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Oregon Crisis Care Guidance

This guidance is a tool that helps hospitals and health care providers make decisions about life-saving health care treatments during an emergency, such as a pandemic, based on available resources. An easy-to-read, [plain language summary](#) of this guidance is available.

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Preface

Health care personnel and health system leaders in Oregon may be faced with unprecedented circumstances and heart-wrenching decisions if life-saving resources become limited in a future emergency. Everyone in the health system- state and local government, hospitals and health care systems, health care personnel, coalitions, community-based organizations and beyond- will need to work in statewide partnership to mitigate the need for implementing crisis standards of care. The Oregon Crisis Care Guidance represents Oregon Health Authority’s commitment to this work.



This guidance is a tool that helps hospitals and health care providers make decisions about life-saving health care treatments during an emergency, such as a pandemic, based on available resources. This is referred to as crisis care triage or crisis standards of care (CSC). This guidance does not address other health care resource shortages. Hospitals should have complementary surge capacity and resource allocation plans to address the potential broad array of resource limitations during an emergency. This guidance should be operationalized in coordination with a hospital’s overall emergency operations plan as well as the state and regional emergency medical services, trauma system and disaster response plans.

The specific guidance in this document may not be achievable in the immediate setting of an acute, mass casualty event whereby triage decisions will be needed in rapid sequence based on limited, clinical information. The U.S. Department of Health and Human Services’ Administration for Strategic Preparedness a Response (ASPR) publication, “Template—Hospital Crisis Standards of Care Resource Allocation Annex” (2024), provides an outline for addressing this reactive period. (1) Oregon hospitals should move into proactive triage informed by Oregon’s crisis care guidance as quickly as possible if there are not enough life-saving resources for everyone who needs them. At all times, providers should use the overarching principles of non-discrimination, health equity, patient-centered decision making and transparent and effective communication to inform decision making in a crisis as previously outlined by the Oregon Health Authority (OHA) in “Principles in Promoting Health Equity During Resource Constrained Events” (2020). (2)

Background

Crisis care guidance history and definitions



In the event of an emergency or disaster, health care demands may overwhelm available capacity to offer potentially life-saving care to all who need it. The ability of a hospital or health care system to expand care during an emergency or disaster occurs on a continuum based on the demand for health care services and available resources. (2) See Box 1 for definitions of the care continuum concepts during an emergency. Crisis care guidance is an important tool for protecting the health of the public during an emergency. It is a tool that informs hospitals and health care providers how to make equitable, life-saving, health care decisions when resources are inadequate during an emergency.

Box 1. Care continuum definitions (3)

- Conventional care: usual resources and level of care provided through maximal use of the facilities' usual beds, staff and resources.
- Contingency care: provision of functionally equivalent care—care provided is adapted from usual practices (e.g., boarding critical care patients in post-anesthesia care areas).
- Crisis care: inadequate resources are available to provide equivalent care—care is provided to the level possible given the resource gap. Increased risk of morbidity and mortality defines the care provided in this phase—this risk can be minimized by implementing consistent proactive resource use strategies.

Oregon's crisis care guidance development began in 2010 prompted by growing national attention regarding emergency responses in the aftermath of Hurricane Katrina and the H1N1 pandemic. Early in the COVID-19 pandemic, OHA began receiving concerns about Oregon's crisis care guidance that had been published in 2018. Primary among the concerns was that Oregon's crisis care triage approach would lead to bias, discrimination and worsening health inequities.

In May 2020, Disability Rights Oregon and others submitted a complaint to the U.S. Department of Health and Human Services' Office for Civil Rights regarding the 2018 guidance. (4) In September 2020, OHA announced its decision to no

longer reference or rely on the previously published guidance. OHA subsequently published updated crisis care guidance for Oregon including “Principles in Promoting Health Equity in Resource Constrained Events” (2020) and the “Oregon Interim Crisis Care Tool” (2022). (5,6)

Oregon Resource Allocation Advisory Committee

In May 2022, OHA convened the Oregon Resource Allocation Advisory Committee (ORAAC) to review crisis care guidance in a public forum, understand diverse perspectives relating to crisis care and inform updates to Oregon’s crisis care guidance. (7) Throughout their work, the committee assessed commonly used approaches in crisis care triage, including growing concerns with the use of the Sequential Organ Failure Assessment (SOFA) and modified SOFA (mSOFA) tools for assessing patient prognosis for hospital survival due to their inaccuracy and potential for worsening health inequities. (8,9,10)

The twenty-five committee members included representatives of health systems, hospitals, clinics, bioethicists, public health, culturally specific communities, the disability community, aging community and beyond; all members were recruited through a publicly announced application process. At the outset of their work, ORAAC members committed to centering hope and innovation in their deliberations and to not be limited by current triage practices. They also committed to promote public health and achieve procedural justice through transparency, seeking community input on emerging recommendations, assessing local cultural values regarding resource allocation and prioritizing input from communities who face the greatest health inequities.

A month-long public comment period and two community listening sessions provided OHA and ORAAC with additional input on crisis care triage options. (12,13) OHA published the ORAAC Final Report at the completion of the committee’s work in July 2023. (14)

Guidance goals

Even during an emergency or disaster, the people of Oregon are protected from discrimination in health care by unambiguous federal and state laws. (15) While hospitals must comply with non-discrimination laws at all times, our health care system should consider additional obligations. Crisis care approaches should recognize that bias and discrimination—including ableism, ageism, racism and sexism—have deeply and pervasively impacted individual and community health prior to the onset of an emergency. Differences in characteristics such as race, ethnicity and having a disability are linked to health inequities: avoidable and

unjust health differences. Health inequities can result from unfair differences in access to health care, safe and supportive housing, food, nutrition and more. These can hurt health and health outcomes for people, resulting in a higher burden of chronic disease and shorter life expectancy. (16,17) Crisis care guidance must consider and account for these realities; without such intentional consideration, guidance will likely perpetuate and deepen health inequities.

In consideration of these factors, and informed by discussions with ORAAC members, OHA has developed this guidance based on the shared goals of 1) saving lives and 2) not worsening health inequities. This crisis care guidance replaces the 2022 Oregon Interim Crisis Care Tool and reflects input from ORAAC members, public input, available research and best practices in CSC.

Crisis care assumptions

Activation

If resources are sufficient, all patients who can potentially benefit from life-saving resources will be offered treatment.

Oregon hospitals may activate CSC if their critical care resources are severely limited, the number of patients presenting for critical care exceeds capacity and there is no option to transfer patients to other critical care facilities.

As the state agency tasked with Oregon Emergency Support Function 8 related to health and medical care, OHA will work with Oregon hospitals to maximize the capacity of the entire health care system and provide needed care to as many patients as possible in the event of impending scarcity. (18,19) This will be achieved by supporting the transfer of patients to facilities where capacity exists (also referred to as “load balancing”) and directing critical resources to the areas that are hardest hit. Coordination among response partners at all levels (facility, local, regional, state and federal) is expected in order to meet health care surge needs.

Prior to the implementation of CSC, hospitals should:

- Take all possible steps to extend capacity to deliver critical care resources, including by:
 - accumulating supplies;
 - delaying non-urgent care; and
 - preparing to use space, staff and other resources that are not typically used for critical care delivery.
- Coordinate with OHA, regional resource hospitals, emergency medical services (EMS) partners and other local and state response partners to alert them to the current situation and exhaust alternative options.
- Only activate CSC in extraordinary circumstances when critical care resources are severely limited, the number of patients presenting for critical care exceeds capacity and there is no option to transfer patients to other critical care facilities.



Depending on the event that triggers the need for crisis care, OHA recognizes that coordination between state and hospitals may be limited or impossible for some period (e.g., due to loss of power or damage to facilities or infrastructure, etc.). Health care clinicians and staff may need to activate crisis standards of care without the opportunity for state coordination in these cases.

When all other options have been exhausted, hospitals can and should activate crisis care triage to proactively triage the limited, critical care resource(s). If a hospital activates CSC, they must comply with Oregon Administrative Rule 333-505-0036 relating to hospital requirements during an emergency impacting standard of care, including notification to OHA and the public. (20)

Oregon hospitals can choose to use their own crisis care triage tool relating to critical care resource allocation so long as it is consistent with “Principles in Promoting Health Equity in Resource Constrained Events” (2) and does not violate state and federal non-discrimination laws or any other applicable laws.

CSC activation should be limited to the immediate, limited resource(s). The need for crisis care should be continuously evaluated and triage should be suspended immediately once the conditions for triggering crisis care are no longer present.

Individualized assessments

If there are not enough life-saving resources for all patients who need them, all patients should be individually assessed according to the best objective medical evidence. Prognosis for hospital survival should be determined based on an individualized assessment of the nature and severity of acute illness or injury including a careful history, physical exam and appropriate use of ancillary studies and clinical consultation. Note: the terms “prognosis for hospital survival” and “prognosis for survival to hospital discharge” used in this guidance are intended to have the same meaning and are used interchangeably.

Triage decisions must be made without regard to race, ethnicity, gender identity, sexual orientation, national origin, immigration status, faith orientation, parental status, ability to pay, insurance coverage, disability, veteran status, genetic information, perceived quality of life, past/or future medical resource needs, perceived social worth or solely on the basis of age. No one should be denied care based on stereotypes or assumptions about any individual’s quality of life, judgement about an individual’s “worth”, or based on the presence or absence of disabilities or chronic health conditions. Triage decisions should not use categorical exclusion criteria based on any of the factors listed above or proxies thereof.

In accordance with the Americans with Disabilities Act (ADA), health care organizations are required to provide reasonable modifications (e.g., adjustments or changes) to policies, practices, and procedures that ensure equal access to facilities and services for people with disabilities. (21, 22) This includes crisis care triage procedures and use of triage-related diagnostic tools. Language access services must also be provided in accordance with state and federal laws. (23)

It is important to be aware there are some people who are likely to experience immediate or near-immediate death despite aggressive therapy, such that during conventional care clinicians do not provide critical care treatments (e.g., massive intracranial bleeds not amenable to surgical intervention). During an emergency, clinicians should still make those same judgments about the medical appropriateness of critical care services using the criteria applied during conventional care.

Patient care preferences

Prior to, as well as during implementation of CSC, all efforts should be made to determine a patient's goals of care and treatment preferences. It is imperative to know whether aggressive interventions such as hospitalization, intensive care unit (ICU) admission or mechanical ventilation are consistent with a patient's preferences. The care team should confirm and document each patient's goals for care and whether they have advance directives for health care or portable orders for life sustaining treatment (POLST). (24)

Providers should be careful not to pressure patients or their families to make advanced care planning decisions due to perceptions of quality of life or relative worth nor require patients to consent to a particular advanced care planning decision. If advanced care planning documents are in place and available, the health care provider should verify that the patient's goals of care and treatment preferences remain the same. Additionally, if the patient's treatment wishes have changed these should be clearly documented.

For a patient with decision-making capacity, the individual's informed refusals and informed wishes for life-sustaining treatment should be respected to the extent possible given the existing resource scarcity. Patients and their families should not be steered or pressured by the health care team into agreeing to the withdrawal from or withholding of life-sustaining care. Patients should be strongly encouraged to appoint a proxy decision-maker (e.g., health care representative or durable power of attorney for health care) if not previously in place.

Supported decision making should be used for patients with limited or low capacity to make decisions about their health. This will allow patients with disabilities to identify support people who can help them understand, consider and communicate decisions. This can provide a patient with a disability the tools to make their own, informed, decisions. (25)

Providers should be knowledgeable about advance directives, POLST, guardianship, health care representatives and beyond, including the role and authority for each of these.

CSC triage team

A CSC triage team should be designated by the hospital for implementing critical care resource allocation determinations. Triage decisions may involve the initiation, continuation, or withdrawal of a particular resource. The purpose of the triage team is to save lives and prevent discrimination. Those serving as representatives of the triage team should not be caring for any patient involved in crisis care triage. Triage staff should recuse themselves from triage determinations for patients they are personally treating unless no other option exists. When possible, it is recommended that a hospital's CSC triage team consist of:

- Two to three senior clinicians with experience in triage (e.g., critical care, emergency medicine, trauma surgery, etc.). This should include at least one physician and one nurse. These clinicians should be licensed and actively participating in their field;
- A medical ethicist with experience and training as a health care ethics consultant;
- An expert in diversity, equity, and inclusion (DEI);
- A representative with disability expertise including disability related anti-discrimination laws and policies;
 - This representation could be fulfilled by the hospital's ADA coordinator, for example, or the DEI expert so long as that individual has specific expertise including disability related anti-discrimination laws and policies.
- A non-clinical community representative, such as but not limited to a community health worker, who has completed all required training to comply with state and federal privacy laws; and
- An administrative assistant to record all triage team decisions and maintain necessary records and documents.

Qualified interpreters should be readily available to the triage team to assist with communication needs involving patients, support persons or authorized decision-makers who use a language other than English.

Research has shown that bias is common. Within health care, bias affects treatment decisions and access to health care resources. (26) To the greatest extent possible, each hospital should mitigate bias by having a group of triage officers and a triage team that adequately reflects the diversity of the community and patient population served by the hospital in terms of demographics such as race, ethnicity, disability, preferred language, sexual orientation and gender identity. Diversity among triage officers is intended to promote equality and to mitigate potential instances of health inequities in resource allocation.

Members of a hospital's triage team with the responsibility to determine allocation of life-saving resources should have training in implicit and explicit bias, trauma-informed care, and anti-discrimination, including both anti-racism and anti-ableism. A triage team should be trained to create, assess, and support an environment that does not activate bias. Hospital leadership should support the emotional and psychological needs of triage team members and ensure preparedness for their role. Continuous learning, coaching and review of errors should be expected.

Crisis care triage

Assumptions

When crisis care triage is implemented, a triage team should assess the prognosis for hospital survival for all patients that require ICU level of care (e.g., patients with hypotension, requiring ventilatory support, other ICU-level needs). The triage team should make this prognosis assessment based on medical information provided by the treating medical team.

These triage protocols should be applied to all individuals, including patients with health conditions directly resulting from the immediate emergency as well as all other patients requiring care, regardless of age, disability status, or other extraneous factors. All individuals should be included and evaluated in the same triage pool of individuals requiring treatment with the limited critical care resource.

- Prognosis assessments should be individualized for each patient based on the best available, relevant, and objective medical evidence. When considering prognosis, the relevant focus should be the likelihood of hospital survival and should not include considerations of the patient's long-term survival or resource intensity/duration of need.
- All patients who desire and can potentially benefit from treatment should be included in the crisis care triage process regardless of prognosis. The amount of resource available will determine how many patients will ultimately receive the needed, critical care resource.
- After presenting relevant clinical information pertinent to triage criteria only, treating providers should be recused, leaving triage officers to make a triage decision regarding the allocation of resources. Treating providers should not make decisions to withhold or withdraw life-sustaining interventions in CSC situations as long as an independent triage officer or ethics consultant is available or unless allowed under Oregon Revised Statute (ORS) 127.635.
- Treating providers may make decisions to withhold or withdraw life-support based on goals of care conversations through shared decision-making with the patient, family or guardian. This is consistent with conventional practice.

Crisis care triage steps

Step 1: Estimate patient prognosis for hospital survival for all patients needing the critical care resource. Apply reasonable modifications for individuals with disability when assessing prognosis for hospital survival.

- a. Prognosis for hospital survival should be assessed using the following clinical information:
- Cardiovascular: name and dose of all vasopressors and mean arterial pressure
 - Respiratory: PaO₂/FiO₂ and type of respiratory support needed
 - Renal: need for renal replacement therapy due to the acute illness or injury
 - Hematologic: platelet count
 - Hepatic: bilirubin level
 - Neurologic: Glasgow Coma Scale results should only be used in limited situations; see Box #3 for important details
 - Other: presence of any severe medical condition that is expected to impact hospital survival prognosis based on best available objective data and condition-specific clinical expertise
- b. Creatinine measurement and need for chronic dialysis should not be considered when determining prognosis for hospital survival. Inclusion of this information may reduce the accuracy of survival prediction and deepen health inequities. (27,28)

Box 2. SOFA and mSOFA

The Sequential Organ Failure Assessment (SOFA) and the modified SOFA (mSOFA) scoring tools should not be used to make crisis care triage decisions. Growing research shows that SOFA and mSOFA have poor prognostic accuracy and produce or worsen structural disadvantage for Black patients. (8,9) Furthermore, SOFA can also create or worsen structural disadvantage for persons with disability due to its reliance on the Glasgow Coma Scale. (10)

As recently noted by the Administration for Strategic Preparedness and Response in their Hospital Crisis Standards of Care Resource Allocation Annex Template publication (2024), “Standardized scores such as SOFA (Sequential Organ Failure Assessment) may be used to monitor the degree of illness of the patients in the ICU and compare acuity between units or trend scores over time but should not be used as a primary data point for individual treatment decisions”. (1)

Box 3. Use of the Glasgow Coma Scale in Oregon's Crisis Care Guidance

Use of the Glasgow Coma Scale (GCS) to assess the level of consciousness in patients with disabilities that impact speech or motor movements can lead to discrimination (i.e., lower prioritization for resources without a greater mortality) if not modified. (29) In addition, use of the GCS in patients who are intubated or sedated can also preclude accurate assessments, and challenges with interrater reliability have been documented. (30,31,32) Any consciousness assessment should consider all factors that may be contributing to a patient's neurologic status.

While the GCS has been shown to have predictive value for assessing in-hospital mortality in patients with traumatic brain injury, its validity for assessing mortality in other conditions is less clear. (33,34) International research and unpublished simulations using Oregon data provide emerging evidence to suggest that the GCS may not meaningfully contribute to the accuracy of prognosis for in-hospital mortality for adult patients with sepsis or COVID-19, respectively. (35,36)

OHA recommends that the GCS should not be used to assess patient prognosis for hospital survival as part of crisis care triage unless the following three conditions are met: 1) the person using the GCS scoring system had adequate training in its use; 2) reasonable modifications are actively applied for patients with disabilities; and 3) it is only used to assess patients with medical conditions for which GCS results strongly correlate with in-hospital mortality. If the clinical team is unsure whether evidence shows the GCS strongly correlates with in-hospital mortality for a patient's medical condition, it should not be used for the purpose of crisis care triage.

If these conditions are met and GCS is used in crisis care triage, only the change in neurologic status from an acute injury or illness should inform the prognosis for hospital survival, not the patient's baseline or presence of an underlying disability. Reasonable modifications for a patient with disabilities may include changes to the clinical instrument as well as assessment of the patient's baseline (e.g., pre-injury or pre-acute illness) speech and motor movements. The latter may require consultation with family members, support persons, or the patient's personal healthcare providers. If reasonable modifications are not possible or are not incorporated, it should not be used in patients with disabilities that impact speech or motor movements, as the use of GCS in these situations may be discriminatory.

- c. For children, consider using an age-appropriate prognostic tool to facilitate the assessment of hospital survival prognosis. These may include the Pediatric Logistic Organ Dysfunction, Version 2 (PELOD-2) for children, the Score for Neonatal Acute Physiology and Perinatal Extension (SNAPPE-II) for full-term neonates and the National Institute of Child Health and Developmental Outcomes Tool (NICHD-OT). See further information about [assessing prognosis for hospital survival for children](#).

If information normally used to determine the prognosis for hospital survival is not immediately available, clinical judgement will be required. However, triage decisions should not include consideration of survival beyond the current hospitalization, quality-of-life judgments, past or future use of medical resources, resource intensity or duration of resource need.

Step 2: Assign each patient to a triage priority group based on their prognosis for hospital survival.

- a. Using the clinical information listed in step 1, assign each patient to a prognosis group based on the percent likelihood that the patient will survive to hospital discharge if they receive the needed resource, as follows:

Table 1. Prognosis groups

Priority group 1	Priority group 2	Priority group 3	Priority group 4
≥90% chance of hospital survival	89–50% chance of hospital survival	49–11% chance of hospital survival	≤10% chance of hospital survival

Step 3: Pause and review priority group assignments for clinical consistency and potential biases.

Step 4: Assign and communicate triage priority group assignments. Patients assigned to a priority group with higher prognosis for hospital survival will be given priority for the resource. For example, patients in the first priority group will be given first priority to receive the critical care resource. Patients in the fourth priority group will be given the last priority to receive the critical care resource.

Step 5: If there are not enough resources available for every patient within a priority group, move to the equal priority resolution process (“tiebreaker”) using the equitable chances criteria described below to determine the individual-level priority of each patient within the group.

Step 6: If a patient meets ICU admission criteria but is not prioritized for the limited critical care resources, place the patient on an ICU waiting list and admit the

patient to the appropriate alternative medical unit for ongoing care. As resources become available, their clinical situation will be reassessed and they will be re-triaged based on criteria outlined in Step 1–5.

Equal priority resolution process (“tie breaker”): Equitable chances criteria

Once patients have been classified into a triage priority group based on prognosis for hospital survival, the situation may arise when there are not enough resources for all patients within the same triage priority group. If any patient within the same triage priority group is already receiving the resource, the resource should remain with that patient.

In other cases when there are not enough resources for all patients within the same priority grouping, allocation should proceed using the equitable chances criteria. In this weighted randomization approach, all patients have a baseline chance to receive the life-saving resource. Additional priority (i.e., beyond equal chance) is then assigned for each patient in proportion to the impact of the emergency or disaster based on regional data.

Steps for applying the equitable chances criteria

Step 1: Utilize available administrative data to identify each patient’s home address. For patients who are houseless, use their last known address (e.g., shelter) or assign a score of 100 representing the highest level of disadvantage.

Step 2: Using a disadvantage index (37) such as the Area Deprivation Index (ADI), identify each patient’s disadvantage percentile (or “score”) based on their address. This can be done using the Neighborhood Atlas Mapping Tool® (38). An ADI score of 1 indicates the least disadvantage based on the ADI statistical measure and a score of 100 indicates the highest level of disadvantage.

Step 3: Using data made available by OHA, determine the relative impact of the current emergency according to the patient’s disadvantage score. In the immediate phase of an emergency, OHA may not have access to data pursuant to the impact of the emerging event. OHA will supply data measuring the baseline outcomes by disadvantage score, such as death rates, (39) for use in the weighted randomization process in this case.

Step 4: Apply a weighted randomization process to determine the rank order of patients to be prioritized within a priority group. Weights are designed such that

they increase chances of receiving a resource in proportion to the impact that a disaster has had across the disadvantage spectrum.

- a. For example, if those with the highest disadvantage score (100 is the highest score) experience three times higher death rates than those with the lowest disadvantage score, their chances to receive the needed resources would be increased 3-fold. A randomization process with the application of the “equitable chances weighting” directly proportional to the impact of the emergency or disaster would then determine the patient-level prioritization within priority groups.
- b. Hospitals can utilize software to automate the weighted randomization process. There are publicly available tools, known as Categorized Priority Systems, that have been used in a range of resource allocation efforts during the COVID-19 pandemic. (40)

See Appendix [B](#) and [C](#) for illustration of the crisis care triage algorithm and equitable chances tiebreaker process.

Assessing prognosis for hospital survival in children

The allocation of resources for pediatric patients is similar to the process for adults. The triage team should include clinicians with expertise in pediatric care alongside other triage team members. Use of an age-appropriate prognostic tool to facilitate the individual assessment of hospital survival prognosis for pediatric patients may be helpful, including the PELOD-2, SNAPPE-II or NICHD-OT depending on the age of the patient. Reasonable modifications of pediatric clinical instruments must be made for pediatric patients with disability.

The triage process, ongoing triage, review, and appeals are similar to adults. Once a patient is in the ICU, they should be regularly reassessed (like adults) for continued need for ICU care and/or any condition that develops that would drastically affect their triage priority score.

Chronically ventilated patients

When a chronically ventilated patient with their own (non-hospital) ventilator is admitted, they may continue to be ventilated using that ventilator which is considered to be their personal property. While ventilated by their personal ventilator, patients are exempt from the triage process when ventilators are the limited resource requiring triage. Under no circumstances should a patient’s

personal ventilator be “reallocated” to another patient. This is likewise true of other durable medical equipment that the patient is using that does not belong to the hospital.

However, if a chronically ventilated patient’s respiratory status changes and they need to be ventilated with a new ventilator provided by the hospital, the patient should be included in the crisis care triage process if CSC have been activated. If this occurs, that patient’s personal ventilator remains personal property and may not be subject to involuntary reallocation.

Ongoing triage

The above triage approach is designed for the allocation of life-saving resources between two or more patients not yet receiving the intervention.

Prognosis for hospital survival should be recalculated at regular intervals (i.e., at least every 48–72 hours) for all patients. This does not mean patient care will necessarily change; this is to allow triage officers to remain aware of each patient’s status and to ensure the hospital’s incident command team is up to date regarding local resources in relationship to demand.

A patient will not be reassigned a lower triage priority score simply because they continue to require the limited resource. All patients should have appropriate duration of therapy to demonstrate benefit. If the clinical course is not dramatically worse (e.g., the development of a devastating complication) and the attending physician feels continued use of the resource is medically indicated, the resource will not be reassigned.

If a patient receiving the resource develops a condition that would drastically affect their prognosis for hospital survival, that individual patient may have their triage priority redetermined. Agreement among multiple providers and the triage team should be achieved before any reallocation decision is made.

At regular intervals, cases should be systematically reviewed by a triage officer or team other than those making the original decision to ensure consistency, fairness and adherence to the process.

Appeals

Any clinician, patient, family, or patient advocate should be permitted to bring a request for re-evaluation of a patient’s CSC triage prioritization determination. The process for bringing such a request should be clearly posted and communicated verbally to patients with disabilities. Requests should be limited to concerns regarding whether an individual patient’s prognosis for hospital survival is accurate.

The request for re-evaluation should be submitted in writing. The request for re-evaluation should be submitted in writing. Oral requests should also be permitted to ensure due process for people with disabilities.

One or more appointed triage officers not involved in the original triage decision, or a separate appeals team, should be designated to review the case. Depending on the urgency of the medical event (i.e., acute vs. prolonged) it is understood that this process may be retrospective. However, if the event is more prolonged and the potential outcomes of the patient may be affected, then processes should be in place to allow a sufficiently rapid decision.

Final decisions for any request for re-evaluation of a specific patient case should be in writing, dated, and timed, and include all supporting documentation.

Transparent communication

Transparency and clear, effective communication for patients and the public is always important but especially so during an emergency or disaster. Having access to needed health care information is life-saving. People should not be disadvantaged in receiving timely and understandable health information because of their language, culture or access to technology and other supports.



Transparency demands that the public be informed when CSC have been triggered. The public should have up-to-date, transparent and accessible information about health care system crisis care plans, including how resources will be allocated differently than conventional standards of care, how hospital survival assessments function and when crisis standards of care have been activated.

Within a health care system, transparent and timely communication with all patients or their authorized decision-maker should occur when the hospital is facing resource constraints, including the nature of the constraints and how resource allocation decisions will be made. Any decision regarding resource allocation (i.e., eligibility for a ventilator or intensive care unit level of care) should be clearly communicated with patients or their authorized-decision maker and documented. Hospitals should provide all patients with information about how to contact the hospital's ADA coordinator or patient advocate.

All communication during a public health emergency should be provided in a culturally responsive and linguistically accessible manner and meet the needs of individuals with intellectual, developmental or other disabilities. This may include but is not limited to providing effective communication using qualified interpreters, making emergency messaging available in plain language and in prevalent languages, using multiple formats such as audio, large print, and captioning, providing access to support persons chosen by the patient who can help ensure effective communication and ensuring websites providing emergency information are disability accessible as required under federal civil rights laws.

Oregon Administrative Rule 333-505-0036(3)(b)-(d) outlines specific communication requirements for hospitals when crisis standards of care are activated. (41)

Data collection

In order to retrospectively assess crisis care triage processes, such as to evaluate if they exacerbate health inequities or for other needed improvements, the following data is required to be collected by the hospital for any patient included in crisis care triage. OAR 333-505-0036. Of note, demographic data should not be shared with the triage team to avoid any potential bias in resource allocation decision making. This data should be collected separately through administrative processes.



Data collection to be included:

- Patient's medical record number
- Hospital name and location
- Date of birth
- Patient's sexual orientation, gender identity, gender modality, race, ethnicity, language, and disability data (in accordance with REALD and SOGI demographic data collection standards) (42)
- Whether, at the time of presentation at the hospital, the patient was using a personal ventilator or other personal medical treatment equipment or resources.
- Home address, unhoused or unknown
- The patient's care preferences, as documented in an advanced directive, portable orders for life-sustaining treatment (POLST), or as communicated by a health care representative, support person or a family member.
- Triage prioritization and clinical outcome

Looking ahead: Innovation and prevention

Innovation

ORAAC members indicated that access to a triage scoring system (referred to as a “survivability prediction tool” and “triage tool” in the ORAAC final report; also sometimes called a “ventilator allocation scoring system” in the literature) to assist triage team members in assessing prognosis for hospital survival during CSC is highly desirable. Such a resource could aid a triage team in hospital survival prognosis determination with the goal to reduce bias, improve consistency across hospitals and improve efficiency of hospital survivability assessments during an evolving crisis. ORAAC members discussed ideal characteristics for a triage scoring system including accurate, reliable and easy to use; applicable to a wide variety of patient conditions; applicable to the current emergency; unbiased, non-discriminatory, and does not worsen health inequities; and acknowledges community-specific health conditions. Currently there are no known triage scoring systems that meet these criteria. New approaches to assessing hospital survivability should be measured against these ideal characteristics and informed by community input.

This crisis care guidance cannot be stagnant. OHA staff will continue to support opportunities for CSC input and training and will monitor for emerging research regarding crisis care resource allocation and new ways to assess prognosis for hospital survival.

As noted by Hick et al.: “Improved prognostic tools should be prioritized for use and widespread deployment. These should be both generic systems for organ failure assessment as well as condition-specific assessment tools. The marked improvements in data science, including the application of artificial intelligence (AI) and machine learning to improve predictive analytics, should be leveraged to create more accurate triage scoring systems, while monitoring closely for inadvertent creation or exacerbation of inequities (a recognized ethical risk of AI risk prediction algorithms)”. (3)

Emerging research led by Will Parker, MD, PhD, the principal investigator of a National Institutes of Health (NIH) funded, multi-site research project “Improving the efficiency and equity of critical care allocation during a crisis with place-based



disadvantage indices” marks progress and innovation in this area. OHA staff had the opportunity to learn from Dr. Parker and his colleague, Pat Lyons, MD, MPH, about the resource allocation model they are developing and will continue to track their work.

Future guidance updates should be done transparently and through a public process. Updates should be informed by improvement opportunities and emerging evidence as well as input from health care professionals and community members across Oregon.

Crisis care prevention

The need to activate CSC due to limited, life-saving resources in an emergency should be rare, if not prevented altogether. Broader efforts beyond crisis care guidance are paramount to protect the public and reduce health inequities. These include but are not limited to:

- Attention to ongoing emergency preparedness, including review of and practice with emergency plans;
- Appropriate health care supply management;
- Broad access to culturally responsive health care and other related health related needs;
- Access to supports that allow individuals with disability to achieve desired independence and communicate their needs and goals;
- A diverse, responsive, and supported health care workforce;
- Local, regional, statewide, and interstate communication and coordination; and
- Movements of patients to access needed care (also called “load balancing”) when needed.

Hospitals and health systems should develop ongoing partnerships with the communities most impacted by health inequities to develop and refine approaches to responding in an emergency and to identify opportunities to reduce health inequities.

End notes

1. U.S. Department of Health & Human Services' Administration for Strategic Preparedness & Response (ASPR) Hospital Crisis Standards of Care Resource Allocation Annex Template (2024): <https://files.asprtracie.hhs.gov/documents/template-hospital-csc-resource-allocation-annex.pdf>
2. Principles in Promoting Health Equity During Resource Constrained Events (2020): <https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le3513.pdf>
3. Hick, J. L., D. Hanfling, M. Wynia, and E. Toner. 2021. Crisis Standards of Care and COVID-19: What Did We Learn? How Do We Ensure Equity? What Should We Do? NAM Perspectives. Discussion, National Academy of Medicine, Washington, DC. <https://doi.org/10.31478/202108e>
4. Disability Rights Oregon complaint: <https://www.ndrn.org/wp-content/uploads/2020/05/2020.05.08-Letter-to-HHS-OCR-Regarding-Crisis-Care-Guidance-in-Oregon.pdf>
5. Principles in Promoting Health Equity in Resource Constrained Events (2020): <https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le3513.pdf>
6. Oregon Interim Crisis Care Tool (2022): <https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le4019c.pdf>
7. Oregon Resource Allocation Advisory Committee: <https://www.oregon.gov/oha/Pages/ORAAC-Oregon-Resource-Allocation-Advisory-Committee.aspx>
8. Miller WD, Han X, Peek ME, Charan Ashana D, Parker WF. Accuracy of the Sequential Organ Failure Assessment Score for In-Hospital Mortality by Race and Relevance to Crisis Standards of Care. JAMA Netw Open. 2021;4(6):e2113891. doi: 10.1001/jamanetworkopen.2021.13891
9. Schmidt H, Roberts DE, Eneanya ND. Rationing, racism and justice: advancing the debate around 'colourblind' COVID-19 ventilator allocation. Journal of Medical Ethics 2022;48:126-130. doi: 10.1136/medethics-2020-106856
10. Manchanda EC, Couillard C, Sivashanker, K. Inequity in Crisis Standards of Care. N Engl J Med. 2020; 383:e:16. doi: 10.1056/NEJMp2011359
11. ORAAC Call for Applications: <https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le4019a.pdf>
12. Summary of Public Responses to Triage Options: https://www.oregon.gov/oha/Documents/Summary%20of%20Public%20Repsonsos-Triage%20Options_English.pdf

13. Summary of Community Conversations on Crisis Standards of Care: <https://www.oregon.gov/oha/ORAACDocuments/Summary%20of%20Community%20Conversations%20on%20Crisis%20Standards%20of%20Care.pdf>
14. ORAAC Final Report: <https://www.oregon.gov/oha/Documents/ORAAC%20Final%20Report.pdf>
15. Section 1557 of the Affordable Care Act, 42 U.S.C. 18116, 42 CFR Parts 438, 440, 460, 45 CFR Parts 86, 92, 147, 155, 156; Section 504 of the Rehabilitation Act, 42 USC 126, 29 CFR Part 32 and 29 CFR Part 37; ORS 659A.103 to 659A.145.
16. GBD US Health Disparities Collaborators. Life expectancy by county, race, and ethnicity in the USA, 00-19: a systematic analysis of health disparities. Lancet. 2002. [https://doi.org/10.1016/S0140-6736\(22\)00876-5](https://doi.org/10.1016/S0140-6736(22)00876-5)
17. Majer IM, Nusselder WJ, Mackenbach JP, Klijs B, van Baal PH. Mortality risk associated with disability: a population-based record linkage study. Am J Public Health. 2011 Dec;101(12):e9-15
18. Oregon Medical Coordination Center: <https://www.ohsu.edu/health/oregon-medical-coordination-center>
19. Oregon Emergency Support Functions (ESFs) https://www.oregon.gov/oem/documents/oregon_esf_descriptions_one_page_job_aid.pdf
20. Oregon Administrative Rules Chapter 333, Division 505: <https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=301096>
OHA crisis standards of care notification portal: <https://app.smartsheet.com/b/form/9159e223d55d442ea011f4b2e2a34ef4>
21. Americans with Disabilities Act: <https://www.ada.gov/>
22. Pacific ADA Center. Healthcare provider responsibilities under the ADA. Accessed 10/21/24 at <https://www.adapacific.org/healthcare-provider-responsibilities-under-the-ada/>
23. State and federal laws about language access services: <https://www.oregon.gov/oha/ei/pages/language-disabilityaccess.aspx#:~:text=Under%20Section%201557%20providers%20must,be%20a%20qualified%20healthcare%20interpreter>
24. Portable Orders for Life-Sustaining Treatment®: <https://oregonpolst.org>
25. Oregon Administrative Rules Chapter 333, Division 505: <https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=300555>
26. Vela MB, Erondy AI, Smith NA, Peek ME, Woodruff JN, Chin MH. Eliminating Explicit and Implicit Biases in Health Care: Evidence and Research Needs. Annu Rev Public Health. 2022 April 5;43:477-501. doi: 10.1146/annurev-publhealth-052620-103528

27. Ashana D C, et al. Equitably Allocating Resources during Crises: Racial Differences in Mortality Prediction Models. *Am J Respir Crit Care Med*. 2021 Jul; 204(2): 178-186. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8759151/>
28. Schmidt H, Roberts DE, Eneanya ND. Rationing, racism and justice: advancing the debate around 'colourblind' COVID-19 ventilator allocation. *J Med Ethics*. 2022 Feb;48(2):126-130. doi: 10.1136/medethics-2020-106856
29. Ne'eman A, Stein MA, Berger ZD, Dorfman D. The Treatment of Disability under Crisis Standards of Care: An Empirical and Normative Analysis of Change over Time during COVID-19. *J Health Polit Policy Law*. 2021;46(5);831-860. DOI: 10.1215/03616878-9156005
30. Gill M, Martens K, Lynch EL, Salih A, Green SM. Interrater Reliability of 3 Simplified Neurologic Scales Applied to Adults Presenting to the Emergency Department with Altered Levels of Consciousness. *Annals of Emergency Medicine*. 2007;49(4):403-407.e1.
31. Manley G, Maas A. The Glasgow Coma Scale at 50: looking back and forward. *The Lancet*. 2024;404(10454);734-735
32. Reith FCM, Vand den Brande R, Synnot A, et al. The reliability of the Glasgow Coma Scale: a systematic review. *Intensive Care Med*. 2016;42;3-15.
33. Chou R, Totten AM, Carney N, et al. Predictive Utility of the Total Glasgow Coma Scale Versus the Motor Component of the Glasgow Coma Scale for Identifications of Patients With Serious Traumatic Injuries. *Annals of Emergency Medicine*. 2017;70(2):143-157.
34. Gill M, Windemuth R, Steele R, and Green S. A comparison of the Glasgow Coma Scale score to simplified alternative scores for the prediction of traumatic brain injury outcomes. *Annals of Emergency Medicine*. 2005;45(1);37-42.
35. Wang L, Ma X, Zhou G, et al. SOFA in sepsis: with or without GCS. *European Journal of Medical Research*. 2024; 29(296). DOI: 10.1186/s40001-024-10849-w.
36. Unpublished data; citation pending.
37. Srivastava T, Schmidt H, Sadecki E. Disadvantage Indices Deployed to Promote Equitable Allocation of COVID-19 Vaccines in the US. *Jama Health Forum*. 2022;3(1):e214501. doi: 10.1001/jamahealthforum.2021.4501
38. Neighborhood Atlas Mapping Tool®: <https://www.neighborhoodatlas.medicine.wisc.edu/mapping>
39. Depending on the type of emergency, other empirical markers may be appropriate, such as infection rates.

40. Sönmez, T, et al. Categorized Priority Systems- A New tool for Fairly Allocating Scarce Medical Resources in the Face of Profound Inequities. Chest. 2021;159(3) p1294-1299. <https://doi.org/10.1016/j.chest.2020.12.019>
41. Oregon Administrative Rules Chapter 333, Division 505: <https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=301096>
42. Oregon Administrative Rules Chapter 950, Division 30: <https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=7792>

Appendix A: Acronyms

ADA: Americans with Disabilities Act

ADI: Area Deprivation Index

ASPR: Administration for Strategic Preparedness & Response

COVID-19: Coronavirus disease of 2019

CSC: Crisis standards of care

EMS: Emergency medical services

ICU: Intensive care unit

mSOFA: Modified Sequential Organ Failure Assessment Tool

NICHD-OT: National Institute of Child Health and Development Outcomes Tool for extremely preterm births

NIH: National Institutes of Health

OHA: Oregon Health Authority

OHP: Oregon Health Plan

ORAAC: Oregon Resource Allocation Advisory Committee

PELOD-2: Pediatric Logistic Organ Dysfunction, Version 2

POLST: Portable order for life-sustaining treatment

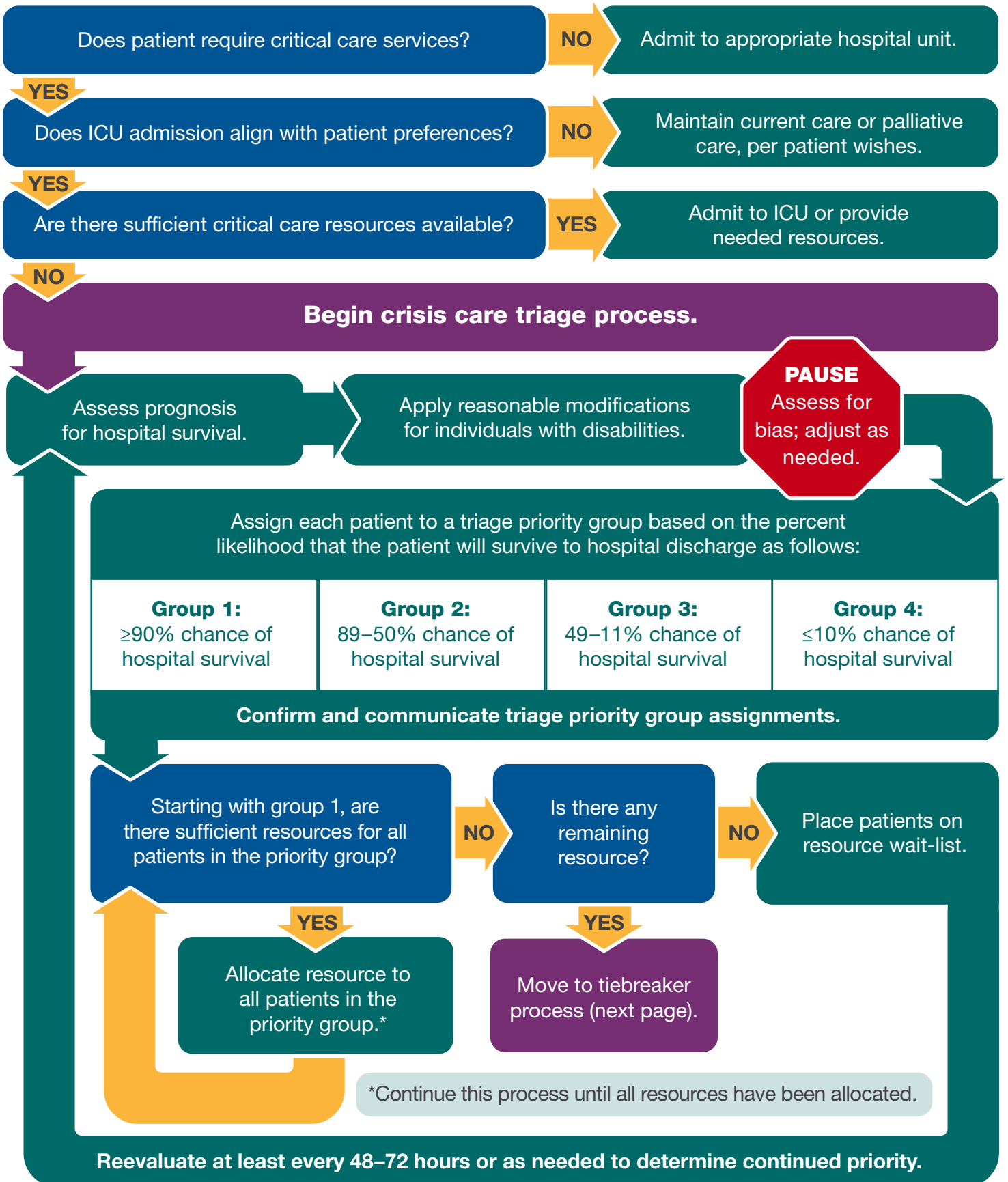
REALD: Race, Ethnicity, Language, Disability data collection

SNAPPE-II: Score for Neonatal Acute Physiology and Perinatal Extension

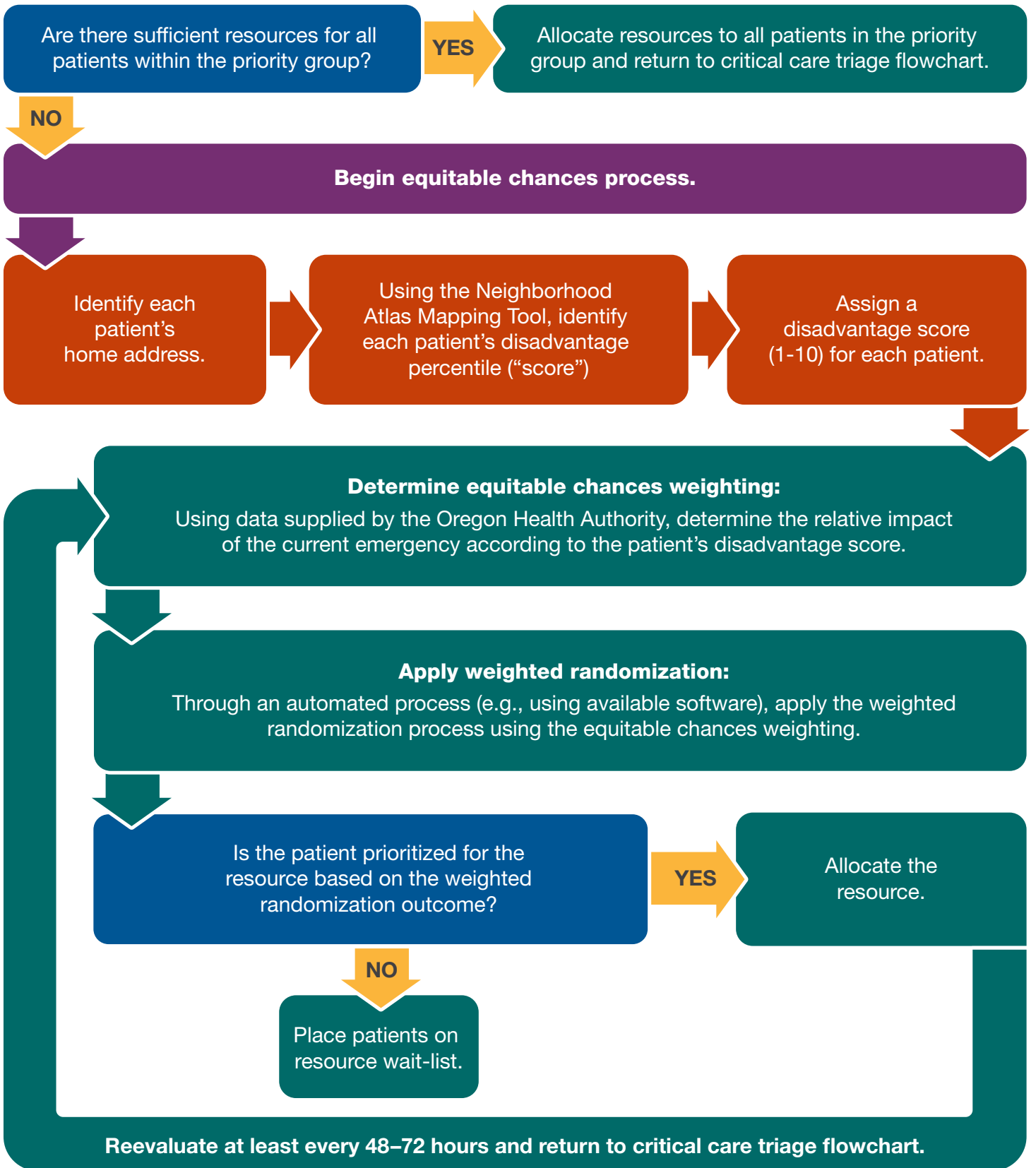
SOFA: Sequential Organ Failure Assessment Tool

SOGI: Sexual orientation, gender identity and gender modality data collection

Appendix B: Critical care triage algorithm



Appendix C: Equitable chances “tiebreaker”



Appendix D: Acknowledgements

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