sites (e.g., long-term care facilities, veterinary hospitals, surgicenters) with suitable infrastructure to support acute care of ill or injured patients.

- Develop draft requests for Center for Medicare and Medicaid Services to waive specified provisions of the Medicare Conditions of Participation, EMTALA, and other federal laws that may present a barrier to effective crisis response.
- Develop draft requests to Oregon licensing boards for waivers in licensing, documentation, and other requirements that may present barriers to effective crisis response.
- Develop/update memoranda of agreement with potential suppliers, alternate care sites, and other healthcare employers to maximize availability of space, staff, and supplies.
- Involve all staff, clinical and non-clinical, in some level of workplace emergency and disaster preparedness, including individual/family preparedness (to allow employees to come to work and/or work non-routine schedules).
- Cross-train staff to maximize available staffing for critical healthcare functions; include in planning how to access and incorporate SERV-OR/MRC volunteers into disaster response. Those interested in participating can learn more about these programs at: <https://serv-or.org/>
- Adopt and maintain robust exercise programs to test plans, training, equipment, and facilities, and to support regional and facility proficiency in implementing key components (e.g., triage and resource allocation) of crisis care response. Develop and implement corrective action plans from exercises.
- Develop consultation networks for crisis care of children and others with special care needs
- Involve clinicians with pediatric and other relevant expertise in crisis care planning.
- Plan with law enforcement and other security entities to provide safe secure environments for patients, staff, and visitors in a crisis.
- Identify, stock, and maintain sufficient supplies to sustain care for extended, high-volume operations. Consider that “burn rate” for emergency supplies may substantially exceed that of planning assumptions.
- Reinforce facilities to better withstand significant local hazards through:
 - Structural seismic upgrades to older masonry or concrete buildings
 - Non-structural seismic upgrades (building systems and contents)
 - Ensuring emergency generators (including fuel tanks and transfer switches) are mitigated against seismic, wind, and flood hazards

For epidemic preparedness, consider:

- Prioritizing clinical and non-clinical healthcare personnel for personal protective equipment, relevant vaccines, and other preventive measures to maintain staffing levels.

Guidance for Crisis Care in Setting of Severe, Pervasive Surges in Healthcare Utilization, by Healthcare Sector

Setting	Conventional	Contingent	Crisis
	<p>Pandemic influenza or other severe transmissible illness of public health significance confirmed in community. Credible information suggests a natural disaster is imminent. [Note: an “early warning” of this type is unlikely in some natural disasters such as earthquakes, which typically occur with no notice.] Increased demand, resources adequate. Emergency department operations are at or near baseline for volume and throughput. Demands on non-hospital healthcare facilities below capacity.</p>	<p>Approaching capacity achievable with usual operating procedures; system not yet overwhelmed. Non-hospital-based phone advice lines at or near capacity. Hospital staffable bed census at or near 100%. Utilization of available ventilators approaching capacity. Essential functions (those that, if not provided within 24 hours, would result in loss of life or severe morbidity) are compromised regionally, are expected to remain so for at least two days, and cannot be fulfilled using usual operational procedures; absenteeism among staff is affecting response capacity.</p>	<p>Systems are overwhelmed; off-loading to other facilities not possible. Essential functions remain compromised throughout region despite implementation of surge capacity measures; absenteeism among staff precludes provision of critical care services to patients who would ordinarily receive them.</p>

Strategies Potentially Useful in All Healthcare Sectors

<p>In epidemic setting:</p> <ol style="list-style-type: none"> 1. Reinforce relevant infection control practices with healthcare workers/staff, including when to stay home if ill. <p>Recommend:</p> <ol style="list-style-type: none"> 2. screening for influenza-like illness or other relevant symptoms, 3. Using kiosks to supply masks for incoming patients with respiratory symptoms, 4. excluding visitors with symptoms consistent with possible severe transmissible illness. 	<ol style="list-style-type: none"> 1. Plan for surge in care of children/other types of patients in proportion to their representation in the population affected 2. Ensure mechanisms to maintain connections between pediatric patients and their families, and to locate families and reunite children with them if separated. 3. Report available resources to Public Health Division as requested by Public Health Director 4. Implement strict exclusion from patient care of staff with symptoms of potentially severe, transmissible illness. 5. Use trained, non-medical volunteers to provide non-medical care for patients (e.g. providing meals, changing linens) in healthcare and community settings. <p>Recommend</p> <ol style="list-style-type: none"> 6. flexibility in services/privileges within scope of practice (i.e., scope of professional license) provided by nurses, physicians, other care providers, including use of standing orders, 7. streamlined documentation process to expand capacity to provide health care. (See bullet 3, Planning Strategies, pg. 11.) 	<ol style="list-style-type: none"> 1. Continue efforts to increase surge capacity through changes in care practices, e.g. further changes in documentation, nurse-patient ratios. 2. Continue bed/resource capacity reporting. 3. Using objective criteria, make referral, care and resource allocation decisions to maximize number of lives saved. (See Appendix E.)
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Conventional

Contingent

Crisis

Support for Health Care at Home

Recommend:

1. just-in-time training of home health staff and other potential care providers for care of influenza, trauma, or other prevalent conditions,
2. using a variety of strategies including hotlines, internet sites, and social networking tools to share information about prevalent conditions, when they can be self-managed, when they require medical evaluation, and where to go for evaluation.

Recommend:

1. home visits, by home health and hospice nurses or other trained staff as appropriate, for patients recovering at home, to provide basic care and evaluate whether a higher level of care may be needed,
2. coordinating with hospitals to identify patients discharged early and providing needed at-home follow-up.

1. Use objective inclusion and exclusion criteria to evaluate ill patients for inpatient admission.
2. Provide palliative and supportive care for the very ill meeting exclusion criteria above.
3. Expand scope of illnesses and injuries monitored and cared for through services in the home.

Alternate Care Sites

Recommend:

1. (if not yet done) identifying alternate care sites (long-term care facilities, veterinary hospitals, surgicenters, gymnasiums, etc.) with infrastructure to support acute care of ill or injured patients,
2. developing memoranda of agreement (if not already in place) with potential alternate care sites to ensure availability as expanded acute care bed capacity.

Recommend:

1. activating alternate care sites for patients who require care beyond that available at home, but do not meet criteria for hospitalization,
2. using Medical Reserve Corps/ SERV-OR volunteers to staff alternate care sites,
3. using non-hospital-based triage systems (in-person, phone, or internet-based), providing consultation for both adult and pediatric patients, to identify those in need of additional care or further evaluation,
4. (in pandemic settings) dedicating specific alternate care sites for care of "contagious" or "non-contagious" patients to lessen patient-to-patient spread.

1. Use objective exclusion criteria to evaluate ill patients for hospital admission.
2. Provide palliative and supportive care through alternate care sites for the very ill meeting exclusion criteria.

Conventional

Contingent

Crisis

Ambulatory Care

Recommend:
1. decreasing the number of scheduled ambulatory care visits,
2. using phone triage and standing orders for routine refills,
3. using consistent, objective criteria of illness/injury severity to determine treatment venue.

Recommend:
1. canceling all non-essential scheduled ambulatory care visits,
2. developing collaborative therapy agreements with pharmacists to:
a. facilitate pharmacy refills for prescriptions first dispensed at other pharmacies,
b. handle routine visits with decisions based on objective measurements (e.g. blood pressure checks for medicine refills with call criteria for provider consult.)
3. (in pandemic setting) using separate areas for evaluation and care of patients with suspected severe communicable disease,

1. Make decisions on referral to inpatient facilities using objective criteria (as established in accordance with these guidelines) to maximize number of lives saved.

Recommend:
2. staffing and use of alternative sites for comfort/palliative care of patients near death and not triaged to critical care.

911 Dispatch

If not already doing so, identify potentially infectious patients at dispatch level and notify transport units.

Consider use of modified criteria to dispatch emergency medical services, conduct phone triage evaluation.

Continue to evaluate and adjust dispatch criteria as needed; coordinate efforts regionally.

Emergency Medical Services

Recommend:
1. operational plans to minimize number of staff exposed to potentially infectious patients,
2. adopting consistent definitions of illness or trauma severity to guide transport decisions. For an example, see "Revised Strategy for On-Scene Rapid Triage" – for use in influenza pandemics. (See Appendix D.)

Recommend strategies to optimize patient care in setting of resource and personnel shortages, including:
1. changing numbers of personnel involved in response, or other non-routine resource allocation strategies,
2. sharing transport resources across Ambulance Service Area boundaries,
3. using alternate vehicles to respond to low acuity calls and determine need for transport,
4. altered response time goals,
5. accommodating transport to alternate care sites,
6. curtailing responses on certain call types/severity levels.

Adjust triage, using objective criteria, to ensure critically ill or injured patients with highest likelihood of survival are transported.

Conventional

Contingent

Crisis

Emergency Department / Admissions

Recommend:

1. cohorting patients with suspected severe transmissible conditions (e.g. influenza),
2. implementing a regionally coordinated phone information line to encourage symptom or injury management at home as appropriate. In mass trauma settings, this would promote most effective use of trauma care resources, In a pandemic setting, it would decrease exposure of those not ill to others who are infected.

Recommend:

1. aggressive triage/discharge of patients with non-life or limb threatening conditions to an appropriate, less-stressed ambulatory setting. Coordinate expectations with these clinics,
2. using "drive-through" triage area or related strategies to reduce emergency department patient load,
3. (in pandemic setting) using alternative emergency department waiting areas and care sites for patients with influenza-like illness or other severe transmissible diseases.

Triage services to maximize overall lives saved, based on objective criteria. (See Appendix E.)

Hospital Outpatient Services

(In pandemic setting) recommend screening all scheduled outpatients 24 hrs. in advance, with cancellation for anyone with influenza-like illness or other relevant symptoms.

Recommend:

1. deferring health promotion/chronic disease management activities, including screening procedures (mammography, colonoscopy, etc.),
2. relocating/providing essential services such as chemotherapy offsite, e.g. through visiting nurses, or appropriately trained SERV-OR or MRC staff.

1. Defer non-life-sustaining outpatient services, including physical and occupational therapy.
2. For cardiac/stroke rehab and cancer therapy (in pandemic setting), adapt services and venue to minimize risk of exposure to severe transmissible illness and free staff for other duties.

Conventional

Contingent

Crisis

Hospital Wards

1. (In pandemic setting), screen all scheduled elective admissions 24 hrs. in advance, with cancellation for anyone with influenza-like illness or other relevant symptoms.

Recommend:

2. inventory and stockpiling of needed supplies and equipment,
3. isolating/caring for influenza patients in areas separated from non-influenza patients,
4. topping off oxygen tanks.

Recommend:

1. discharging patients not requiring acute in-patient care,
2. using alternate care sites/systems,
3. modifying nurse-to-patient ratios,
4. changing documentation practices to increase numbers of patients who can safely be cared for.

1. Triage services to maximize overall lives saved.
2. Continue bed/resource capacity reporting.
3. Cancel all job duties considered non-essential; reassign personnel as appropriate.
4. If possible, move patients who cannot be discharged but who are stable to alternate facilities experiencing less surge.
5. Ensure availability of high quality palliative care and symptom management services to all patients, if possible through a pre-arranged palliative care team consisting of physicians, nurses, clergy, and lay volunteers.

Surgical Units

In pandemic setting, consider deferring elective surgeries for patients with influenza-like illness or other relevant symptoms.

Recommend deferring surgeries unless the situation is emergent or, in the judgment of the surgeon, the operation is medically required within the next 14 days.

In mass trauma setting: frees staff and operating rooms to care for injured.

In pandemic setting: frees staff for alternate duties, makes post-anesthetic recovery space available for acute care.

1. Defer surgeries not essential to preserve life and limb or not needed to facilitate discharge from hospital; triage services to maximize overall lives saved. (See Appendix E.)
2. In mass trauma settings, pull staff with surgical experience from other areas of hospital to support trauma response capacity.
3. In pandemic setting, have surgical staff assist in other units of the hospital as needed.
4. Maintain a 24/7 call schedule for emergency life-saving surgery, with back-up staff identified to address staff illness.

Conventional

Contingent

Crisis

Critical Care

- 1. Stress use of infection control practices appropriate to the situation.
- 2. To the extent possible, cohort patients who have the same severe, transmissible infections.

- Recommend:
- 1. strategies to increase the number of patients who can receive critical care services, including:
 - a. increasing numbers of available critical care beds,
 - b. using non-ICU settings for care of ventilated patients,
 - c. modifying nurse-to-patient ratios,
 - d. changing documentation practices,
 - e. expanding services provided by nurses and other staff,
 - 2. developing and using guidelines for early discharge from ICU to free bed capacity.

- For new admissions:
- 1. Within capacity to do so, triage services using objective criteria to maximize lives saved, (See Appendix E.)
- For patients already in critical care:
- 2. Within capacity to do so, conduct periodic reassessments, using objective criteria, to determine if critical care should be continued.
 - 3. Where possible, triage decisions should be made by a group or individual not directly involved in patient care.
 - 4. Where possible, implement "family support teams" to provide information and comfort to families of patients not receiving on-going critical care services. (See Appendix G.)
 - 5. Continue bed/resource capacity reporting.

Conclusions

Any crisis resulting in severely limited resources and sustained surges in healthcare demand would pose an immense challenge to healthcare providers and to the broader community. By recognizing this and developing strategies now, we can better provide for people's needs in a public health crisis. This guidance allows us to plan ahead, giving communities the best opportunity to have the resources and partnerships in place to provide the best care possible in a crisis. It also provides a common approach, so that healthcare providers have a consistent, agreed-upon strategy to care for the sick and injured in a way that saves as many lives as possible.

Workgroup members who developed this guidance hope that we will never need to use it. However, if and when we do face a crisis, the products of this process will put us in a much better position than if practitioners and policy-makers are forced to improvise in the heat of the moment.

Oregon Crisis Care Guidance Appendix A – Workgroup Members

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Oregon Crisis Care Guidance

Appendix B – Methods for Guidance Development

During winter and spring of 2010, workgroups assembled to develop guidance in the areas of Ambulatory Care, Critical Care, Emergency Medical Services/911 Dispatch, Ethics, Hospital Services other than critical care, and Support for Care at Home/Alternate Care Sites. Participants drew on information gathered through professional experience, literature review, consultation with experts in areas touched on by the guidance, as well as existing response plans from Oregon health systems and facilities, work done in other states, and national guidance on crisis care from the Institute of Medicine and the federal Agency for Healthcare Research and Quality.

Through a series of meetings, conference calls, and electronic review and revision, the content-area workgroups drafted guidance in their subject areas. These drafts were then given to a general review workgroup, composed of representatives from each of the content-area workgroups, plus additional participants with relevant expertise. Over a 12-month period, this group, through a series of meetings and revision of drafts by e-mail, combined the draft guidance from the content-area workgroups into this comprehensive document.

Oregon Crisis Care Guidance

Appendix C – Legal Framework for Emergency Declaration and Response; Liability Protection

1. Declarations of Emergency

Under Oregon law the Governor may declare an emergency or a public health emergency under certain circumstances. An “emergency” is defined as:

A human-created or natural event or circumstance that causes or threatens widespread loss of life, injury to person or property, human suffering or financial loss, including but not limited to:

(a) Fire, explosion, flood, severe weather, landslides or mud slides, drought, earthquake, volcanic activity, tsunamis or other oceanic phenomena, spills or releases of oil or hazardous material as defined in ORS 466.605, contamination, utility or transportation emergencies, disease, blight, infestation, civil disturbance, riot, sabotage, acts of terrorism and war; and

(b) A rapid influx of individuals from outside this state, a rapid migration of individuals from one part of this state to another or a rapid displacement of individuals if the influx, migration or displacement results from the type of event or circumstance described in paragraph (a) of this subsection.¹

A “public health emergency” is defined as:

An occurrence or imminent threat of an illness or health condition that:

(a) Is believed to be caused by any of the following:

(A) Bioterrorism;

(B) The appearance of a novel or previously controlled or eradicated infectious agent or biological toxin that may be highly contagious;

(C) An epidemic of communicable disease; or

(D) A natural disaster, a chemical attack or accidental chemical release or a nuclear attack or nuclear accident; and

(b) Poses a high probability of any of the following harms:

(A) A large number of deaths in the affected population;

(B) A large number of serious or long-term disabilities in the affected population; or

(C) Widespread exposure to an infectious or toxic agent that poses a significant risk of substantial future harm to a large number of persons in the affected population.²

¹ ORS 401.025.

² ORS 433.442.

Following a declaration of emergency, the Governor may take necessary actions to respond to the emergency, including suspending a state order or rule if compliance with the order or rule would “prevent, hinder or delay mitigation of the effects of the emergency.”³

2. Powers of the Governor and Public Health Director in Emergency Response

During a declared public health emergency, the Governor may:

- Close, order the evacuation of or the decontamination of any facility the Governor has reasonable cause to believe may endanger the public health.
- Regulate or restrict by any means necessary the use, sale or distribution of food, fuel, medical supplies, medicines or other goods and services.
- Prescribe modes of transportation, routes and destinations required for the evacuation of individuals or the provision of emergency services.
- Control or limit entry into, exit from, movement within and the occupancy of premises in any public area subject to or threatened by a public health emergency if such actions are reasonable and necessary to respond to the public health emergency.
- Take any other action that may be necessary for the management of resources, or to protect the public during a public health emergency, including any actions authorized under ORS 401.168, 401.185, 401.188 and 401.192.⁴

In addition, the state Public Health Director may:

- Adopt reporting requirements for and provide notice of those requirements to health care providers, institutions and facilities for the purpose of obtaining information directly related to the public health emergency;
- After consultation with appropriate medical experts, create and require the use of diagnostic and treatment protocols to respond to the public health emergency and provide notice of those protocols to health care providers, institutions and facilities;
- Order, or authorize local public health administrators to order, public health measures appropriate to the public health threat presented;

³ ORS 401.168, 401.175.

⁴ ORS 433.441(3).

- Upon approval of the Governor, take other actions necessary to address the public health emergency and provide notice of those actions to health care providers, institutions and facilities, including public health actions authorized by ORS 431.264;
- Take any enforcement action authorized by ORS 431.262, including the imposition of civil penalties of up to \$500 per day against individuals, institutions or facilities that knowingly fail to comply with requirements resulting from actions taken in accordance with the powers granted to the Public Health Director.⁵

Absent a governor-declared emergency, during a serious public health event, with approval from the Governor, the state Public Health Director may:

- Coordinate the public health response across jurisdictions.
- Prescribe measures for the:
 - Identification, assessment and control of the communicable disease or reportable disease, disease outbreak, epidemic or other condition of public health importance; and
 - Allocation and distribution of antitoxins, serums, vaccines, immunizing agents, antibiotics, antidotes and other pharmaceutical agents, medical supplies or personal protective equipment.
- After consultation with appropriate medical experts, create and require the use of diagnostic and treatment guidelines and provide notice of those guidelines to health care providers, institutions and facilities.
- Require a person to obtain treatment and use appropriate prophylactic measures to prevent the introduction or spread of a communicable disease or reportable disease, unless:
 - The person has a medical diagnosis for which a vaccination is contraindicated; or
 - The person has a religious or conscientious objection to the required treatments or prophylactic measures.
- Direct a district school board to close a children’s facility or school under the jurisdiction of the board.
- Issue guidelines for private businesses regarding appropriate work restrictions.
- Organize public information activities regarding the public health response to the public health event.
- Adopt reporting requirements for, and provide notice of those reporting requirements to, health care providers, institutions and facilities for the purpose of obtaining information directly related to the public health threat presented.

⁵ ORS 433.443(2).

- Take control of antitoxins, serums, vaccines, immunizing agents, antibiotics, antidotes and other pharmaceutical agents, medical supplies or personal protective equipment.⁶

3. Liability and Other Protections for Emergency Volunteers and Facilities

a. State Liability Protection

(1) Qualified Emergency Service Volunteers

Under Oregon law, a qualified emergency service volunteer (QESV) is eligible for liability protection under the Oregon Tort Claims Act (OTCA) and workers' compensation benefits if the volunteer is performing emergency service activities under the direction of a public body during a declared emergency or public health emergency or is engaged in training conducted or approved by a public body. A QESV means a person who is (1) Registered with the Office of Emergency Management or other public body to perform emergency service activities; (2) Acknowledged in writing as a qualified emergency service volunteer, at the time the person offers to volunteer during an emergency, by the Office of Emergency Management or by another public body; or (3) A member of the Oregon State Defense Force.⁷

(2) Volunteer Health Care Providers

The Oregon Health Authority (OHA) maintains a registry of volunteer health care providers, SERV-OR, that may be deployed during a governor-declared emergency or public health emergency.⁸ SERV-OR registered health care providers who are deployed during an emergency or state-sanctioned exercises are agents of the state under the OTCA and thus have liability protection. A volunteer health care provider is also considered a QESV.

A health care provider who provides care at a designated emergency health care facility during an emergency is also eligible for liability protection under the OTCA but such a volunteer is not a QESV unless that volunteer also registers, is acknowledged by, and is acting at the direction of a public body. A volunteer health care provider who does not otherwise meet the definition of a QESV is not entitled to workers' compensation benefits.⁹

Registered volunteer health care providers¹⁰ have liability protection and workers' compensation benefits when engaged in training authorized by OHA. Those considering taking part in SERV-OR can learn more at: <https://serv-or.org/>

⁶ ORS 431.264.

⁷ ORS 401.358.

⁸ ORS 401.651 to 401.670.

⁹ ORS 401.667.

¹⁰ The Oregon Administrative Rules (OAR 333-003-0110 – 333-003-0210) regarding the state volunteer registry, liability protections, and emergency health care centers are available at: http://arcweb.sos.state.or.us/pages/rules/oars_300/oar_333/333_003.html

(3) Emergency Health Care Facilities

OHA may designate all or part of a health care facility or other location, such as a school for example, as an emergency health care center that may be used for: (1) Evaluation and referral of individuals affected by the emergency; (2) Provision of health care services; and (3) Preparation of patients for transportation. An emergency health care center must have an emergency operations plan and credentialing plan that governs the use of volunteer health care providers. A designated emergency health care facility and an individual or individuals operating such a facility are considered agents of the state under the OTCA for the purposes of any claims arising out of services that are provided through those centers or facilities under ORS 401.651 to 401.670 pursuant to directions from a public body and that are within the course and scope of the duties of the health care facility or other person.¹¹

b. Federal Liability Protection

(1) Federal Volunteer Protection Act

The federal Volunteer Protection Act¹² protects volunteers from liability if the volunteer individual is working for a nonprofit organization¹³ or governmental entity, does not receive compensation other than the reimbursement of expenses, and is acting within the course and scope of her or his responsibilities in compliance with state laws regarding the practice of such responsibilities. Liability protection is not available for harm that was caused by willful or criminal misconduct, gross negligence, reckless misconduct or a conscious, flagrant indifference to the rights and safety of the individual harmed by the volunteer.

¹¹ ORS 401.667.

¹² 42 USC 14501 – 14505.

¹³ The term "nonprofit organization" means -

(A) any organization which is described in section 501(c)(3) of title 26 and exempt from tax under section 501(a) of such title and which does not practice any action which constitutes a hate crime referred to in subsection (b)(1) of the first section of the Hate Crime Statistics Act (28 U.S.C. 534 note);

or

(B) any not-for-profit organization which is organized and conducted for public benefit and operated primarily for charitable, civic, educational, religious, welfare, or health purposes and which does not practice any action which constitutes a hate crime referred to in subsection (b)(1) of the first section of the Hate Crime Statistics Act (28 USC 534).

42 USC 14505(4).

(2) Public Readiness and Emergency Preparedness (PREP) Act¹⁴

The PREP Act authorizes the Secretary of Health and Human Services to issue a declaration to provide immunity from tort liability for, among others, administrators and distributors of vaccines, including health care and other providers who prescribe, administer or dispense countermeasures. Willful misconduct is not covered.¹⁵ A covered countermeasure may include vaccines, antidotes, medications, medical devices or other FDA assets used to respond to pandemics and other similar threats.

4. Medical Standard of Care

A medical standard of care is the type and level of care required by professional norms, professional requirements and perhaps institutional, i.e. facility, objectives.

5. Legal Standard of Care

In a medical malpractice case, the question for the jury to decide is whether the health care provider used that degree of care, skill, and diligence used by ordinarily careful health care providers practicing in the same or similar circumstances in the same or a similar community. Thus, the legal standard of care shifts depending on the circumstances. If a health care provider is following guidelines established by a community for the allocation of resources during an emergency, that fact may be evidence that the provider was using the degree of care, skill, and diligence used by health care providers in similar circumstances in the community and could be considered in a malpractice case, should one arise.

¹⁴ 42 USC 201, Public Law 109-148 (December 30, 2005).

¹⁵ 42 USC 247d-6d.

Oregon Crisis Care Guidance Appendix D – Planning

Resources

In response to requests for planning resources from the healthcare community, we have included links to potentially helpful documents.

Additional Crisis Care planning, training, and implementation tools are available through the *Oregon Crisis Care Guidance Implementation Toolkit*, available at: healthoregon.org/crisiscare

Crisis Care Planning: Summary Documents

Institute of Medicine. Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response. Mar. 2012

www.ncbi.nlm.nih.gov/books/NBK201063/

Institute of Medicine. Crisis Standards of Care: A Toolkit for Indicators and Triggers. Jul. 2013

www.nationalacademies.org/hmd/Reports/2013/Crisis-Standards-of-Care-A-Toolkit-for-Indicators-and-Triggers.aspx

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. Medical Surge Capacity Handbook: A Management System for Integrating Medical and Health Resources during Large-Scale Emergencies. Sept. 2007.

www.phe.gov/preparedness/planning/mscc/handbook/pages/default.aspx

American Nurses Association. Adapting Standards of Care under Extreme Conditions: Guidance for Professionals during Disasters, Pandemics, and Other Extreme Emergencies. Mar. 2008

www.calhospitalprepare.org/sites/main/files/file-attachments/14_adaptingstandardsofcare.pdf

Centers for Medicare and Medicaid Services. Emergency Preparedness Rule

www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/Emergency-Prep-Rule.html

Community and Ambulatory Care

Planning Framework:

Institute of Medicine. Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response, Mar. 2012. Template 8.1: Core Functions of the Out- of-Hospital and Alternate Care Systems in CSC Planning and Implementation.

www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2012/Crisis-Standards-of-Care/TEMPLATE%2081.pdf

Use of Non-Medical Resources

Severe health crises put tremendous strains on healthcare systems and personnel. Community Emergency Response Teams (CERT), search and rescue groups, and other volunteer organizations exist in many communities. They provide a ready reserve of trained individuals who can serve as force multipliers, carrying out a variety of non-medical support activities and freeing clinicians to provide direct medical care. For more information about CERT, visit:

www.ready.gov/community-emergency-response-team

Healthcare Volunteer Resources

The *State Emergency Registry of Volunteers in Oregon (SERV-OR)* is a database of licensed healthcare professionals who have registered to volunteer in response to federal, state, or local emergencies. SERV-OR volunteers are considered agents of the state when deployed during declared emergencies and state sanctioned exercises, and have both liability coverage under the Oregon Tort Claims Act, and workers compensation coverage. Many SERV-OR volunteers are also members of local or regional Medical Reserve Corps organizations. SERV-OR provides a pool of vetted healthcare professionals from multiple disciplines, as well as a notification system through which healthcare volunteers can be contacted and recruited for crisis response. For more information, see: <https://serv-or.org/> .

Examples of More Detailed Planning and Response Tools:

Lane County Medical Society. Influenza Pandemic Guidelines for Medical Practices in Oregon. 2009.

https://cdn.ymaws.com/lcmedsociety.site-ym.com/resource/resmgr/docs/lane_co_med_soc_pan_flu_temp.pdf

Emergency Medical Services

Planning Framework:

Institute of Medicine. Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response, Mar. 2012. Template 6.2: Core Functions of EMS Systems and EMS Personnel in the Implementation of CSC Plans.

www.nationalacademies.org/hmd/~media/Files/Report%20Files/2012/Crisis-Standards-of-Care/TEMPLATE%2062.pdf

CDC. Framework for Expanding EMS System Capacity During Medical Surge. Nov. 2017.

www.cdc.gov/phpr/readiness/healthcare/Expanding-EMS-Systems.htm

U.S Department of Health and Human Services, Agency for Healthcare Research and Quality. Mass Medical Care with Scarce Resources: A Community Planning Guide. Feb. 2007. Chapter IV: Pre-hospital Care.

N.B: AHRQ closed its Office of Public Health Emergency Preparedness in 2011 and put this document in its archive with the disclaimer that it will not update it. As of 2018, it remains a useful planning resource. <http://archive.ahrq.gov/research/mce/mceguide.pdf>

Examples of More Detailed Planning and Response Tools:

[Strategy for On-Scene Rapid Triage \(SORT\)](#) tool and [Patient Decision Chart](#) for use in emergency medical response during severe pandemic. Adapted from work by Emory University School of Medicine's Department of Emergency Medicine, Woodruff Health Sciences Center, and Office of Critical Event Preparedness and Response.

<https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/PreparednessSurveillanceEpidemiology/Documents/CrisisCare/SORT-triage-tool.pdf>

<https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/PreparednessSurveillanceEpidemiology/Documents/CrisisCare/SORT-DecisionChart.pdf>

Hospital and Critical Care

Institute of Medicine. Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response, Mar. 2012. Template 7.1: Core Functions of Hospital Facilities and Providers in the Implementation of CSC Plans

<http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2012/Crisis-Standards-of-Care/TEMPLATE%2071.pdf>

Task Force on Mass Critical Care. Care of the Critically Ill and Injured During Pandemics and Disasters: CHEST Consensus Statement. Oct. 2014

[https://journal.chestnet.org/issue/S0012-3692\(15\)X6419-1?code=chest-site](https://journal.chestnet.org/issue/S0012-3692(15)X6419-1?code=chest-site)

U.S Department of Health and Human Services, Agency for Healthcare Research and Quality. Mass Medical Care with Scarce Resources: A Community Planning Guide. Feb. 2007. Chapter V: Hospital/Acute Care, Chapter VII: Palliative Care.

N.B: AHRQ closed its Office of Public Health Emergency Preparedness in 2011 and put this document in its archive with the disclaimer that it will not update it. As of 2018, it remains a useful planning resource.

<http://archive.ahrq.gov/research/mce/mceguide.pdf>

Examples of More Detailed Planning and Response Tools:

[*Nurse Screening Tool for Urgent Discharge*](#). Template for criteria guiding expedited discharge of patients in contingency and crisis settings. Adapted from a document developed by University of Washington Medical Center.

<https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/PreparednessSurveillanceEpidemiology/Documents/CrisisCare/UrgentDischargeTool.pdf>

Bed Surge Capacity Expansion Tool. Accessible at:

<https://www1.nyc.gov/assets/doh/downloads/pdf/em/bscet.pdf>

U.S Department of Health and Human Services, Office of the Asst. Secretary for Preparedness and Response. Hospital Surge Evaluation Tool. Dec. 2014

www.phe.gov/Preparedness/planning/hpp/surge/Pages/default.aspx

National Emergency Department Overcrowding Scale (NEDOCS)

A calculator to assess level of emergency department surge

<http://support.ncttrac.org/kb/a45/emresource-nedocs-definitions-and-sample-tracking-log.aspx>

Clearinghouse Websites for Information on Healthcare Preparedness

ASPR TRACIE (Technical Resources, Assistance Center, and information Exchange)

Features information about pandemic response, medical surge and pharmacy response, as well as crisis response issues related to EMTALA and other federal laws.

<https://asprtracie.hhs.gov/>

Centers for Disease Control and Prevention, Office of Public Health Preparedness and Response: www.cdc.gov/phpr/readiness/healthcare/index.htm

U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, Public Health Emergency Preparedness Archive: <http://archive.ahrq.gov/prep>

N.B: AHRQ closed its Office of Public Health Emergency Preparedness in 2011 and put this document in its archive with the disclaimer that it will not update it. As of 2013, it remains a useful planning resource.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response (Public Health Emergency):

www.phe.gov/preparedness/pages/default.aspx

California Hospital Association, Hospital Emergency Preparedness:

www.calhospitalprepare.org

Oregon Crisis Care Guidance

Appendix E – Oregon Model for Triage and Allocation of Critical Care Resources in a Healthcare Crisis

This appendix describes the triage model for critical care resource allocation in a severe, sustained healthcare crisis. It also includes a clinical tool, the Modified Sequential Organ Failure Assessment, which may help in determining which of several people presenting for limited critical care resources should receive more aggressive care. Next, there is a set of scenario-based case studies. Healthcare providers who might potentially serve as triage officers are encouraged to review the Triage Model, then to read the case studies and go through the process of making resource allocation decisions.

Model for Critical Care Triage during a Sustained, Severe Public Health Crisis

A crisis situation exists when critical care resources are severely limited, the number of patients presenting for critical care exceeds capacity, and there is no option to transfer to other critical care facilities. (See “Settings – Crisis situation”, pg.12 in the body of this document.) In these situations, it is important that triage decisions are made fairly and in a way that saves as many lives as possible.

To the greatest extent possible, there should be consistency in how triage decisions are made across healthcare facilities and communities, and decisions should be made by experienced clinicians based on the best objective information available. Further, in the stressful atmosphere of a public health crisis, where possible, clinicians should be spared the added burden of having to choose which severely ill patients under their care should receive critical care services, and which should not. In light of these concerns, we recommend the following model for critical care triage.

In a crisis, who would make critical care triage decisions in Oregon?

Where possible, a triage team, rather than an individual, should be responsible for decisions about who will receive critical care. Ideally, the triage team would include two critical care providers (at least one of whom is not directly involved in care of the patients being triaged). Triage teams would be staffed by the most experienced critical care providers available, including physicians, critical care nurse managers, and potentially other clinicians with experience in critical care.

The authors recognize that in smaller facilities, or even in large ones where many severely ill people are presenting simultaneously for critical care services, it may be necessary to have a single triage officer handle critical care triage decisions. Where possible, the authors recommend that triage team duty be rotated among available staff with the necessary clinical expertise in critical care. When possible, persons serving on the triage team or as triage officer should not be involved in direct patient care during their triage shift.

To provide support for smaller facilities and to staff triage services with minimal effect on availability of critical care personnel for direct care, regions can consider a regional

triage system, in which experienced clinical care personnel from hospitals in the area take turns staffing the triage team. Clinicians would then present cases to the triage team by phone or electronically. Such a system would depend on an intact ability to use tele-communications, and some standardization in how cases are presented, using objective information about each patient's presentation. Used appropriately, it would both decrease the burden on individual hospitals to staff triage and would contribute to transparency and consistency in triage decision-making.

In a crisis, on what criteria should critical care triage decisions be based?

Critical Care Exclusion and Inclusion Criteria

Some medical conditions are associated with very low likelihood of long-term survival. Based on the goal to maximize the number of lives saved in a sustained public health crisis, people with confirmed advanced disease or severe injury for which the average life expectancy is less than six to twelve months will be referred to less aggressive care rather than aggressive, critical care. These conditions include advanced illnesses such as cancer with spread to distant parts of the body, heart failure, liver disease, neurologic disease, or other conditions with an average life expectancy of less than six to 12 months.

Cardio-pulmonary resuscitation (CPR) is a labor- and staff-intensive endeavor that has poor overall survival, except in situations where there is an immediately treatable and reversible etiology. In certain situations, there is almost universally a poor outcome, including

- cardiac arrest following blunt trauma,
- initial rhythm of asystole,
- recurrent arrest, and
- those who do not have immediate return of spontaneous circulation after initial interventions

It may be appropriate, in a crisis setting, not to undertake CPR in these and similar situations, or if there are no critical care resources available for post-arrest care. If CPR has been initiated, it is appropriate to consider stopping, if, in the clinical judgement of the person leading the code, there is a very low likelihood of patient survival to discharge. Similarly, if epinephrine is in short supply, it may be appropriate to refrain from its use during advanced cardiac life support resuscitation, so that it can be reserved for treatment of anaphylaxis or other uses associated with higher rates of survival.

In addition, persons who are on hospice and persons who have expressed a desire not to receive intensive care would be referred for less aggressive care.

(In the event of a larger mass casualty situation, in which progressive demands for critical care continue to overwhelm the medical system despite use of the above parameters, clinicians should expand the critical care exclusion criteria to encompass patients whose medical conditions are expected to result in an average life expectancy of less than 1-2 years).

People with none of the conditions above should be evaluated by the triage team.

Given the demands such an event would place on critical care delivery areas, critical care should be restricted to those patients meeting the following criteria:

(1) Patients with a requirement for invasive ventilatory support such as:

- Refractory hypoxemia (SpO₂ <90% on non-rebreather mask or FIO₂ >0.85),
- Severe respiratory acidosis,
- Inability to protect or maintain airway, or
- Clinical evidence of impending respiratory failure.

In pediatric patients, a respiratory rate, at rest, >20 breaths per minute above the upper limit of normal for age* in the setting of respiratory distress as evidenced by one or more of the following: perioral cyanosis, retractions/use of accessory breathing muscles, oxygen saturation below 90%, irregular respiration/apnea, or decreased level of consciousness.

(2) Adult patients who have hypotension with clinical evidence of shock*** refractory to volume resuscitation, and requiring vasopressor or inotrope support that cannot be managed in a ward setting,**

Pediatric patients with hypotension or with clinical evidence of shock*** and decreased peripheral perfusion** as manifested by decreased temperature of the distal limbs relative to the core, or progressively increasing capillary refill time.

Note: hypotension is a sufficient critical care inclusion criterion in pediatric patients, but is not required.

(3) Patients at high risk of death from other illness or injury who are expected to benefit substantially from timely provision of critical care services, such as those with:

hemodynamically unstable arrhythmia of reversible cause, diabetic ketoacidosis, status epilepticus, sepsis, hypoglycemia, life-threatening illness from toxin exposure, or illnesses of similar severity.

***Age-specific respiratory rate inclusion criteria for pediatric patients:**

Age	0 days-1 wk.	1wk-1 mo.	1 mo.-1 yr.	2-5 yrs.	6-12 yrs	13-18 yrs
Breaths per minute	>70	>60	>54	>42	>38	>34

****Hypotension** = Systolic BP <90 mm Hg for patients >10 years old, or <70 +(2 x age in years) for patients ages 1 to 10, or relative hypotension;

*****Clinical evidence of shock** = altered level of consciousness, decreased urine output, or other evidence of hypoperfusion-induced organ failure

Additional Criteria to Guide Critical Care Resource Allocation Decisions

Triage decisions should be based on integrating assessments in two principal areas:

- 1) The likelihood of death, based on the best information available, if the presenting patient does not receive critical care services, and
- 2) The likelihood of survival and recovery from the current illness or injury if critical care services are provided.

Additional relevant, but not over-riding considerations include:

- 3) The expected scope and amount of medical resources that would be needed to provide critical care for this patient and the scarcity of those resources, and
- 4) Underlying medical conditions (other than those listed as critical care exclusion criteria) and their expected impact on the patient's long-term prognosis.

In regard to the first two areas, critical care triage decisions should be made using best clinical judgment and, as noted above, should be based on objective clinical measurements. The authors recognize that different tools have been developed to guide critical care decision-making.

Use of the Modified Sequential Organ Failure Assessment (MSOFA), included below, may help in determining which of several people presenting for limited critical care resources should receive more aggressive care. Lower MSOFA scores indicate a higher likelihood of survival, while higher scores suggest greater risk of death. Clinicians throughout Oregon should be familiar with MSOFA to facilitate efficient sharing of relevant clinical information and critical care triage decision making in a crisis.

The authors recognize that clinical judgment can be superior to scoring systems such as MSOFA in predicting survival in critical care settings (Sinuff, et al. Mortality predictions in the intensive care unit: comparing physicians with scoring systems. *Crit Care Med* 2006; 34:878–885). MSOFA scoring may be most useful for settings in which experienced critical care physicians are not available. MSOFA scores may also help to standardize the description of illness severity during communications among healthcare facilities and with public health officials.

In addition, the tempo at which patients present may shift the threshold for use of resources. For example, if there are relatively few patients, resources may be ample to treat a large number of severely ill patients with a relatively high MSOFA score.

However, as the number of severely ill patients increases, the threshold for resource use may need to be changed to a lower MSOFA score.

Further, in a crisis, the tempo at which patients present may preclude systematic use of scoring systems such as MSOFA, as could lack of functioning clinical and laboratory equipment. In these situations, clinical judgment based on the objective information available (heart rate, respiratory rate, blood pressure, urine output, level of consciousness, skin color and turgor, extent and severity of observed injuries) should be used to guide resource allocation decisions.

In assessing the third area—expected resource consumption versus resource availability--- it is important that triage decision makers have access to the most current information about available critical care resources to inform their decisions. They should be provided with regularly updated information on ventilator and critical care services availability for their own facility and for any hospitals within feasible transfer distance.

Outside of the exclusion criteria listed above, consideration of underlying medical conditions and their impact on long-term prognosis should be secondary to the initial assessment of the benefit of resource use and its ability to increase the presenting patient's baseline probability of surviving her/his acute illness or injury. When multiple people have the same potential for benefit, long-term prognosis can be considered.

Pregnancy and Critical Care Resource Allocation

Capacity for fetal monitoring and diagnostic assessment, as well as perinatal and critical care resources, will likely be limited in a crisis setting. In a public health crisis, it will, therefore, often be difficult to determine with confidence the likelihood of survival of an unborn infant carried by a critically ill or injured mother. Because of this, decisions about critical care resource allocation and treatment should be based primarily on the pregnant woman's clinical condition and chance of survival. When the capacity exists to assess the unborn child's status, and, based on that assessment and available resources, there is a high likelihood of the infant's survival, this could be considered in resource allocation decisions.

Reassessment of patients receiving critical care

Any patient occupying an intensive care unit bed at the onset of a public health crisis of a severity and pervasiveness requiring implementation of this triage model should be re-assessed periodically in accordance with the critical care triage principles outlined above. Patients who do not meet criteria for critical care should be transferred out of the intensive care unit for less aggressive medical treatment or palliative care. In a crisis setting, the decision not to initiate critical care and a decision to withdraw critical care are morally and legally equivalent.

In a crisis, what approaches will foster transparency, consistency, and refinement of triage decision making?

A system should be established to allow regular phone or webinar conferences between clinicians involved in critical care triage around the state. These conferences would allow comparison of how triage decisions are being made and help refine triage criteria based on changing resource availability, numbers of severely ill or injured people presenting for care, or any concerns from providers, patients or their families about individual triage decisions.

Modified Sequential Organ Failure Assessment (MSOFA)

The MSOFA requires only one lab value, which can be obtained using bedside point-of-care testing (creatinine obtained through ISTAT). MSOFA has not been validated in children, but is currently under study.

MSOFA Scoring Guidelines						
Variable	Score 0	Score 1	Score 2	Score 3	Score 4	Score for each row
SpO₂/FIO₂ ratio* or nasal cannula or mask O ₂ required to keep SpO ₂ >90%	SpO ₂ /FIO ₂ >400 or room air SpO ₂ >90%	SpO ₂ /FIO ₂ 316-400 or SpO ₂ >90% at 1-3 L/min	SpO ₂ /FIO ₂ 231-315 or SpO ₂ >90% at 4-6 L/min	SpO ₂ /FIO ₂ 151-230 or SpO ₂ >90% at 7-10 L/min	SpO ₂ /FIO ₂ ≤150 or SpO ₂ >90% at >10 L/min	
Jaundice	no scleral icterus			clinical jaundice/ scleral icterus		
Hypotension†	None	MABP<70	dop<5	dop 5-15 or epi ≤0.1 or norepi ≤0.1	dop >15 or epi >0.1 or norepi >0.1	
Glasgow Coma Score	15	13-14	10-12	6-9	<6	
Creatinine level, mg/dL (use ISTAT)	<1.2	1.2-1.9	2.0-3.4	3.5-4.9 or urine output <500 mL in 24 hours	>5 or urine output <200 mL in 24 hours	
MSOFA score = total scores from all rows:						

* SpO₂/FiO₂ ratio:

SpO₂ = Percent saturation of hemoglobin with oxygen as measured by a pulse oximeter and expressed as % (e.g., 95%)

FIO₂ = Fraction of inspired oxygen; e.g., ambient air is 0.21

Example: if SpO₂=95% and FIO₂=0.21, SpO₂/FIO₂ ratio is calculated as 95/0.21=452

† Hypotension:

MABP = mean arterial blood pressure in mm Hg (diastolic + 1/3(systolic - diastolic))

dop= dopamine in micrograms/kg/min

epi = epinephrine in micrograms/kg/min

norepi = norepinephrine in micrograms/kg/min

Source: Grissom CK, Brown SM, Kuttler KG, et al. *Disaster Med Public Health Preparedness*. 2010;4:277-284.

Cases Studies in Triage:

Implementation of the Oregon Triage Model

In December, 2012 the Critical Care Workgroup of the State Crisis Care Guidance Development Project held a work session in which they piloted the Oregon Triage Model. Workgroup members reviewed 12 case histories and independently recorded their resource allocation decisions for each patient presented. They then compared their conclusions and discussed the basis for their decisions. Results of this exercise are presented here as a guide to how the Triage Model can be used, and to outline which specific aspects of the Triage Model led to each triage decision. The authors hope that this will help potential triage officers as they develop their skills in use of the Model.

First, we present the Scenario and the case histories. Healthcare providers who might potentially serve as triage officers are encouraged to review the Triage Model, then to read the case studies and go through the process of making resource allocation decisions about each of the patients presented.

The conclusions of the Critical Care Workgroup follow, along with an explanation of which components of the triage model guided specific resource allocation decisions.

Scenario

Without warning, a magnitude 8.5 earthquake strikes 20 miles off Oregon's coast. All major highways, airports and bridges west of the Cascades are severely damaged and unusable. In Portland 2,500 people die within minutes. Another 15,000 are also injured, many seriously enough to need hospital care.

The Governor declares a disaster and after consultation with surviving representatives of the healthcare community, the Public Health Director activates Crisis Care Guidelines. Efforts to expand surge capacity are in place. However, critical care capacity is overwhelmed by the number of severely injured patients presenting for care, and it is not possible to transfer to unaffected facilities.

Patients to Be Triageed: Group 1

You are serving as Triage Officer. There are currently two ICU beds available. You are evaluating the following patients:

Patient A is a 54 yo female with hypercholesterolemia marginally controlled on simvastatin, a 35 pack-year smoking history, and hypertension controlled on lisinopril. She was carrying out her usual duties as charge nurse in your hospital when she developed new onset, sub-sternal chest pain radiating to her jaw, and mild dyspnea. EKG shows sinus tachycardia with ST elevations in the anterior leads. SBP is 160. She has no history of trauma. Cardiac catheterization is not available.

Patient B is a 42 yo female undergoing chemotherapy for breast cancer with multiple distant metastases. She presents with severe respiratory distress after a crush injury to her chest sustained in a building collapse. She is alert and oriented. Breath sounds are

audible on the left but not on the right. O₂ sat by pulse oximetry on non-rebreather mask is 82%

Patient C is a 19 yo male with mild developmental delay secondary to trisomy 21. He has no known manifestations of chronic disease, but presents with closed head trauma and a traumatic amputation of his L leg. He is lethargic, opens his eyes and withdraws in response to pain, but is non-verbal. Temperature is 97.8, BP is 80/50, pulse 120 and faint. Capillary refill is >4 seconds. PRBC supplies are low (2 compatible units available, platelets are currently unavailable).

Patient D is the 22 yo sister of pt. C, She has an unremarkable past medical history, and was caught in the same building collapse as her brother. She also has sustained head trauma with skull fracture. She is unconscious and unresponsive to pain stimulus, with a skull fracture through which brain tissue is extruding. There is no neurosurgeon currently available.

How would you triage these patients? Which would you refer for ICU admission? What is the basis for your triage decision in each patient?

Patients to Be Triageed: Group 2

Five days later, you are on Triage duty again. After a three-day lull, there is an upsurge in the number of people presenting for care. You do not currently have access to blood chemistry analysis. Critical care beds and available hospital beds are all full.

You are evaluating the following patients:

Patient E is a 78 yo male with R knee osteoarthritis and a functioning pacemaker secondary to history of 3rd degree heart block His past medical history is otherwise unremarkable except for a large contaminated laceration of his L thigh sustained 5 days ago during an aftershock. He has been active and well prior to this illness. He presents with fever of 102, rigors, and decreased level of consciousness with confusion, onset 12 hours ago. He is anicteric, opens his eyes only with painful stimuli, utters recognizable but inappropriate words, and has purposeful movement in response to pain. His family reports that he has not voided in the past 15 hours. MSOFA score is 10

Patient F is an 18 month old female who sustained a crush injury to both lower extremities during the initial earthquake. She is otherwise healthy and meeting developmental milestones. She now presents with oliguria and cola-colored urine. Her parents report that, until this morning, she has been eating and drinking well. She is alert but irritable, Blood pressure is 126/80 (>99th percentile for age).

Patient G is a 62 yo male with diabetes marginally controlled on metformin and glipizide. He presents with 1 ½ hrs. of dyspnea and nausea. He denies chest pain, but is mildly bradycardic at 56 bpm, with ST depression in lead I and apparent ST elevation in leads II, III, and AVF. He is normotensive; O₂ sat. is 94% on 2 L/min. by mask. MSOFA is 1.

Patient H is a 45 yo female in cardiac arrest. She was brought to the hospital with CPR in progress by EMTs who extricated her 10 minutes ago after she was caught in the after-shock-

induced collapse of a nearby apartment. She transiently regained a perfusing rhythm but is currently in asystole. MSOFA is 12.

Currently, the following patients are in the ICU, and you re-evaluate them:

Patient I is a 55 yo male admitted with hematemesis and hypotension. He sustained a tibial and fibular fracture of the L leg a week ago which has been splinted. Past medical history notable for diabetes, cirrhosis and a prior episode of hematemesis from varices related to his hemochromatosis. He also has chronic angina, which is reasonably controlled on a beta blocker and p.r.n. nitroglycerin. Over the past two days, his urine output has decreased (now ~150cc/24 hrs.) A urine dipstick shows no protein, and urine sediment is unremarkable. He is unconscious but responds to painful stimuli by withdrawal. MSOFA score has increased from 8 at admission to 12.

Patient J is a 15 yo female, admitted two days ago with influenza-like illness, fever to 104, obtundation, and respiratory failure. She remains on a ventilator with settings of CMV 30/15, RR 25, FiO₂ 70% (weaned from 100% in the last 24h). Her O₂ sat is 90%. Vasopressors for circulatory support were initiated at admission, but were weaned off this morning. Team plans to wean sedation today; sedation holidays reveal intact neurological exam. Tracheal tube secretions are increased, but remain clear. Patient is well-perfused; urine output is 2ml/kg/hr.

Patient K is a 53 yo male with diabetes, he was admitted with sepsis 9 days ago secondary to polymicrobial osteomyelitis involving several metatarsal bones in the R foot. After debridement and partial amputation of the foot, he developed necrotizing fasciitis, now with extension to the psoas. He underwent aggressive debridement two days ago, and continues on appropriate antibiotic therapy, but has not regained consciousness. He is intubated and on 10 mcg/kg/min of dopamine. His MSOFA has risen from 8 to 11 in the past 24 hrs.

Patient L is a 61 yo male with COPD admitted two days before the earthquake with respiratory failure secondary to pneumococcal pneumonia. His baseline PaO₂ is 50 mm Hg on room air and FEV₁ is 20% of predicted, and he has had multiple hospitalizations in the past year with COPD exacerbation, each requiring intubation. WBC on admission was 4,500/uL. Two attempts to wean off the ventilator have been unsuccessful. Current settings are CMV Vt 8ml/kg, RR 18, FIO₂ 0.7, PEEP 8. He has been very restless and is sedated and paralyzed. Urine output is within normal limits and he is not requiring pressors and is not jaundiced. MSOFA cannot be calculated due to induced paralysis.

Which newly presenting patients meet inclusion and exclusion criteria? How would you triage them? Should any of the patients you re-assessed be referred to a less aggressive level of care outside the ICU? Which parts of the Triage Model are the basis for your triage decisions?

Conclusions of the Critical Care Workgroup

Group 1

Patient A – No exclusion criteria met. Apparent anterior MI without hemodynamic instability. Survival does not currently appear to be dependent on critical care services; offer thrombolytics, admit to hospital, not critical care area.

Patient B – Widespread metastases with resultant low life expectancy would exclude this patient from critical care. Apparent tension pneumothorax can be evaluated and treated.

Patient C – No exclusion criteria met. Treat apparent hypovolemia with crystalloid in this young, otherwise healthy person. Perform clean amputation and obtain hemostasis for leg injury. Admit to non-critical care bed for fluids and observation. Neurosurgery support is not available. However, consider head imaging, if available, with intervention if treatable hematoma identified.

Patient D – Likelihood of survival in this setting with open skull fracture exposing brain tissue is low and would exclude patient from critical care. Provide palliative care.

Group 2

Patient E – Sepsis with altered mental status and possible oliguria. No Exclusion criteria; high likelihood of death without critical care and reasonable expectation of survival with it. Admit, to critical care if bed can be cleared, and treat.

Patient F – Patient with apparent acute renal failure due to rhabdomyolysis-induced myoglobinuria. No exclusion criteria; high likelihood of death without care and good potential for survival with fluids and diuretics. May not require critical care, but need to find a bed with skilled nursing.

Patient G – No exclusion criteria. Apparent inferior wall MI with minimal bradycardia and well-maintained BP. Prognosis for survival and recovery is good without critical care services. ICU admission not indicated.

Patient H – Blunt-trauma-induced cardiac arrest excludes patient from critical care in this setting. Terminate CPR.

Patient I – Apparent hepato-renal syndrome carries low likelihood of survival even with aggressive critical care. Transfer to palliative care.

Patient J – Continues to meet inclusion criteria; her pulmonary condition is improving, and she would likely not survive if it were withdrawn. Continue critical care services.

Patient K – Patient has secondary complication (necrotizing fasciitis with truncal involvement) associated with low likelihood of survival even with critical care services. Transfer to palliative care.

Patient L – End-stage COPD would have met exclusion criteria had this person been admitted since the earthquake. His superimposed pneumonia has not improved after one week on ventilation. Transfer to palliative care.

Oregon Crisis Care Guidance
Appendix F – Ethical Guidance for Health Response during Epidemics of
Highly Contagious, Potentially Life-Threatening Infections and
other Public Health Emergencies

In accordance with a request from the Director of the Oregon Public Health Division, the Crisis Care Guidance Development Ethics Workgroup convened on November 4, 2014 to identify and provide guidance on key ethical issues related to Ebola response. This document contains the conclusions from those discussions.

This appendix to the Crisis Care Guidance will be revised and updated as needed to address the ethical implications of other practical issues pertinent to crisis care as they are identified.

Brief Summary of Conclusions

Issue 1. Mandatory restriction of movement and activities among people who have been exposed to a highly contagious, potentially life-threatening communicable disease.

Unless there is compelling evidence that a disease is severe, and is transmissible prior to onset of illness, it is difficult to justify restriction of movement as a disease-prevention strategy. In special situations, where there is compelling evidence that an exposed person won't be willing or able to isolate from others if a severe communicable disease develops, restriction of movement is justified.

Issue 2. *Duty to care*; exemption from direct care responsibilities; monitoring of potentially exposed healthcare workers

Generally, during a public health crisis, people with the knowledge, training and, infection prevention resources to provide care safely would not have an ethical justification to refuse to provide care. An exception would be if a care provider has an underlying condition (immune deficiency or pregnancy) that materially increases the risk of severe illness or death.

Issue 3. Differences in evaluation, quarantine, or other aspects of management, based on nationality, insurance status, or other traits not related to medical condition.

During a crisis, there is no ethical justification for differences in care based on factors unrelated to medical condition.

Issue 4. Challenges for first responders who must evaluate patients and initiate care in uncontrolled environments with incomplete information

Measures taken should optimize potential benefit to patients with suspected severe communicable disease while mitigating the risk to responders. Those evaluating, transporting, and providing care for such a patient should implement infection control precautions, but nonetheless have a duty to provide care that is likely to benefit the patient if they can do so safely.

First responders and others are ethically justified in deferring high-risk procedures until they can be done in a controlled setting if the delay does not substantially increase the patient's risk of harm. First responders are further justified in not initiating resuscitation if there is no benefit to the ill patient. However, when adequate infection control measures are available, there is reasonable expectation of benefit to the patient, and delaying care is likely to result in serious harm to the patient, *Duty to Care* obliges a first responder to provide care.

Issue 5. Refusal by clinicians and other healthcare personnel to evaluate, provide care for, or transport patients

During a crisis, refusal based on conscientious objection to provide care and allocate resources in accordance with the Guidance might be accommodated if staffing allows. However, if there is no timely option for transfer of care, the provider should continue with care in accordance with the Guidance unless other care options become available. If refusal to provide care is based on inadequacy of infection prevention resources or concern that the intervention ordered is not consistent with correct implantation of the Guidance, every effort must be made by incident managers to address and resolve the issue.

Full Discussion of Each Issue

Issue 1. Mandatory restriction of movement and activities among people who have been exposed to a severe communicable disease

The Workgroup identified the two ethical principles of *Respect for Persons and their Dignity* and *Protecting the Common Good* as relevant to the questions regarding movement and activity restriction among potentially infected persons. Decisions about mandatory quarantine should be based on scientific evidence related to severity of disease and likelihood of transmission. The risk that a person exposed to a pandemic infectious agent will become ill with it varies based on the infectious agent and the intensity and duration of exposure. Similarly, the relative weight of the two principles mentioned above varies depending on the degree of risk, with protection of the public becoming a less compelling argument in lower risk situations.

If there is no empiric evidence that transmission occurs before a person becomes symptomatic, then the argument for *Respect for Persons and their Dignity* is strong. For example, in the context of Ebola, the actual benefit to the public of mandatory restrictions on movement of an exposed, asymptomatic person is slight. Thus in the majority of cases, because of limited risk to the public from an asymptomatic person exposed to Ebola, mandatory quarantine is not justified.

However, if there is empiric evidence that transmission occurs before a person becomes symptomatic, then the argument for *Protecting the Common Good* is strong. Some possible benefits to the public of restricting movement of exposed, asymptomatic persons include (a) lessened anxiety or fear that members of the public might develop the illness, and (b) a decreased likelihood that an exposed person, if he or she does develop symptoms, will do so in a public area in which others might be exposed, e.g., to infectious blood or body fluids.

There are some exceptions. Should there be convincing evidence that an exposed person would be unwilling or unable to monitor for symptoms or to isolate him or herself, once symptomatic, to prevent exposure to others, the principle of *Protecting the Common Good* could justify mandatory restriction of movement. Even in this situation, the principle of *Respect for Persons and their Dignity* requires that any restriction be a last resort and be carried out in a humane way, that the rationale of mandated quarantine be shared with the individual, and that all the person's basic needs during the quarantine period are met.

The Workgroup noted that monitoring for fever or symptoms is a separate consideration from movement restrictions. Monitoring offers potential benefits for the exposed person (prompt recognition, diagnosis, and treatment) and to the community (prompt recognition of illness and establishment of infection control precautions to protect others from exposure and possible illness). Monitoring represents a lesser burden on an exposed individual than mandatory restriction of movement. Nonetheless, the principle of *Respect for Persons* and the need to provide services in a fair, non-stigmatizing way so as to promote *Social Solidarity* both require first seeking voluntary participation in monitoring, and a practice of always fully informing the exposed person of the risks of exposure and the rationale for, and benefits of, monitoring.

Issue 2. *Duty to care*; exemption from direct care responsibilities; monitoring of potentially exposed healthcare workers

The Workgroup agreed that, in *Adherence to Professional Standards*, and *Professional Integrity* **there is a duty to provide care incumbent on those who have the expertise to do so and who have been trained in effective measures to mitigate risk of infection, unless those individuals have a condition that would increase their risk of severe illness or death.** *Duty to Care*, then, is not absolute. It may be appropriate to exempt from care responsibilities healthcare workers who (1) may be at increased risk of infection or serious complications due to immune compromise or pregnancy, (2) have not received training in required infection control strategies, or (3) cannot demonstrate proficiency in implementing these strategies. When there is an abundance of healthcare workers with the necessary clinical expertise and proficiency in infection control measures, it is reasonable and ethical for those organizing response efforts to communicate with those individuals and to select a care/response team based on willingness to volunteer for duty.

The Workgroup further observes that the principles of *Non-maleficence* (the duty to refrain from knowingly causing harm) and *Beneficence* (the professional duty to benefit others to prevent or remove harm so as to produce a positive balance of goods over harms) provide ethical justification for limiting the number of people who are exposed to a person with possible or confirmed communicable disease during evaluation and care. Public health and the healthcare community also have an obligation to track and monitor all healthcare workers involved in care of a person with such an infection in order to protect both the worker potentially exposed and the public. At the same time, they have an obligation to protect the confidentiality of individuals being tracked and monitored as far as is feasible. This response should be proportionate, given the virulence and potential lethality of the infection and potential for transmission from patients who are seriously ill.

Issue 3. Differences in evaluation, quarantine, or other aspects of management, based on nationality, insurance status, or other traits not related to medical condition

The Workgroup affirms that two ethical principles, ***Respect for Persons*** and ***Justice*** (in the sense of equitable treatment), weigh strongly against determining services and treatment offered to, or restrictions required of, individuals who have been exposed to or are ill with a communicable disease based on arbitrarily chosen characteristics unrelated to their health status. The Workgroup noted that objective evidence for differences in risk of developing illness, severity of illness, and prognosis can justify difference in clinical and public health interventions for ill or exposed individuals. However, this should not be confused with decision-making based on traits unrelated to medical condition.

Issue 4. Challenges for first responders who must evaluate patients and initiate care in uncontrolled environments with incomplete information

Emergency first responders including Emergency Medical Services (EMS), law enforcement officers and fire fighters respond to calls from the public, often with no medical history about the potential patient, and in uncontrolled environments. First responders frequently must make rapid decisions about treatment and transport, often without knowing whether or not they might be exposed to a potentially contagious disease.

A person with a severe communicable disease who has a medical emergency should receive the standard care for the acute condition. First responders may be notified of the possibility of exposure to a contagious agent at the time they respond, allowing them to don personal protective equipment (PPE). On the other hand, responders may be exposed before an outbreak is recognized or without knowing the patient has symptoms suggestive of the severe contagious disease. To estimate the risk of transmission from a person who may be infected with a severe, communicable agent, the best available scientific evidence should be used to determine the mechanism and likelihood of transmission of the agent. However, such information may not be available at the time of response. Therefore, many EMS agencies direct first responders to don PPE before arrival if they hear the person has potentially contagious symptoms such as fever and cough, and before initiating high-risk procedures such as establishing intravenous access and aerosol-generating procedures such as suctioning or placing an advanced airway.

The measures taken should optimize potential benefit to the ill person while mitigating the risk to responders. During a known outbreak, avoiding certain procedures in the field or during transport is ethically justified if there is no benefit to the patient in the procedure or delaying the procedure until it can be done in a controlled hospital setting mitigates risk to healthcare professionals without substantially increasing the patient's risk of harm. **Based on the principles of *Beneficence* and *Adherence to***

Professional Standards, responders have an ethical obligation to provide the usual standard of care and to follow existing protocols. EMS Physician Supervisors could be morally justified in directing EMS not to initiate resuscitation in a person strongly suspected of sepsis in the setting of an infection with a virulent, contagious agent experiences cardiac arrest. Prognosis in this setting is very poor, and the likelihood of benefit to the patient is low. Responders are not obligated to assume increased risk of transmission without potential benefit to the patient.

In an established outbreak, EMS physicians can modify protocols. For example, during the Ebola outbreak in Africa, Oregon EMS physicians knew that the organism was highly transmittable in body fluids and that CPR, suctioning, placement of advanced airways and starting IVs in the uncontrolled, out-of-hospital environment or a moving ambulance was high risk. EMS physicians also knew that a person in cardiac arrest was not going to survive. Protocols were implemented stating that if a patient with likely Ebola was in cardiac arrest, no attempt at resuscitation should occur, advanced airway procedures should be deferred, if possible, to the hospital and IVs should only be established if the person needed rapid fluid administration before hospital arrival. Similar approaches could be considered during public health emergencies involving other life-threatening, communicable pathogens, based on the best available evidence regarding mode of transmission, infectivity, and benefit to patients.

However, a person being monitored for a severe communicable disease who has an acute health event with symptoms not consistent with the communicable disease (e.g., stroke or a broken bone secondary to a fall) should receive care that is appropriate for the acute condition. Those evaluating, transporting, and providing care for the patient should implement infection control precautions, but nonetheless have a duty to provide care if they have the ability to do so competently and safely.

Issue 5. Refusal by clinicians and other healthcare personnel to evaluate, provide care for, or transport patients

During a public health crisis, a healthcare professional might object to performing a certain action in the course of providing crisis care. This may be a request to have the objection accommodated professionally by having another healthcare professional replace the objecting person, or an explicit refusal regardless of care being unduly interrupted or halted altogether. The types of care that a healthcare professional could object to include the provision of a certain treatment, the withholding or withdrawal of a treatment, or some other kind of task e.g., related to a triage decision in implementing the Crisis Care Guidance.

The healthcare professional's justification for refusing to carry out a certain healthcare-related task could represent:

1. A case of conscientious objection; that is, a refusal to provide or discontinue care due to a core personal moral belief that is inconsistent with performing a given action

2. A case of concern for personal health or safety; that is, a refusal to provide care in a situation where professional risks exposure to a possibly infectious agent
3. A case of conflict with a professional's integrity as a physician, nurse, etc.; that is, a refusal to provide care due to perceived conflict with established professional duties
4. A case of improper application of the Crisis Care Guidance, for example, a refusal to provide care due to a professional's claim that the mSOFA score was calculated inaccurately

Even in a public health crisis, it is necessary to review a healthcare professional's objection to performing a certain action to the extent possible. In some situations, such as a crisis response to a mass-casualty situation, there may not be an opportunity to adequately evaluate a claim. However, certain insights may be helpful to consider should there be sufficient opportunity and resources to review a given objection:

1. Regarding a case of conscientious objection, usual principles and practices in clinical ethics should apply to assure transition of care to another professional without risking patient abandonment. The professional making a conscientious objection should continue to respond in accordance with the plan developed in implementing the Crisis Care Guidance unless and until another healthcare professional can assume care.
2. Regarding a concern for the healthcare professional's own personal health or safety, it is necessary to evaluate whether health system, EMS agency, and other healthcare entity obligations have been fulfilled regarding the provision of adequate training, PPE, and other infection control measures in order to provide care as safely as possible. Should a healthcare professional's objection highlight lapses in meeting these aforementioned obligations (for example, appropriate PPE has not been provided), then an immediate response should be made by the crisis command center and relevant leaders. If adequate training, PPE, and other infection control measures are in place, the healthcare professional should continue to respond in accordance with the plan developed in implementing the Crisis Care Guidance unless other factors, such as pregnancy or compromised immunity, put the individual at higher risk of infection.
3. Regarding a case of conflict with a professional's integrity as a physician, nurse, etc., it is important to note that the Crisis Care Guidance has been developed with broad stakeholder engagement including representatives from a broad range of relevant professional practices and disciplines. If individual professionals cannot reconcile their responsibilities in a crisis situation with their professional identity as a doctor, nurse, or other healthcare professional, this may represent a failure to share the Crisis Care Guidance, its ethical underpinnings and its implementation prior to development of a crisis situation, or the manner in which it has been implemented during a crisis. Ultimately, all things being equal, the professional should be carefully listened to, but encouraged to practice in accordance with the unique application of medical expertise to a crisis care situation that can differ, sometimes markedly, from standard clinical practice.

4. Regarding a case of improper application of the Crisis Care Guidance, this represents a situation where something may have been overlooked, similar to a surgeon not performing an instrument count after an open procedure or a pharmacist delivering the wrong dose of a prescription. Consistent with organizations and industries who commit to being “highly reliable” (cf. nuclear energy, commercial aviation), a mechanism should be developed to escalate a concern about how the Crisis Care Guidance is being implemented in an accurate, consistent manner. A crisis situation does not lessen the requirement that all members of the disaster response team pursue excellence in the care they are able to provide during crisis response.

Oregon Crisis Care Guidance
Appendix G – Health Care during a Crisis:
Frequently Asked Questions

Q: What is a healthcare crisis?

A: A healthcare crisis exists when public demand for healthcare resources overwhelms the available supply. Examples of events that might lead to a healthcare crisis include a major earthquake, a tsunami, or a pandemic.

Q: What is a pandemic?

A: A pandemic is an outbreak of an infectious disease over a broad geographic area, sometimes worldwide. It leads to infections among many people, and, because of the disruption it causes, can indirectly affect many more. The influenza pandemics of 1918, 1957, 1968, and 2009 affected millions of people worldwide.

Q: Why is it necessary to have a guidance on allocating healthcare resources (such as mechanical ventilators or intensive care) in a healthcare crisis?

A: One critical factor when planning for a healthcare crisis is the expected shortage of life-sustaining equipment and services such as mechanical ventilators (breathing machines), space in intensive care units, capacity for surgery to care for severe injuries, etc. A healthcare crisis that uses available supplies and also leads to a shortage of staff could force hospital staff to decide which patients *would* and *would not* receive intensive care. This is called the **triage** decision. Having clear guidelines in advance helps create a fair triage process that provides the greatest benefit to as many patients as possible.

Q: Why don't we just stock as many ventilators and other resources as would be needed?

A: Although healthcare facilities in Oregon work to ensure that they are prepared to meet needs of Oregonians, it would be prohibitively expensive to purchase and maintain enough equipment for the worst-case scenario, even if there were sufficient staff to operate it. Because of these limitations and the fact that many people would be critically ill at the same time, in a healthcare crisis there will be shortages. In addition, healthcare workers would be ill or injured, leaving insufficient staff to provide the skilled care needed for hospital patients. Consequently, difficult decisions about providing resources are unavoidable. We must recognize and plan for this.

Q: Who developed the guidance regarding resource allocation in a healthcare crisis?

A: The proposed guidance was developed through extensive collaboration involving people from many disciplines. The workgroups involved considered issues posed by a severe shortage of critical medical equipment, supplies and staff. They included experts in public health, medical ethics, clinical medicine, healthcare preparedness and other disciplines relevant to a healthcare crisis response. (See Appendix A for a list of workgroup members.)

Q: Are the recommendations final?

A: No. This is a living document. It will be revised based on public comment and additional information from clinicians, healthcare facilities, published reports and the community. There are no perfect answers in response to the immense challenges posed by a healthcare crisis. That is the reason we are sharing the proposed guidance and asking for your ideas.

Q: Isn't this really a proposal to "ration" critical supplies?

A: The guidance is much broader than that. Although it would probably be necessary in a crisis to make difficult decisions about who would receive which resources, the proposed guidance is also intended to accomplish the following important goals:

- Reinforce the fundamental obligation of health professionals to care for patients.
- Devise a fair system for assigning healthcare resources during times of critical shortage.
- Provide clear, consistent communication to healthcare providers, patients, and their families.
- Outline strategies to expand the number of patients who can be treated with available resources.

Q: When would this guidance take effect?

A: This guidance would take effect in the setting of a healthcare crisis if the need for resources exceeds the supply of equipment and staff. The settings in which various strategies would be implemented are outlined on page 12 of the guidance.

Q: What can facilities do to reduce the demand for resources?

A: The proposed guidance describes a number of possible strategies to optimize use of resources in a healthcare crisis:

- Postponing/canceling elective procedures during the period of emergency. (Elective procedures are operations, tests, or other treatments not immediately required to preserve the health or life of the patient.) (See guidance, pg. 16.)
- Limiting outpatient procedures, especially those that may require hospital admission and/or ventilator support if complications arise. (See guidance, pg. 15.)
- Encouraging nearby facilities to work out voluntary plans for loans of equipment and staff in a crisis. (See guidance, pg. 10.)

However, in the event of a healthcare crisis, ***even these measures would likely fall short of meeting the anticipated need for resources.***

Q: Could hospitals borrow resources from each other?

A: The proposed guidance encourages nearby hospitals to work together to get healthcare resources to those who would die without aggressive care, but who have the best chance of surviving if they receive it. A decision about sharing resources between hospitals would be made based on the specific circumstances of the crisis. However, in a healthcare crisis it is possible that most or all parts of the Northwest would be affected by shortages at some point. In a pandemic, all areas would be affected, so demand would be high everywhere, and extra resources are not likely to be available from other facilities. In a major disaster like a severe earthquake, roads and airports will likely be damaged, making transportation difficult.

Q: What would trigger the process of triage for resource distribution?

A: A healthcare crisis may strike different areas at different times; therefore, triage would be initiated in response to the specific circumstances of the disaster. Medical facilities would be in communication with the State Public Health Division documenting that they had completed appropriate pre-triage requirements, such as taking steps to decrease resource demand and increasing access to reserve resources, and that despite these measures the need for resources exceeded the supply. The decision would be made based on this information, in accordance with the criteria listed in the guidance on pg. 12. (See also pg. 9, paragraph 3.)

Q: In a pandemic, would patients with a pandemic infection be treated differently from other patients?

A: No. In accordance with this guidance, all patients in acute care facilities would be equally subject to critical care triage guidelines, regardless of their disease category or role in the community. (See Guidance, pg. 7, #5.)

Q: Would healthcare workers or other first responders get first access to scarce resources?

A: Some guidelines recommend priority access to some resources for healthcare workers and others, for example to vaccines and medicines that prevent influenza. The purpose is to protect these workers and keep them on the job. However, people who are already sick or injured enough to require critical care are unlikely to return to work during the time when they are most needed. Also, if resources are in very short supply, prioritizing care for this group might mean that other community members would not have access to resources. Therefore this guidance recommends assessing patients who require hospital resources by health criteria only, regardless of job description. (See Guidance, pg. 7, #5.)

Q: Who would make the decisions about which patients would receive the most aggressive care?

A: Hospitals would designate experienced healthcare providers to serve as “triage officers” responsible for making these decisions. Whenever possible, triage officers would not make resource allocation decisions about patients for whom they are providing individual patient care. (See Appendix E, pg. 1.)

Q: How do we know that this system would be fair?

A: The proposed guidance is specific about the circumstances under which a decision to withhold critical care resources would be made. It calls for healthcare providers to evaluate patients based on universally applied, medically relevant, objective information. The guidance specifically states that race, ethnicity, clinician-perceived quality of life, and ability to pay are not acceptable criteria to consider in making triage decisions. (See guidance, pg. 7, #5.)

Q: What are inclusion criteria for access to hospital care?

A: Access would depend on which patients have the greatest medical need and the best chance of survival if they receive hospital support. (See guidance, pg. 6, #4.)

Q: What are exclusion criteria for critical care services?

A: When medical resources are overwhelmed, access to critical care would be limited for those with medical conditions associated with low likelihood of long-term survival. These include recurrent cardiac arrest and severe illnesses or injuries with an average life expectancy of less than six to twelve months. Age, non-life-threatening disability and "social worth" are NOT exclusion criteria. (See Appendix E, pg. 2.)

Q: Does this present a conflict of interest for the patient's healthcare provider?

A: No. Healthcare providers would be expected to provide care, as always, and to put their patients' interests first. Under the guidance, wherever possible, providers involved in individual patient care would not make decisions about access to critical care services. A triage officer (or team) would make the decisions about who would receive hospital or intensive care support. The guidance states that these roles should be separate. (See Appendix E, pg. 1.)

Q: How does this guidance apply to persons in long-term care facilities or those on ventilators in the community setting?

A: The guidance would apply when patients are transferred to a hospital or treated in an emergency department. The guidance would not cause patients in long-term care facilities to lose access to their ventilators or other support. If a ventilator-dependent person required hospital care for a life-threatening medical condition, he/she would be evaluated using the outlined objective criteria for critical care service allocation. (See guidance, pg. 7, #5.)

Q: What would healthcare providers do for severely ill or injured patients who don't receive critical care services?

A: Palliative care, given to relieve symptoms of illness, rather than cure it, would play a crucial role in providing comfort to patients, including those who do not receive critical care. Under the guidance, every effort would be made to keep patients comfortable. Patients would receive care for pain and anxiety, as well as other supportive services. (See guidance, pg. 7, #8.)

Q. Would there be an appeals process for critical care allocation decisions?

A. Experts agree that review of allocation decisions during a healthcare crisis is required to make sure that the process is followed consistently and fairly. However, there is disagreement over the feasibility of case-by-case appeals. Some experts argue that a group of healthcare workers should be available to review triage decisions when patients or families protest. Other experts find that case-by-case appeals would cause the system to fail. Ongoing review, perhaps every 24 hours, of the allocation process and its application, without individual case review, may be all that is possible under the circumstances. We specifically invite public comment on this issue. (See guidance, pg. 7, #7.)

Q: What if I want to take my family member from one hospital to another where more resources might be available?

A: The proposed guidance does not address this issue. However, because of the nature of a healthcare crisis—with illness and/or injury likely occurring over a wide area at one time—this is unlikely to be a viable option. Even if some patients and families could leave the area, transport delays and inability to provide adequate care during transport could significantly increase the risk to the family member. It is quite possible that families would find the same circumstances waiting for them at other locations.

Oregon Crisis Care Guidance

Appendix H – Glossary

Allocation – Organized distribution of something, such as medical supplies, personnel, or services.

Ambulatory care – Medical care provided to non-hospitalized patients, that is, to patients who don't stay overnight in the hospital.

Bed capacity – The number of staffed hospital beds available that can be used for medical care of the sick or injured; may be specific to type of care (e.g., pediatric beds, ICU beds)

Center for Medicare and Medicaid Services (CMS) – A federal agency that oversees how Medicare and Medicaid programs are run, and that determines what documentation of care provided must be present for a healthcare provider to be reimbursed for medical services under these programs

Cohorting – Grouping of patients based on whether or not they have a given illness as a means of decreasing risk of spread. Similarly, assigning specific healthcare workers to work only with patients with a designated disease in order to prevent transmission.

Communicable disease – An illness that can be transmitted from one person to another. Similar to “contagious.”

Community settings – In health care, this refers to areas outside of the hospital. It includes health clinics, homes, and businesses. In medical terms, this is sometimes also called the “pre-hospital” setting.

Community standard of care – The degree of skill and diligence used by ordinarily careful health care providers practicing in the same or similar circumstances in the same or a similar community. This is the same as the legal standard of care.

Contagious – Transmissible from one person to another (see “Communicable”).

Crisis decision-makers – People who must allocate medical care and resources during a crisis. Examples might include healthcare providers, emergency medical service providers, public health and health system administrators, and others.

Critical Care – Intensive, complex medical treatment involving services usually available only in an intensive care unit; the same as “intensive care”.

Elective procedures – Surgeries or other medical treatments that are not immediately required to save a life or to avoid severe illness or disability.

Emergency medical services (EMS) – The part of the healthcare system that evaluates, provides initial treatment to, and transports sick and injured people to the hospital. EMS access typically starts with a 9-1-1 call (see Public Safety Answering Point).

EMTALA – Emergency Medical Treatment and Active Labor Act. A federal law that ensures public access to emergency healthcare services regardless of ability to pay.

Epidemic – For the purposes of this document, a disease attacking many in the community at the same time

Evidence-based treatment – Conscientious, explicit, and judicious use of best available knowledge in making decisions about the care of individual patients.

H1N1 – A strain of influenza that caused widespread illness in many parts of the world during 2009.

Healthcare resources – Equipment, supplies, personnel, facilities, and services used for medical care

ICU – Intensive care unit, an area of the hospital where critical care services are typically provided.

Infectious disease – Any disease caused by growth of microorganisms in the body

Inpatient – A person who is admitted to a hospital for at least an overnight stay.

Just-in-time training – Instruction given on short notice in order to help people learn and perform unfamiliar tasks, possibly under unfamiliar conditions.

Medical Reserve Corps – A federal program supporting healthcare professionals who volunteer to respond to health emergencies

Medicare Conditions of Participation – Requirements established by the Center for Medicare and Medicaid Services that must be met by providers and facilities if they want to provide (and receive payment for) Medicare services

Modified Sequential Organ Failure Assessment (MSOFA) – A tool used by critical care medical providers to assess likelihood of survival, based on assessment of five different organ systems.

Outpatient – A person who seeks medical attention in a hospital or other healthcare facility, but is not admitted to the hospital for an overnight stay.

Palliative care – services provided to decrease suffering and control symptoms without curing underlying illness or injuries

Pandemic – An outbreak of contagious disease that affects large parts of the population in multiple areas of the world.

Pressor – A medication used to help support the blood pressure of patients who, because of illness or injury, cannot maintain high enough blood pressures to survive on their own.

Personal protective equipment – Gloves, masks, gowns, and other equipment worn by healthcare workers and others to avoid infection when caring for contagious patients or to avoid exposure to toxic materials when dealing with patients or environments that are potentially contaminated.

Privileges – In a hospital, the procedures and activities that a given licensed health professional is approved to do in that facility.

Public Health Disaster – A severe, sustained threat to the public’s health and wellbeing, typically caused by a large outbreak of disease or a natural calamity

Public Safety Answering Point (PSAP) – a facility that receives 9-1-1 calls and dispatches fire, law enforcement, and/or EMS.

Reciprocity – Mutual give and take. In this case, exchanging one benefit (protection from illness) for another (healthcare or other essential services)

SARS – Severe Acute Respiratory Syndrome. A severe viral lung infection that resulted in more than 8,000 illnesses and 800 deaths in several parts of the world during 2003.

Scope of practice – The particular services and activities a licensed healthcare professional can engage in, as set by the licensing board for that person’s profession

SERV-OR – Oregon’s health volunteer registry. Clinicians and other health staff registered with SERV-OR receive notification about opportunities for response during public health emergencies or state sanctioned exercises, and have liability and workers comp coverage as agents of the state during such responses. Those considering participation in the program can learn more at: <https://serv-or.org/>

Settings – In this document, refers to the conditions in the community, particularly related to healthcare services in the community, which would signal the need to implement the specific response strategies listed

Symptom management – Medical care provided to help control symptoms of illness

Throughput – In healthcare settings, the number of patients seen in a given amount of time

Trauma – an injury or wound.

Triage – The medical screening of the sick and injured to determine their priority for treatment.

Ventilator – (Also called a “respirator”) A piece of medical equipment typically used to support the breathing of patients who are unable to take in enough oxygen or to exhale enough carbon dioxide on their own.

Webinar – A meeting or seminar conducted over the Internet

Oregon Crisis Care Guidance Update Log

Based on input from the Oregon Crisis Care Summit, held April, 12, 2017,
The following updates were incorporated:

- Links to the SERV-OR health volunteer registry, and further discussion of use of this resource in a crisis
- Use of volunteer staff for non-medical care in healthcare or community settings added as a surge strategy (pg. 12 and Appendix D)
- Additions to Planning Strategies (pg. 10-11) incorporating Summit input
- Reviewed and updated planning resources in Appendix D
- Added link to Crisis Care Implementation toolkit (Appendix D)
- Added Appendix F, Discussing conscientious objection and its ethical implications during a crisis, as well as several other ethical issues
- Provided guidance on how pregnancy should be addressed in critical care allocation decisions (Appendix E)
- Refined critical care inclusion criteria to address pediatric assessment (Appendix E)
- Refined critical care exclusion criteria; addressed limited role for CPR during crisis settings when likelihood of patient survival is low (Appendix E)
- Minor edits in other sections for clarity