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CHAPTER 333
OREGON HEALTH AUTHORITY
PUBLIC HEALTH DIVISION

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RULES:

333-200-0010, 333-200-0020, 333-200-0040, 333-200-0080, 333-200-0090, 333-200-0250, 333-200-0265, 333-200-0285, 333-200-0295, 333-205-0000, 333-205-0010, 333-205-0040, 333-205-0050

AMEND: 333-200-0010

RULE TITLE: Definitions

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0010

Definitions have been amended to clarify cross references to Exhibits and corrected an error in the definition of EMS provider by adding missing license classifications. Exhibits 2, 3 and 5 are included with this filing for reference only; no changes are being made to them. Exhibit 4 is being replaced in entirety and has been updated to reflect the new 2022 standards published by the ACS, Resources for the Optimal Care of the Injured Patient. These new standards remove redundancy, as well as standards that are no longer supported by evidence-based practice, and aligns information into 9 chapters from the previous 21 chapters.

RULE TEXT:

As used in OAR 333-200-0000 through 333-200-0295:

- (1) "Area Trauma Advisory Board" (ATAB) means an advisory group appointed by the Authority for each established trauma area to represent providers of trauma care and members of the public.
- (2) "Authority" means the Oregon Health Authority.
- (3) "Categorization" means a process for determining the level of a hospital's trauma care capability and commitment which allows any hospital which meets criteria to receive trauma patients.
- (4) "Communications coverage area" means a geographic region representing a primary radio service area for emergency medical communications. When primary service areas substantially overlap they will be considered as one coverage area.
- (5) "Coordinated care organization" has the meaning given that term in OAR 410-141-0000.
- (6) "Designation" means a competitive process for determining the level of a hospital's trauma care capability and

commitment, allowing the Authority to select a limited number of hospitals which meet criteria to receive trauma patients.

(7) "Emergency medical condition" means a medical condition that manifests itself by symptoms of sufficient severity that a prudent layperson possessing an average knowledge of health and medicine would reasonably expect that failure to receive immediate medical attention would place the health of a person, or a fetus, in the case of a pregnant person, in serious jeopardy.

(8) "Emergency Medical Responder" means a person who is licensed by the Authority as an Emergency Medical Responder.

(9) "Emergency Medical Services provider" (EMS provider) means a person who is licensed by the Authority as an Emergency Medical Responder, Emergency Medical Technician, Advanced EMT, EMT-Intermediate, or Paramedic.

(10) "Emergency Medical Technician" (EMT) means a person who is licensed by the Authority as an Emergency Medical Technician.

(11) "Glasgow Coma Scale" (GCS) means an internationally recognized scoring system for the assessment of head injury severity and degree of coma.

(12) "Hospital" has the meaning set forth in ORS 442.015.

(13) "Injury Severity Score" (ISS) means a method for quantifying the degree of anatomic injury. As described in Baker, S.P., O'Neill B., Haddon W. Jr., et al: The Injury Severity Score, Journal of Trauma, 1974, 14: 187-196.

(14) "Level I (regional) trauma hospital" means a hospital which is categorized or designated by the Authority as having met the trauma hospital resource standards for a Level I hospital, as described in Exhibit 4. Level I hospitals manage severely injured patients, provide trauma related medical education and conduct research in trauma care.

(15) "Level II (area) trauma hospital" means a hospital categorized or designated by the Authority as having met the trauma hospital resource standards for a Level II hospital, as described in Exhibit 4. Level II hospitals manage the severely injured patient.

(16) "Level III (local) trauma hospital" means a hospital categorized or designated by the Authority as having met the trauma hospital resource standards for a Level III hospital, as described in Exhibit 4. Level III hospitals provide resuscitation, stabilization, and assessment of the severely injured patient and provide either treatment or transfer the patient to a higher level trauma system hospital as described in Exhibit 5.

(17) "Level IV (community) trauma hospital" means a hospital categorized or designated by the Authority as having met the hospital resource standards for a Level IV hospital, as described in Exhibit 4. Level IV hospitals provide resuscitation and stabilization of the severely injured patient prior to transferring the patient to a higher level trauma system hospital as described in Exhibit 5.

(18) "Managed health care organization" means a health care provider or a group or organization of medical service providers that provide for the delivery of an agreed upon set of medical or referral services for an enrolled group of individuals and families in a defined geographic area at a fixed periodic rate paid per enrolled individual or family.

(19) "Medical direction" means physician responsibility for the operation and evaluation of prehospital emergency medical care performed by emergency care providers.

(20) "Off-line medical direction" means the direction provided by a physician to prehospital emergency medical care providers through communications such as written protocols, standing orders, education and quality improvement reviews.

(21) "On-line medical direction" means the direction provided by a physician to prehospital emergency medical care providers through radio, telephone, or other real time communication.

(22) "Oregon Trauma Registry" means the trauma data collection and analysis system operated by the Authority.

(23) "Prehospital response time" means the length of time between the notification of a provider and the arrival of that provider's emergency medical service unit(s) at the incident scene.

(24) "Stabilization" means that, within reasonable medical probability, no material deterioration of an emergency medical condition is likely to occur.

(25) "State Trauma Advisory Board" (STAB) means an advisory group appointed by the Authority to represent providers

of trauma care.

(26) "These rules" means OAR 333-200-0010 through OAR 333-200-0295.

(27) "Trauma patient" means a person who at any time meets field triage criteria for inclusion in the Oregon Trauma System as described in Exhibit 2 or the hospital activation criteria as set forth in Exhibit 3 of these rules.

(28) "Trauma system hospital" means a hospital categorized or designated by the Authority to receive and provide services to trauma patients.

(29) "Trauma system plan" means a document which describes the policies, procedures and protocols for a comprehensive system of prevention and management of traumatic injuries.

(30) "Triage criteria" means the parameters established to identify trauma patients for treatment in accordance with the trauma system plan. These criteria are set forth in Exhibit 2.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.065

EXHIBIT 2
OAR chapter 333, division 200

National Guideline for the Field Triage of Injured Patients

RED CRITERIA

High Risk for Serious Injury

Injury Patterns	Mental Status & Vital Signs
<ul style="list-style-type: none"> • Penetrating injuries to head, neck, torso, and proximal extremities • Skull deformity, suspected skull fracture • Suspected spinal injury with new motor or sensory loss • Chest wall instability, deformity, or suspected flail chest • Suspected pelvic fracture • Suspected fracture of two or more proximal long bones (humerus or femur) • Crushed, degloved, mangled, or pulseless extremity • Amputation proximal to wrist or ankle • Active bleeding requiring a tourniquet or wound packing with continuous pressure 	<p>All Patients</p> <ul style="list-style-type: none"> • Unable to follow commands (motor GCS less than 6) • RR less than 10 or greater than 29 breaths/min • Respiratory distress or need for respiratory support • Room-air pulse oximetry less than 90% <p>Age 0-9 years</p> <ul style="list-style-type: none"> • SBP less than 70 mmHg + (2 x age years) <p>Age 10-64 years</p> <ul style="list-style-type: none"> • SBP less than 90 mmHg OR • HR greater than SBP <p>Age 65 years or older</p> <ul style="list-style-type: none"> • SBP less than 110 mmHg OR • HR greater than SBP

Patients meeting any one of the above RED criteria should be transported to the highest-level trauma center available within the geographic constraints of the regional trauma system

YELLOW CRITERIA

Moderate Risk for Serious Injury

Mechanism of Injury	EMS Judgment
<ul style="list-style-type: none"> • High-Risk Auto Crash <ul style="list-style-type: none"> - Partial or complete ejection - Significant intrusion (including roof) <ul style="list-style-type: none"> ▪ Greater than 12 inches occupant site OR ▪ Greater than 18 inches any site OR ▪ Need for extrication for entrapped patient - Death in passenger compartment - Child (Age 0-9) unrestrained or in unsecured child safety seat - Vehicle telemetry data consistent with severe injury • Rider separated from transport vehicle with significant impact (e.g., motorcycle, ATV, horse, etc.) • Pedestrian/bicycle rider thrown, run over, or with significant impact • Fall from height greater than 10 feet (all ages) 	<p>Consider risk factors, including:</p> <ul style="list-style-type: none"> • Low-level falls in young children (ages 5 years or younger) or older adults (ages 65 years or older) with significant head impact • Anticoagulant use • Suspicion of child abuse • Special, high-resource healthcare needs • Pregnancy greater than 20 weeks • Burns in conjunction with trauma • Children should be triaged preferentially to pediatric capable centers <p>If concerned, take to a trauma center</p>

Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)

EXHIBIT 3
OAR chapter 333, division 200

OREGON HOSPITAL TRAUMA TEAM ACTIVATION CRITERIA

<ul style="list-style-type: none">• Confirmed blood pressure less than 90 mmHg at any time in adults, and age-specific hypotension in children aged 0-9 years less than 70 mmHg + (2 x age years)• All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee• Glasgow Coma Scale less than 9 (with mechanism attributed to trauma)• Transfer patients from another hospital who require ongoing blood transfusions• Patients intubated in the field and directly transported to the trauma center• Patients who have respiratory compromise or are in need of an emergent airway <p>Emergency physician's discretion</p>	<p>YES</p> <p>→</p> <p>Activate Full Trauma Team</p>	<p style="text-align: center;">Full Trauma Team</p> <ul style="list-style-type: none">- General Surgeon- Emergency Physician- Emergency Nurse(s)- Laboratory- Radiology- Respiratory Therapist <p><u>Response times from patient arrival:</u></p> <p>Level I & II – 15 minutes Level III & IV – 30 minutes</p>
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Oregon Hospital Trauma Team Activation Criteria (continued)

- Glasgow Coma Scale of 9 - 13
- Chest wall instability, deformity, or suspected flail chest
- Suspected fracture of two or more proximal long bones (humerus or femur)
- Suspected spinal cord injury with motor sensory deficit
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Skull deformity, suspected skull fracture
- Suspected pelvic fracture
- Falls from a height greater than 10 feet (all ages)
- High-risk auto crash
 - Partial or complete ejection
 - Significant intrusion including roof: greater than 12 inches occupant site; **OR** greater than 18 inches any site; **OR** need for extrication for entrapped patient
 - Death in passenger compartment
 - Child (age 0-9 years) unrestrained or in unsecured child safety seat
 - Vehicle telemetry data consistent with severe injury
- Pedestrian/bicycle rider thrown, run over, or with significant impact
- Rider separated from transport vehicle with significant impact (e.g., motorcycle, ATV, horse, etc.)

Emergency physician's discretion

Consider risk factors, including:

- Low-level falls in young children (age 0-5 years) or older adults (age 65 years or greater) with significant head impact
- Anticoagulant use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy greater than 20 weeks
- Burns in conjunction with trauma
- Systolic blood pressure (SBP) less than 110 mmHg **OR** heart rate greater than SBP (age 65 years or greater)
- Children should be triaged preferentially to pediatric capable trauma centers

YES



**Activate
Modified
Trauma
Team**

Modified Trauma Team

- Emergency Physician
- Emergency Nurse(s)
- Laboratory
- Radiology

EXHIBIT 4
OAR Chapter 333, Division 200

OREGON TRAUMA HOSPITAL RESOURCE STANDARDS

AAAM	Association of the Advancement of Automotive Medicine	ICU	intensive care unit
ACS	American College of Surgeons	ISS	Injury Severity Score
AIS	Abbreviated Injury Scale	MRI	magnetic resonance imaging
ATLS	Advance Trauma Life Support	MTP	massive transfusion protocol
CAISS	Certified Abbreviated Injury Scale Specialist	OPO	organ procurement organization
CE	continuing education	OPPE	Ongoing Professional Practice Evaluation
CME	continuing medical education	OR	operating room
CRNA	certified registered nurse anesthetist	PI	performance improvement
CT	computed tomography	PIPS	Performance Improvement and Patient Safety
DIED	Died in emergency department	TBI	traumatic brain injury
DMEP	Disaster Management and Emergency Preparedness	TMD	trauma medical director
DOA	Dead on arrival	TPM	trauma program manager
EMS	emergency medical services	TQP	Trauma Quality Programs
FTE	full-time equivalent	VRC	Verification, Review, and Consultation
GCS	Glasgow Coma Scale		

Type: Verification standards are divided into Type 1 and Type 2 standards. Type 1 standards are considered critical standards that directly impact patient care. The trauma program should be in compliance with all applicable standards at the time of the survey visit. If noncompliance with any standard is identified, the trauma program must demonstrate compliance through a Corrective Action Review to achieve or extend

EFFECTIVE: October 1, 2025

verification. The type of Corrective Action Review will depend on the standard(s) in question. Noncompliance with a Type I standard would result in the trauma program not being verified.

LI, LII, LIII, LIII-N, LIV = Level I, Level II, Level III, Level III-Neuro, Level IV

PTCI & PTCII = Pediatric Trauma Center I & Pediatric Trauma Center II

R = Required standard

■ = Standard not required

Tag	Standard	Type	LI & PTCI	LII & PTCII	LIII (LIII-N*)	LIV
1: Institutional Administrative Commitment						
1.1	In all trauma centers, the institutional governing body, hospital leadership, and medical staff must demonstrate continuous commitment and provide the necessary human and physical resources to properly administer trauma care consistent with the level of verification throughout the verification cycle.	1	R	R	R	R
1.2	The hospital administration of a Level I trauma center must demonstrate support for the research program.	2	R	■	■	■
2: Program Scope & Governance						
2.1	All trauma centers must participate in the regional and/or statewide trauma system.	2	R	R	R	R
2.2	All trauma centers must participate in regional disaster/emergency management committees, health care coalitions, and regional mass casualty exercises.	2	R	R	R	R
2.3	All trauma programs must participate in two hospital drills or disaster plan activations per year that include a trauma response and are designed to refine the hospital’s response to mass casualty events. In Level I, II and III trauma programs must be integrated into the hospital’s disaster plan to ensure a robust surgical response: <ul style="list-style-type: none"> A trauma surgeon from the trauma panel must be included as a member of the hospital’s disaster committee and be responsible for the development of a surgical response to a mass casualty event. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The surgical response must outline the critical personnel, means of contact, initial surgical triage (including subspecialty triage when appropriate), and coordination of secondary procedures. <p>Level I trauma centers must also include an orthopedic surgeon from the orthopedic trauma call panel as a member of the hospital's disaster committee.</p>					
2.4	A Level I adult trauma center must care for at least 1,200 trauma patients per year or at least 240 trauma patients with an Injury Severity Score (ISS) greater than 15 per year.	1	R			
2.5	A Level I pediatric trauma center must care for 200 or more injured patients under 15 years of age per year.	1	PTCI			
2.6	<p>Adult trauma centers that annually admits to the hospital 100 or more injured children under 15 years of age must have the following:</p> <ul style="list-style-type: none"> Pediatric emergency department area Pediatric intensive care area Appropriate resuscitation equipment, as outlined in the pediatric readiness toolkit 	1	R	R	R	
2.7	<p>All trauma centers must have a trauma multidisciplinary PIPS committee chaired by the TMD or an associate TMD which meet at a minimum of quarterly.</p> <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must hold separate adult and pediatric trauma multidisciplinary PIPS meetings with distinct minutes.</p>	1	R	R	R	R
2.8	<p>In all trauma centers, the TMD must fulfill the following requirement:</p> <ul style="list-style-type: none"> Hold current Advanced Trauma Life Support (ATLS) Certification. <p>In Level I, II, and III trauma centers, the TMD must fulfill the following requirements:</p> <ul style="list-style-type: none"> Hold current board certification or board eligibility in general surgery or pediatric surgery by the American Board of Medical Specialties (ABMS), American Osteopathic Association (AOA), or Royal College of Physicians and Surgeons of Canada (RCPS-C). Serve as the director of a single trauma program. Be credentialed to provide trauma care. Participate on the trauma call panel Provide evidence of 36 hours of trauma-related continuing medical education (CME) during the verification cycle. For pediatric TMD, 9 of 36 hours must be pediatric-specific CME In Level I trauma centers, the TMD must hold active membership in at least one national trauma organization and have attended at least one meeting during the verification cycle. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> In Level II or III trauma centers, TMD active membership in at least one regional, state, or national trauma organization and attendance at least one meeting during the verification cycle is recommended. <p>If a board-certified general surgeon who is not board-certified or board-eligible in pediatric surgery serves as the pediatric TMD, then the following are required:</p> <ul style="list-style-type: none"> The pediatric TMD must hold current Pediatric Advanced Life Support (PALS) certification The center must have a written affiliation agreement with a current pediatric TMD at another ACS verified Level I pediatric trauma center. This agreement must identify the affiliate pediatric TMD and at minimum include the following responsibilities: <ul style="list-style-type: none"> Assist with process improvement, guideline development, and complex case discussions Attend at least 50% of trauma multidisciplinary PIPS committee meetings Attend the VRC site visit at the time of verification <p>In Level IV trauma centers, the TMD is a physician that is currently board certified or board eligible in general surgery or pediatric surgery, or may be a physician practicing emergency medicine, responsible for coordinating the care of injured patients, verifies continuing medical education (CME) of personnel, and has oversight of the trauma quality improvement process. The TMD is clinically involved with trauma patient management and responsible for credentialing of trauma team members.</p>					
2.9	<p>In all trauma centers, the TMD must be responsible for and have the authority to:</p> <ul style="list-style-type: none"> Develop and enforce policies and procedures relevant to care of the injured patient. Ensure providers meet all requirements and adhere to institutional standards of practice. Work across departments and/or other administrative units to address deficiencies in care. Determine (with their liaisons) provider participation in trauma care, which might be guided by findings from the PIPS process or an Ongoing Professional Practice Evaluation (OPPE). Oversee the structure and process of the trauma PIPS program. 	2	R	R	R	R
2.10	<p>In Level I, II, and III trauma centers, the TPM must fulfill the following requirements:</p> <ul style="list-style-type: none"> Have 1.0 full-time equivalent (FTE) commitment to the trauma program Provide evidence of 36 hours of trauma-related continuing education (CE) during the verification cycle Hold current membership in a national or regional trauma organization 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<p>In Level II and III trauma centers, at least 0.5 FTE of the TPM's time must be spent on TPM-related activities. The remaining time must be dedicated to other roles within the trauma program.</p> <p>In combined programs that are Level II adult and Level II pediatric trauma centers, it is acceptable for the pediatric TPM of a Level II pediatric trauma center to serve at least 0.5 FTE as the pediatric TPM. The remaining time must be devoted to other roles within the adult or pediatric trauma program.</p> <p>In Level IV trauma centers, a proportionate FTE Trauma Coordinator must be employed for trauma centers with less than 250 patients per year.</p>					
2.11	<p>In all trauma centers, the trauma program manager (TPM) must have a reporting structure that includes the TMD and they are to assume at minimum, the following leadership responsibilities in conjunction with the TMD and/or hospital administration:</p> <ul style="list-style-type: none"> • Oversight of the trauma program • Assist with the budgetary process for the trauma program • Develop and implement clinical protocols and practice management guidelines • Provide educational opportunities for staff development • Monitor performance improvement activities in conjunction with a PI coordinator (where applicable) • Service as a liaison to administration and represent the trauma program on hospital and regional committees to enhance trauma care • Have oversight of the trauma registry 	2	R	R	R	R
2.12	<p>All trauma centers must have an injury prevention program that:</p> <ul style="list-style-type: none"> • Has a designated injury prevention professional • Prioritizes injury prevention work based on trends identified in the trauma registry and local epidemiological data • Implements at least two activities over the course of the verification cycle with specific objectives and deliverables that address separate major causes of injury in the community • Demonstrates evidence of partnerships with community organizations to support their injury prevention efforts 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level I trauma centers, the injury prevention professional must be someone other than the TPM or PI personnel.					
2.13	In all trauma centers, an organ procurement program must be available and consist of at least the following: <ul style="list-style-type: none"> • An affiliation with an organ procurement organization (OPO) • A written policy for notification of the regional OPO • Protocols defining clinical criteria and confirmatory tests for the diagnosis of brain death 	2	R	R	R	R
2.14	All pediatric trauma centers must have a child life program.	2	PTCI	PTCII		
3: Facilities and Equipment Resources						
3.1	In Level I and II trauma centers, an operating room (OR) must be staffed and available within 15 minutes of notification, and in Level III trauma centers an OR must be staffed and available within 30 minutes of notification.	1	R	R	R	
3.2	In Level I and II trauma centers, if the first OR is occupied, an additional OR must be staffed and available.	2	R	R		
3.3	Level I and II trauma centers must have a dedicated OR prioritized for fracture care in nonemergent orthopedic trauma. In a Level III trauma center, access to the OR must be made available for nonemergent orthopedic trauma.	2	R	R	R	
3.4	Level I and II trauma centers must have an adequate supply of blood products available. Level III and IV trauma centers must have an adequate supply of red blood cells and plasma available.	1	R	R	R	R
3.5	In Level I and II trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—15 minutes • Computed tomography (CT)—15 minutes • Point-of-care ultrasound—15 minutes • Interventional radiologic procedures—1 hour • Magnetic resonance imaging (MRI)—2 hours 	1	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level III and IV trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—30 minutes • CT—30 minutes • Point-of-care ultrasound—15 minutes 					
3.6	Level I and II trauma centers must have a mechanism to remotely view radiographic images from referring hospitals within their catchment area.	2	R	R		
3.7	Level I, Level II, and Level III-N trauma centers must have cerebral monitoring equipment available.	1	R	R	*	
3.8	In Level I and II trauma centers, cardiopulmonary bypass equipment must be immediately available when required, or a contingency plan must exist to provide emergency cardiac surgical care.	2	R	R		
4: Personnel and Services						
4.1	Trauma surgeons must have direct patient care responsibilities at the institution and must meet the following qualifications: <ul style="list-style-type: none"> • Complete the ATLS course at least once • Have privileges in general and/or pediatric surgery • Hold current board certification or board eligibility in general surgery, or have been approved through the Alternate Pathway <ul style="list-style-type: none"> – Level I pediatric trauma centers must have at least two surgeons board-certified or board-eligible in pediatric surgery. – Level II pediatric trauma centers must have at least one surgeon board-certified or board-eligible in pediatric surgery. 	2	R	R	R	R
4.2	In Level I, II, and III trauma centers, trauma surgery coverage must be continuously available. In Level I and II trauma centers, the trauma surgeon must be dedicated to a single trauma center while on call.	1	R	R	R	
4.3	Level I and II trauma centers must have a published backup call schedule for trauma surgery. Level III trauma centers must have a documented backup call schedule or a backup plan for trauma surgery.	2	R	R	R	
4.4	In Level I, II, and III trauma centers, the trauma surgeon must be present in the operating suite for the key portions of operative procedures for which they are the responsible surgeon and must be immediately available throughout the procedure.	2	R	R	R	

EFFECTIVE: October 1, 2025

4.5	<p>The trauma program must have the following designated liaisons:</p> <p>LI, LII, PTCI, PTCII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist • Board-certified or board-eligible neurosurgeon • Board-certified or board-eligible radiologist • Board-certified or board-eligible intensive care unit (ICU) physician • Geriatric provider (applies only to LI and LII) <p>LIII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist or certified registered nurse anesthetist • Board-certified or board-eligible neurosurgeon (applies only to LIII-N) • Board-certified or board-eligible ICU physician <p>In Level I trauma centers, the orthopedic trauma surgeon liaison must have completed an orthopedic traumatology fellowship approved by the Orthopaedic Trauma Association (OTA). In Level I pediatric trauma centers, this requirement may be met by having a pediatric fellowship-trained orthopedic surgeon.</p>	2	R	R	R	
4.6	<p>In Level I and II trauma centers, the emergency department medical director must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine.</p> <p>In Level I and Level II trauma centers, physicians who completed primary training prior to 2016 and are board-certified in a specialty other than emergency medicine or pediatric emergency medicine may serve as the emergency department director.</p> <p>In Level III trauma centers, the emergency department director must be board-certified or board-eligible.</p> <p>In Level IV trauma centers, the emergency department must have a designated emergency physician director.</p>	1	R	R	R	R

EFFECTIVE: October 1, 2025

4.7	<p>In all trauma centers, emergency medicine physicians involved in the care of trauma patients must be currently board-certified or board-eligible or have been approved through the Alternate Pathway.</p> <ul style="list-style-type: none"> In Level I and II trauma centers, physicians must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine. <ul style="list-style-type: none"> Physicians who completed primary training in a specialty other than emergency medicine or pediatric emergency medicine prior to 2016 may participate in trauma care. In Level I pediatric trauma centers, at least one physician must be board-certified or board-eligible in pediatric emergency medicine. In Level III and Level IV trauma centers, physicians must be board-certified or board-eligible in emergency medicine, pediatric emergency medicine, or a specialty other than emergency medicine. <p>All emergency physicians must have completed the ATLS course at least once. Physicians who are board-certified or board-eligible in a specialty other than emergency medicine must hold current ATLS certification.</p>	2	R	R	R	R		
4.8	<p>In Level I and II trauma centers, a board-certified or board-eligible emergency medicine physician must be present in the emergency department at all times. This requirement may also be met with a board-certified or board-eligible physician who completed primary training prior to 2016 in a specialty other than emergency medicine or pediatric emergency medicine.</p>	1	R	R				
4.9	<p>In Level I pediatric trauma centers, there must be at least two physicians who are board-certified or board-eligible in pediatric critical care medicine or in both pediatric surgery and surgical critical care.</p> <p>These two physicians must practice at least part of their time in the ICU where the majority of pediatric trauma patients are cared for.</p>	2	PTCI					
4.10	<p>Level I and II trauma centers must have board-certified or board-eligible neurosurgeons continuously available for the care of neurotrauma patients.</p> <p>Level III-N trauma centers must have board-certified or board-eligible neurosurgeons.</p> <p>In Level I pediatric trauma centers, there must be at least one board- certified or board-eligible neurosurgeon who has completed a pediatric neurosurgery fellowship.</p>	1	R				R	*

EFFECTIVE: October 1, 2025

4.11	Level I, II, and III trauma centers must have board-certified or board-eligible orthopedic surgeons continuously available for the care of orthopedic trauma patients and must have a contingency plan for when orthopedic trauma capabilities become encumbered or overwhelmed. In Level I pediatric trauma centers, at least one board-certified or board-eligible orthopedic surgeon must have completed a pediatric orthopedic fellowship.	1	R	R	R	
4.12	Trauma centers must have an orthopedic surgeon who has completed an Orthopedic Trauma Association-approved fellowship or has met the alternate training criteria. This requirement may also be met by having transfer protocols specifying the type of patients/injuries that will be transferred to a center with an orthopedic surgeon who has completed an OTA-approved fellowship or meets the alternate training criteria.	2	PTCI	R		
4.13	In Level I and II trauma centers, anesthesia services must be available within 15 minutes of request. Furthermore, the attending anesthesiologist must be present within 30 minutes of request for all operations. In Level III trauma centers, anesthesia services must be available within 30 minutes of request.	1	R	R	R	
4.14	In Level I, II, and III trauma centers, a radiologist must have access to patient images and be available for imaging interpretation, in-person or by phone, within 30 minutes of request.	1	R	R	R	
4.15	Level I and II trauma centers must have the necessary human and physical resources continuously available so that an endovascular or interventional radiology procedure for hemorrhage control can begin within 60 minutes of request.	2	R	R		
4.16	In Level I, II, and III trauma centers must have an ICU surgical director who is board-certified or board-eligible in general surgery and actively participates in unit administration. In Level I adult trauma centers, the ICU surgical director must be board-certified or board-eligible in surgical critical care.	2	R	R	R	
4.17	In Level I and II trauma centers, the ICU must be staffed with physicians who are continuously available within 15 minutes of request and whose primary responsibility is to the ICU.	1	R	R		
4.18	In Level II adult trauma centers, at least one surgeon must be board-certified or board-eligible in surgical critical care.	2		R		
4.19	In Level III trauma centers, provider coverage of the ICU must be available within 30 minutes of request, with a formal plan in place for emergency coverage.	1			R	
4.20	In all trauma centers, the patient-to-nurse ratio in the ICU must be 1:1 or 2:1, depending on patient acuity as defined by the hospital policy for ICU nursing staffing.	2	R	R	R	R
4.21	Level I trauma centers must have continuous availability of the surgical expertise listed below:	1	R	R		

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Cardiothoracic surgery • Vascular surgery • Hand surgery • Plastic surgery • Obstetrics/Gynecology surgery • Otolaryngology • Urology <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have surgical expertise listed above available.</p>				
4.22	<p>Level I trauma centers must have continuous availability of ophthalmology.</p> <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have ophthalmology available.</p>	2	R	R	
4.23	<p>Level I trauma centers must have the capability for comprehensive soft tissue coverage of wounds, including microvascular expertise for free flaps.</p>	1	R		
4.24	<p>Level I trauma centers must have the capability to diagnose and manage acute facial fractures of the entire craniomaxillofacial skeleton, including the skull, cranial base, orbit, midface, and occlusal skeleton, with expertise contributed by any of the following specialists: otolaryngology, oral maxillofacial surgery, or plastic surgery.</p>	1	R		
4.25	<p>Level I and II trauma centers must have replantation capability continuously available or must have in place a triage and transfer process with a replant center.</p>	2	R	R	
4.26	<p>Level I and II trauma centers must have all of the following medical specialists:</p> <ul style="list-style-type: none"> • Cardiology* • Gastroenterology* • Internal medicine or pediatrics* • Infectious disease* • Nephrology* • Pain management (with expertise to perform regional nerve blocks) • Physiatry • Psychiatry • Pulmonary medicine* 	2	R	R	R

EFFECTIVE: October 1, 2025

	An asterisk (*) denotes services that must be continuously available. Level III trauma centers must have internal medicine continuously available.					
4.27	Level I and II pediatric trauma centers must have either a physician on the medical staff who is board-certified or board-eligible in child abuse pediatrics or a physician with special interest in child abuse (nonaccidental trauma) who provides expertise to the trauma center.	2	PTCI	PTCII		
4.28	Trauma centers must have the following allied health services available: LI, LII, PTCI, PTCII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Speech therapy • Social worker (7 days per week) • Occupational therapy (7 days per week) • Physical therapy (7 days per week) LIII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Social worker • Occupational therapy • Physical therapy • Speech therapy 	2	R	R	R	
4.29	Level I and Level II trauma centers must have renal therapy services available to support patients with acute renal failure. Level III trauma centers must have renal replacement therapy services available to support patients with acute renal failure or a transfer agreement in place if this service is not available.	2	R	R	R	
4.30	In all trauma centers, trauma and/or emergency department advanced practice providers who are clinically involved in the initial evaluation and resuscitation of trauma patients during the activation phase must have current ATLS certification.	2	R	R	R	R
4.31	In all trauma centers, there must be at least 0.5 full-time equivalent (FTE) dedicated to the trauma registry per 200-300 annual patient entries. A proportionate FTE must be employed for hospitals with less than 200 annual patient entries. The count of entries is defined as all patients who meet Oregon Trauma Registry inclusion criteria.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Combined adult and pediatric programs (Level I/II adult trauma center with Level II pediatric trauma center) may share resources, but someone must be identified as the lead pediatric registrar.					
4.32	In Level I or other trauma centers seeking ACS verification, at least one registrar must be a current Certified Abbreviated Injury Scale Specialist (CAISS).	2	R			
4.33	In all trauma centers, all staff members who have a registry role in data abstraction and entry, injury coding, ISS calculation, data reporting, or data validation for the trauma registry must fulfill all of the following requirements: <ul style="list-style-type: none"> • Participate in and pass the Association of the Advancement of Automotive Medicine’s (AAAM’s) Abbreviated Injury Scale (AIS) course for the version used at your center • Participate in a trauma registry course that includes all of the following content: <ul style="list-style-type: none"> – Abstraction – Data management – Reports/report analysis – Data validation – HIPAA • Participate in an ICD-10 course or an ICD-10 refresher course every five years 	2	R	R	R	R
4.34	In all trauma centers, each trauma registrar must accrue at least 24 hours of trauma-related CE during the verification cycle.	2	R	R	R	R
4.35	In Level I, II, and III trauma centers, there must be at least 0.5 FTE dedicated performance improvement (PI) personnel when the annual volume of registry patient entries exceeds 500 patients. The count of entries is defined as all patients that meet Oregon Trauma Registry inclusion criteria. When the annual volume exceeds 1,000 registry patient entries, the trauma center must have at least 1.0 FTE PI personnel.	2	R	R	R	
4.36	In Level I adult and pediatric trauma centers, the trauma surgeon liaison to the disaster committee must successfully complete the Disaster Management and Emergency Preparedness (DMEP) course at least once.	2	R			
5: Patient Care: Expectations and Protocols						
5.1	All trauma centers must have evidence-based clinical practice guidelines, protocols, or algorithms that are reviewed every three years.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.2	In all trauma centers, the shared roles and responsibilities of trauma surgeons and emergency medicine physicians for trauma resuscitation must be defined and approved by the TMD.	2	R	R	R	R
5.3	In all trauma centers, the criteria for tiered activations must be clearly defined. For the highest level of activation, the following eight criteria must be included: <ul style="list-style-type: none"> • Confirmed blood pressure less than 90 mm Hg at any time in adults, and age-specific hypotension in children aged 0-9 years less than 70 mmHg + (2 x age years) • All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee • Glasgow Coma Scale less than 9 (with mechanism attributed to trauma) • Transfer patients from another hospital who require ongoing blood transfusions • Patients intubated in the field and directly transported to the trauma center • Patients who have respiratory compromise or are in need of an emergent airway • Emergency physician's discretion 	2	R	R	R	R
5.4	In all trauma centers providing trauma surgical services, for the highest level of activation, at least 80 percent of the time, the trauma surgeon must be at the patient's bedside within 15 minutes (Level I and Level II trauma centers) or 30 minutes (Level III and Level IV trauma centers) of patient arrival.	1	R	R	R	R
5.5	In all trauma centers providing trauma surgical services, the trauma program must define and meet acceptable response time to trauma surgical evaluation for activations other than the highest level.	2	R	R	R	R
5.6	All trauma centers must have the following protocols for care of the injured older adult: <ul style="list-style-type: none"> • Identification of vulnerable geriatric patients • Identification of patients who will benefit from the input of a health care provider with geriatric expertise • Prevention, identification, and management of dementia, depression, and delirium • Process to capture and document what matters to patients, including preferences and goals of care, code status, advanced directives, and identification of a proxy decision maker • Medication reconciliation and avoidance of inappropriate medications • Screening for mobility limitations and assurance of early, frequent, and safe mobility • Implementation of safe transitions to home or other health care facility 	2	R	R	R	R
5.7	All trauma centers must have a process in place to assess children for nonaccidental trauma.	2	R	R	R	R
5.8	All trauma centers must have a massive transfusion protocol (MTP) developed collaboratively between the trauma service and the blood bank.	1	R	R	R	R
5.9	All trauma centers must have a rapid reversal protocol in place for patients on anticoagulants.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.10	In all trauma centers, each emergency department must perform a pediatric readiness assessment during the verification cycle and have a plan to address identified gaps.	2	R	R	R	R
5.11	All trauma centers must have a provider and equipment immediately available to establish an emergency airway.	1	R	R	R	R
5.12	All trauma centers must have clearly defined transfer protocols that include the types of patients, expected time frame for initiating and accepting a transfer, and predetermined referral centers for outgoing transfers.	2	R	R	R	R
5.13	In all trauma centers, the decision to transfer an injured patient must be based solely on the needs of the patient, without consideration of their health plan or payor status.	2	R	R	R	R
5.14	In all trauma centers, when trauma patients are transferred, the transferring provider must directly communicate with the receiving provider to ensure safe transition of care. This communication may occur through a transfer center.	2	R	R	R	R
5.15	In all trauma centers, diversion protocols must be approved by the TMD and include: <ul style="list-style-type: none"> • Agreement of the trauma surgeon in the decision to divert, for all trauma centers that provide trauma surgical services • A process for notification of dispatch and EMS agencies • A diversion log to record reasons for and duration of diversions 	2	R	R	R	R
5.16	All trauma centers must not exceed 400 hours of diversion during the reporting period.	2	R	R	R	R
5.17	Neurosurgical evaluation must occur within 30 minutes of request for the following: <ul style="list-style-type: none"> • Severe TBI (GCS less than 9) with head CT evidence of intracranial trauma • Moderate TBI (GCS 9–12) with head CT evidence of potential intracranial mass lesion • Neurologic deficit as a result of potential spinal cord injury (applicable to spine surgeon, whether a neurosurgeon or orthopedic surgeon) • Trauma surgeon discretion <p>In Level I, II, and III-N trauma centers, neurosurgical provider response times must be documented.</p> <p>In Level I and II trauma centers, the neurosurgery attending must be involved in clinical decision-making.</p>	2	R	R	*	
5.18	All Level III and IV trauma centers must have a written plan approved by the TMD that defines the types of neurotrauma injuries that may be treated at the center.	2			R	R
5.19	Level I and II trauma centers must have a neurotrauma contingency plan and must implement the plan when neurosurgery capabilities are encumbered or overwhelmed.	2	R	R	*	

EFFECTIVE: October 1, 2025

	<p>Level III-N trauma centers must have a neurotrauma contingency plan that includes the potential for diversion and must implement the plan when neurosurgery capabilities are encumbered, overwhelmed, or unavailable.</p> <p>The plan must include the following criteria:</p> <ul style="list-style-type: none"> • A thorough review of each instance by the PIPS program • Monitoring of the effectiveness of the process by the PIPS program 					
5.20	<p>In Level I, II, and III trauma centers must have treatment guidelines for, at minimum, the following orthopedic injuries:</p> <ul style="list-style-type: none"> • Patients who are hemodynamically unstable attributable to pelvic ring injuries • Long bone fractures in patients with multiple injuries (e.g., time to fixation, order of fixation, and damage control versus definitive fixation strategies) • Open extremity fractures (e.g., time to antibiotics, time to OR for operative debridement, and time to wound coverage for open fractures) • Hip fractures in geriatric patients (e.g., expected time to OR (LI, LII, LIII)) 	2	R	R	R	
5.21	<p>In Level I, II, and III trauma centers, an orthopedic surgeon must be at bedside within 30 minutes of request for the following:</p> <ul style="list-style-type: none"> • hemodynamically unstable, secondary to pelvic fracture • suspected extremity compartment syndrome • fractures/dislocations with risk of avascular necrosis (e.g., femoral head or talus) • vascular compromise related to a fracture or dislocation • trauma surgeon discretion <p>The attending orthopedic surgeon must be involved in the clinical decision-making for care of these patients.</p>	2	R	R	R	
5.22	<p>In Level I, II, and III trauma centers must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p> <p>Level IV trauma centers that provide surgical services must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p>	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.23	In all trauma centers providing trauma surgical services, trauma patients requiring ICU admission must be admitted to, or be evaluated by, a surgical service.	2	R	R	R	R
5.24	In all trauma centers providing trauma surgical services, the trauma surgeon must retain responsibility for the trauma patient in the ICU up to the point where the trauma surgeon documents transfer of primary responsibility to another service.	2	R	R	R	R
5.25	In all trauma centers, documentation of preliminary diagnostic imaging must include evidence that critical findings were communicated to the trauma team. The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretations.	2	R	R	R	R
5.26	In all trauma centers, documentation of the final interpretation of CT scans must occur no later than 12 hours after completion of the scan.	2	R	R	R	R
5.27	In Level I, II, and III trauma centers must meet the rehabilitation needs of trauma patients by: <ul style="list-style-type: none"> • Developing protocols that identify which patients will require rehabilitation services during their acute inpatient stay • Establishing processes that determine the rehabilitation care, needs, and services required during the acute inpatient stay • Ensuring that the required services during acute inpatient stay are provided in a timely manner 	2	R	R	R	
5.28	All trauma centers must have a process to determine the level of care patients require after trauma center discharge, as well as the specific rehabilitation care services required at the next level of care. The level of care and services required must be documented in the medical record.	2	R	R	R	R
5.29	All trauma centers must meet the mental health needs of trauma patients by having: <ul style="list-style-type: none"> • A protocol to screen patients at high risk for psychological sequelae with subsequent referral to a mental health provider (LI, LII, PTCI, PTCII) • A process for referral to a mental health provider when required (LIII, LIV) 	2	R	R	R	R
5.30	All trauma centers must screen all admitted trauma patients greater than 12 years old for alcohol misuse with a validated tool or routine blood alcohol content testing. Programs must achieve a screening rate of at least 80 percent.	2	R	R	R	R
5.31	In all trauma centers, at least 80 percent of patients who have screened positive for alcohol misuse must receive a brief intervention by appropriately trained staff prior to discharge. This intervention must be documented.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Level III and Level IV trauma centers must have a mechanism for referral if brief intervention is not available as an inpatient.					
6: Data Surveillance and Systems						
6.1	All trauma centers must have a written data quality plan and demonstrate compliance with that plan. At minimum, the plan must require quarterly review of data quality.	2	R	R	R	R
6.2	In all trauma centers, the trauma registry must be concurrent, defined as having a minimum of 80 percent of patient records completed within 60 days of the patient discharge date.	2	R	R	R	R
6.3	In all trauma centers, trauma registry data must be collected in compliance with the Oregon Trauma Registry inclusion criteria and Oregon Trauma Registry Data Dictionary data elements index. In Level I and Level II trauma centers, data must be submitted to the National Trauma Data Bank® every year in a timely fashion so that it can be aggregated and analyzed at the national level.	2	R	R	R	R
7: Performance Improvement and Patient Safety						
7.1	In all trauma centers, the trauma PIPS program must be independent of the hospital or departmental performance improvement (PI) program, but it must report to the hospital or departmental PI program.	2	R	R	R	R
7.2	All trauma centers must have a written PIPS plan that: <ul style="list-style-type: none"> • Outlines the organizational structure of the trauma PIPS process, with a clearly defined relationship to the hospital PI program • Specifies the processes for event identification. As an example, these events may be brought forth by a variety of sources, including but not limited to: individual personnel reporting, morning report or daily sign-outs, case abstraction, registry surveillance, use of clinical guideline variances, patient relations, or risk management. The scope for event review must extend from prehospital care to hospital discharge. • Includes a list of audit filters, event review, and report review that must include, at minimum, those listed in the Resources section • Defines levels of review (primary, secondary, tertiary, and/or quaternary), with a listing for each level that clarifies: <ul style="list-style-type: none"> – Which cases are to be reviewed 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> – Who performs the review – When cases can be closed or must be advanced to the next level • Specifies the members and responsibilities of the trauma multidisciplinary PIPS committee • Outlines an annual process for identification of priority areas for PI, based on audit filters, event reviews, and benchmarking reports 					
7.3	All trauma centers must have documented evidence of event identification; effective use of audit filters; demonstrated loop closure; attempts at corrective actions; strategies for sustained improvement measured over time.	2	R	R	R	R
7.4	All trauma centers must participate in a benchmarking program and use the results to determine whether there are opportunities for improvement in patient care and registry data quality.	2	R	R	R	R
7.5	In all trauma centers, a physician from the emergency department or trauma program must participate in the prehospital PIPS program, including assisting in the development of prehospital care protocols relevant to the care of trauma patients.	2	R	R	R	R
7.6	<p>All trauma centers must meet the following trauma multidisciplinary PIPS committee meeting attendance thresholds:</p> <ul style="list-style-type: none"> • 60 percent of meetings for the TMD (cannot be delegated to the associate TMD) • 50 percent of meetings for each trauma surgeon • 50 percent of meetings for the liaisons (or one predetermined alternate) from emergency medicine, neurosurgery, orthopedic surgery, critical care medicine, and anesthesia, • 50 percent of meetings for the liaison (or one predetermined alternate) from radiology (LI, LII, PTCI, PTCII) <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must have 50 percent attendance by a representative (TMD or one predetermined alternative) from the other program; this representative is responsible for disseminating information to panel members of the other program.</p> <p>Level IV trauma centers must have 50 percent attendance by medical staff active in trauma resuscitation.</p>	2	R	R	R	R
7.7	<p>In all trauma centers, all cases of trauma-related mortality and transfer to hospice must be reviewed and classified for potential opportunities for improvement.</p> <p>Deaths must be categorized as:</p> <ul style="list-style-type: none"> • Mortality with opportunity for improvement 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Mortality without opportunity for improvement 					
7.8	<p>In all trauma centers, all nonsurgical trauma admissions must be reviewed by the trauma program.</p> <p>As part of secondary review, the Trauma Medical Director must review non-surgical admissions according to the criteria in the Nelson Criteria for Nonsurgical Admission.</p>	2	R	R	R	R
7.9	In all trauma centers, all instances of diversion must be reviewed by the trauma operations committee.	2	R	R	R	R
7.10	<p>All trauma centers must have a process of reviewing and providing feedback to:</p> <ul style="list-style-type: none"> • EMS agencies, related to accuracy of triage and provision of care • Referring providers, related to the care and outcomes of their patients and any potential opportunities for improvement in initial care 	2	R	R	R	R
8: Education: Professional and Community Outreach						
8.1	All trauma centers must provide public and professional trauma education.	2	R	R	R	R
8.2	<p>All trauma centers must provide trauma orientation to new nursing staff caring for trauma patients.</p> <p>Nurses must participate in trauma continuing education (CE) corresponding to their scope of practice and patient population served.</p>	2	R	R	R	R
8.3	In all trauma centers, the trauma program must participate in the training of prehospital personnel.	2	R	R	R	R
8.4	<p>Level I trauma centers must demonstrate commitment to postgraduate training and education by having residency rotations in trauma that meet all of the following conditions:</p> <ul style="list-style-type: none"> • There must be a defined trauma curriculum and trauma-specific objectives for junior and senior residents • The rotations must be available to, at minimum, general surgery, orthopedic, neurosurgery, and emergency medicine residents • All residents on the trauma service must be from an Accreditation Council for Graduate Medicine Education (ACGME) accredited program • There must be a sufficient volume and breadth of cases to provide general surgery senior residents the opportunity to meet the competency requirements for senior general surgery residents in trauma set forth by the ACGME 	2	R			

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The rotation must be continuously available to residents to assure ample exposure to trauma care 			
9: Research				
9.1	<p>Level I trauma centers must demonstrate the following scholarly activities during the verification cycle:</p> <ul style="list-style-type: none"> At least 10 trauma-related research articles* Participation by at least one trauma program faculty member as a visiting professor, invited lecturer, or speaker at a regional, national, or international trauma conference Support of residents or fellows in any of the following scholarly activities: laboratory experiences; clinical trials; resident trauma paper competitions at the state, regional, or national level; and other resident trauma research presentations <p>*Fulfillment of the research requirement must also meet the following criteria:</p> <ul style="list-style-type: none"> At least three articles must be authored by general surgery/pediatric trauma providers Research activity must be performed at the trauma center If case series are to be counted, they must include more than five patients Basic science research must involve topics directly related to the pathophysiology of injury At least three articles must be from disciplines other than general/pediatric surgery All articles must be published or accepted for publication in peer-reviewed and indexed journals Authors from the trauma center must meet accepted authorship requirements of the International Committee of Medical Journal Editors One paper from acute care surgery may be included 	2	R	

EXHIBIT 5

OAR Chapter 333, Division 200

OREGON CRITERIA for CONSIDERATION of TRANSFER to a LEVEL I or II TRAUMA CENTER

HEAD AND CENTRAL NERVOUS SYSTEM

- Penetrating injuries or open fracture of the skull
- GCS < 14 or lateralizing neurologic signs (if no neurosurgical consultation is available.)
- Spinal fracture or spinal cord deficit
- Carotid or vertebral arterial injury

CHEST

- More than two unilateral rib fractures or bilateral rib fractures with pulmonary contusion (if no critical care consultation is available)
- Torn thoracic aorta or great vessel
- Cardiac injury or rupture
- Bilateral pulmonary contusion with Pao₂:Flo₂ ratio less than 200 (require protracted ventilation)

ABDOMEN AND PELVIS

- Major abdominal vascular injury
- Grade IV or V liver injuries requiring transfusion
- Unstable pelvic fracture requiring transfusion
- Complex pelvis/acetabulum fractures
- Open pelvic injury

MULTIPLE SYSTEM INJURY

- Significant head injury combined with significant face, chest, abdominal, or pelvic injury
- Significant torso injury with advanced comorbid disease (such as coronary artery disease, chronic obstructive pulmonary disease, type 1 diabetes mellitus, or immunosuppression)
- Burns with associated injuries
- Fracture or dislocation with loss of distal pulses

SECONDARY DETERIORATION (LATE SEQUELAE)

- Patients requiring long term ventilation
- Sepsis
- Single or multiple organ system failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal or coagulation systems)
- Major tissue necrosis

AMEND: 333-200-0020

RULE TITLE: Objectives of the Trauma System

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0020

Updates the reference to the American College of Surgeons, Resources for Optimal Care of the Injured Patient specifying that an objective of the statewide trauma system is to reduce death and disability by promoting quality treatment, education and research utilizing the 2022 standards (revised December 2023).

RULE TEXT:

The objective of the statewide trauma system is to reduce deaths and disabilities which result from traumatic injuries by:

- (1) Identifying the causes of traumatic injuries and recommending, promoting, and coordinating prevention activities;
- (2) Developing a statewide trauma system plan to assure timely, quality, definitive care through coordinated identification, transportation and treatment of trauma patients:
 - (a) The statewide trauma system plan shall be composed of seven area plans; and
 - (b) Each area trauma system plan shall consist of policies, procedures, and protocols which address each of the following trauma system components:
 - (A) Communication and dispatch;
 - (B) Responders and prehospital response times;
 - (C) Medical direction and treatment;
 - (D) Triage and transportation;
 - (E) Hospital resources;
 - (F) Inter-hospital transfers;
 - (G) Rehabilitation;
 - (H) Quality improvement;
 - (I) Education and research;
 - (J) Prevention; and
 - (K) Disaster management.
- (3) Adopting the standards, policies and procedures necessary to unify area trauma system plans into a statewide trauma system; and
- (4) Promoting quality treatment, education, research and prevention of traumatic injuries utilizing as a model Resources for Optimal Care of the Injured Patient 2022 Standards, Revised December 2023; Verification, Review and Consultation Program, American College of Surgeons and the National Guideline for Field Triage of Injured Patients, Recommendations of the National Expert Panel on Field Triage, 2021.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.050, 431A.060, 431A.065, 431A.070, 431A.080

AMEND: 333-200-0040

RULE TITLE: Trauma System Areas

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0040

Sections (1), (2) and (4) were amended to clarify zip code exceptions in trauma areas 1, 2 and 5 and reflected in revised Exhibit 1.

RULE TEXT:

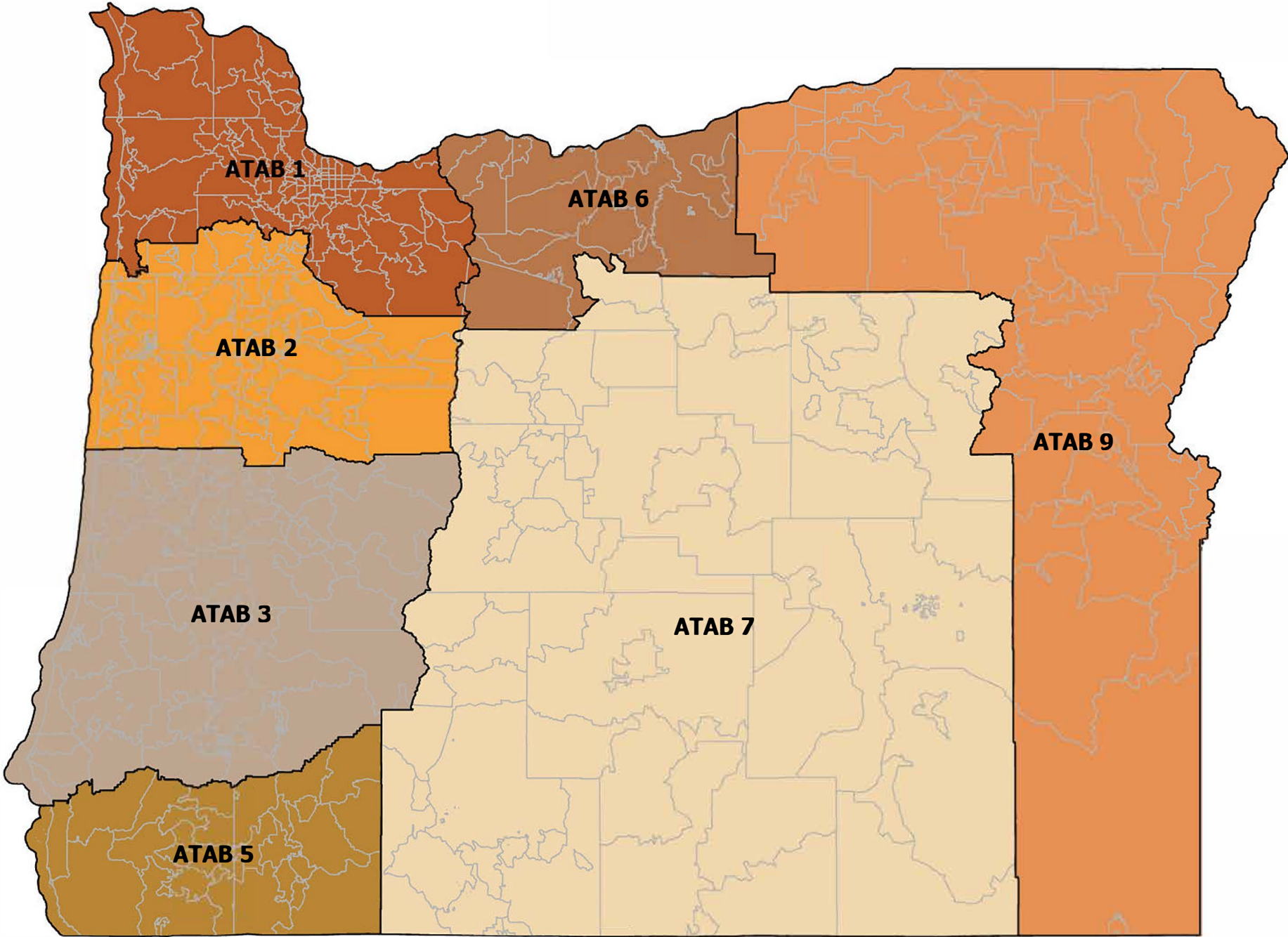
The Oregon Health Authority has established seven trauma system areas utilizing county lines, zip codes, township and range, and roads for the purpose of developing, implementing and monitoring the trauma system and not for the purpose of restricting patient referrals. The trauma system areas are illustrated in Exhibit 1 and are:

- (1) Area 1: Clackamas County; Clatsop County; Columbia County; Multnomah County; Tillamook County (except zip codes 97122, 97149 and 97368); Washington County; and Yamhill County (zip codes 97115, 97119, 97123, 97132, 97140 and 97148 only);
- (2) Area 2: Benton County; Lincoln County; Linn County; Polk County; Marion County; Tillamook County (zip codes 97122, 97149 and 97368 only); and Yamhill County (except zip codes 97115, 97119, 97123, 97132, 97140 and 97148);
- (3) Area 3: Coos County; Curry County (zip codes 97450, 97465, and 97476 only); Douglas County; and Lane County;
- (4) Area 5: Curry County (except zip codes 97450, 97465 and 97476); Jackson County; and Josephine County;
- (5) Area 6: Gilliam County; Hood River County; Sherman County; and Wasco County (except zip codes 97001, 97057 and 97761);
- (6) Area 7: Crook County; Deschutes County; Grant County; Harney County; Jefferson County; Klamath County; Lake County; Wasco County (zip codes 97001, 97057 and 97761 only); and Wheeler County; and
- (7) Area 9: Baker County, Malheur County, Morrow County; Umatilla County; Union County; and Wallowa County.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060

**EXHIBIT 1 - OAR chapter 333, division 200
OREGON TRAUMA SYSTEM AREA MAP**



AMEND: 333-200-0080

RULE TITLE: Standards for Area Trauma System Plans

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0080

Updates the reference to the American College of Surgeons (ACS), Resources for Optimal Care of the Injured Patient specifying that implementation of area trauma system plans shall be in general accordance with the 2022 standards (revised December 2023). Exhibit 4 is being replaced in entirety and has been updated to reflect the new 2022 (revised December 2023) standards published by the ACS, Resources for the Optimal Care of the Injured Patient. These new standards remove redundancy, as well as standards that are no longer supported by evidence-based practice, and aligns information into 9 chapters from the previous 21 chapters. Exhibits 2, 3 and 5 are included with this filing for reference only; no changes are being made to them.

RULE TEXT:

Area trauma system plans shall describe how each of the following standards are met or exceeded. Interpretation and implementation of the standards as set forth in this rule shall be in general accordance with the guidelines of the Resources for Optimal Care of the Injured Patient, 2022 Standards, Revised December 2023; Verification, Review and Consultation Program, American College of Surgeons. For the purposes of section (4) of this rule, interpretation and implementation of standards shall be in general accordance with the National Guideline for Field Triage of Injured Patients, Recommendations of the National Expert Panel on Field Triage, 2021.

(1) Communications and Dispatch:

(a) System access: Residents and visitors in a communications coverage area shall be able to access emergency medical services by calling 9-1-1 as set forth in ORS 403.115;

(b) Dispatch response: Dispatchers for emergency medical care providers shall have protocols which include pre-arrival patient care instructions, and which require the dispatch of the appropriate level of available responding units (basic or advanced life support) based on medical need;

(c) Special Resources: All emergency medical services dispatchers shall maintain an up-to-date list of available law enforcement agencies, fire departments, air and ground ambulance services, quick response units that respond to an ill or injured person to provide initial emergency medical care prior to transportation by an ambulance and special responders for extrication, water rescue, hazardous material incidents and protocols for their use;

(d) Prehospital/Hospital: Ambulances shall have either a UHF or VHF radio that will provide reliable communications between the ambulance and central dispatch, the receiving hospital, and online medical direction. If the information has to be relayed through the dispatching agency, that agency shall be responsible to relay patient information to the hospital; and

(e) Training: There shall be training and certification standards for all tele-communicators that process telephone requests for or dispatch emergency care providers. The authorization to establish these standards is the responsibility of the Department of Public Safety Standards and Training in accordance with ORS 181.640.

(2) Responders and Prehospital Response Times:

(a) Ambulance Service Areas (ASAs): The existing ASAs shall be described as well as a summary of the ATAB's efforts to promote each county adopting an ASA plan in accordance with ORS 682.062;

(b) Prehospital response times: Trauma system patients shall receive prehospital emergency medical care within the following prehospital response time parameters 90 percent of the time:

(A) Urban area, an incorporated community of 50,000 or more population — 8 minutes;

(B) Suburban area, an area which is not urban, and which is contiguous to an urban community. It includes the area within a 10-mile radius of that community's center. It also includes areas beyond the 10-mile radius which are contiguous to the urban community and have a population density of 1,000 or more per square mile — 15 minutes;

(C) Rural area, a geographic area 10 or more miles from a population center of 50,000 or more, with a population density of greater than six persons per square mile — 45 minutes;

- (D) Frontier area, the areas of the state with a population density of six or fewer persons per square mile and are accessible by paved roads — 2 hours; and
- (E) Search and rescue area, the areas of the state that are primarily forest, recreational or wilderness lands that are not accessible by paved roads or not inhabited by six or more persons on a year-round basis. — No established prehospital response time.
- (c) Field command: A uniform policy shall assign responsibility for directing the care of the trauma patient in the prehospital setting in cases of response by multiple providers to assure scene control by the most qualified responder;
- (d) Utilization of air ambulance: Protocols for the medical direction, activation and utilization of air ambulance service(s) shall be established;
- (e) Patient Care Report: All prehospital emergency care providers shall use a patient care report as defined in OAR 333-255-0000; and
- (f) Utilization of Oregon Trauma System identification bracelet: All prehospital emergency medical care providers shall use the official Oregon Health Authority (Authority) numbered trauma system identification bracelet when the patient meets trauma system entry criteria or is entered into the trauma system and notify the receiving trauma hospital of the incoming patient. The prehospital emergency medical care provider shall record the number on the patient's patient care report.
- (3) Medical Direction and Treatment:
- (a) Protocols, policies and procedures: Providers in each trauma system area shall function under an effective and coordinated set of off-line prehospital trauma protocols and on-line medical direction trauma policies and procedures which address basic, intermediate and advanced levels of care. Off-line treatment protocols shall clearly describe all treatment and transportation procedures and identify those procedures which require on-line medical authorization. Medical direction policies and procedures must assure consistent area-wide coordination, data collection and area-wide quality improvement responsibility;
- (b) Hospital status: In the event that on-line medical direction serves two or more categorized or designated hospitals, there shall be a system for medical direction to continuously determine the current status of hospital trauma care capabilities; and
- (c) Physician qualifications: On-line medical direction physicians must be qualified for this role by virtue of training, experience and interest in prehospital trauma care as demonstrated through emergency medicine and Advanced Trauma Life Support (ATLS) training in accordance with the American College of Surgeons ATLS course.
- (4)(a) Triage and Transportation: Triage and transportation protocols shall be written to ensure that patients who at any time meet field triage criteria as set forth in Exhibit 2 will be transported directly to a categorized trauma hospital as described under OAR 333-200-0090. The protocols must be based on field triage criteria (Exhibit 2) and identify the following:
- (A) Which patients are appropriate for transport to a Level I, II, III or IV trauma hospital based on the capabilities of the hospitals in the ATAB;
- (B) Conditions in which an ambulance may bypass a Level III or IV trauma hospital in order to transport directly to a Level I or II trauma hospital; and
- (C) Conditions in which air transport should be considered for transport directly to a Level I or II trauma hospital.
- (b) Triage and transportation protocols shall be followed unless otherwise advised by on-line medical direction or under the following circumstances:
- (A) If unable to establish and maintain an adequate airway, the patient shall be taken to the nearest hospital to obtain definitive airway control. Upon establishing and maintaining airway control, the patient shall be immediately transferred to a Level I or Level II trauma hospital;
- (B) If the scene time plus transport time to a Level I or Level II trauma hospital is significantly greater than the scene time plus transport time to a closer Level III or Level IV trauma hospital;
- (C) If the hospital is unable to meet hospital resource standards as defined in Exhibit 4, when there are multiple patients involved, or the patient needs specialty care; or

- (D) If on-line medical direction overrides these standards for patients with special circumstances, such as membership in a health maintenance organization, and if the patient's condition permits.
- (E) Application of paragraphs (B), (C), and (D) of this subsection must not delay definitive medical or surgical treatment.
- (5) Hospital Resources:
- (a) Trauma system hospital identification: Either the categorization or designation method of identifying trauma system hospitals as described under OAR 333-200-0090(2), (4) and (5) shall be recommended to the Authority; and
- (b) Resource criteria: Trauma system hospitals shall meet or exceed the trauma hospital resource standards as set forth in Exhibit 4 and hospital activation criteria as set forth in Exhibit 3. Area criteria that exceed the criteria set forth in Exhibit 4 shall be accompanied by an informational statement of the additional costs that a hospital will incur to meet these standards.
- (6) Inter-hospital Transfers:
- (a) Identification of patients: ATAB-wide criteria which meet or exceed any of the criteria set forth in Exhibit 5 of these rules shall be established to identify patients who should be transferred to a Level I or II trauma system hospital or specialty care center.
- (b) When it is determined that a patient transfer is warranted:
- (A) The transfer shall take place after the stabilization of the patient's emergency medical condition has been provided within the capabilities of the local hospital, which may include operative intervention; and
- (B) The transfer to a Level I or II trauma hospital shall not be delayed for diagnostic procedures that have no impact on the transfer process or the immediate need for resuscitation.
- (c) In all situations regarding an inter-hospital transfer, the decision to retain or transfer the patient shall be based on medical knowledge, experience, and resources available to the patient.
- (d) The hospital's trauma performance improvement and patient safety process shall monitor all cases meeting inter-hospital transfer criteria. The Authority, through annual reports and site surveys, shall monitor this performance category.
- (7) Inter-hospital Transfers with Health Maintenance Organizations:
- (a) Trauma system hospitals shall facilitate the transfer of a member of a health maintenance organization or other managed health care organization when the emergency medical condition of the member permits and no deterioration of that condition is likely to result from or occur during the transfer of the patient. Trauma system hospitals shall transfer a patient in accordance with the provisions of ORS 431A.065(2) and any other applicable laws or regulations.
- (b) A patient will be deemed stabilized, if the treating physician attending to the patient in the trauma hospital has determined, within reasonable clinical confidence, that the emergency medical condition has been resolved.
- (c) Hospitals or health maintenance organizations may not attempt to influence patients and families, prior to the patient's stabilization, into making decisions affecting their trauma treatment by informing them of financial obligations if they remain in the trauma facility.
- (d) Health maintenance organizations and non-designated trauma facilities shall report follow-up information to the transferring trauma system hospital and all required data as set forth in the Oregon Trauma Registry data dictionary; and
- (e) Hospitals or health maintenance organizations that receive or transfer trauma patients shall participate in regional quality improvement activities.
- (8) Rehabilitation Resources:
- (a) Capabilities for trauma rehabilitation in each trauma system area and transfer procedures to other rehabilitation facilities shall be described; and
- (b) Rehabilitation resources for burns, pediatrics, neurotrauma and extended care shall be included.
- (9) Quality Improvement:
- (a) Provisions shall be made for at least quarterly review of medical direction, prehospital emergency medical care and hospital care of trauma cases:
- (A) Area-wide criteria for identifying trauma cases for audit shall be described and shall include all trauma related

deaths;

(B) Responsibility for identifying and reviewing all trauma cases meeting audit criteria shall be assigned; and

(C) Quarterly reports shall be submitted to the Authority by the ATAB or its representative on confidential forms.

(b) The ATAB, STAB, all Area and State Quality Improvement Committee(s) and the Authority shall meet in executive session as set forth in ORS 192.660 when discussing individual patient cases; and

(c) No member of any ATAB, the STAB, or any committee, subcommittee, or task force thereof, shall disclose information or records protected by ORS 431A.090 or 41.675 to unauthorized persons. Any person violating these rules shall be immediately removed by the Authority from membership on any trauma system committee, subcommittee or task force thereof.

(10) Education and Research:

(a) Trauma training: Trauma system hospitals shall provide or assist in the provision of prehospital trauma management courses to all EMS providers involved in the prehospital emergency medical care of severely injured patients; and

(b) Research: In areas with Level I hospitals, clinical and basic research in trauma and publication of results involving surgical and nonsurgical specialists, nurses, and allied health professionals engaged in trauma care, shall be promoted.

(11) Prevention:

(a) Public education: Public education and awareness activities shall be developed by trauma system hospitals to increase understanding of the trauma system and injury prevention. These activities shall be appropriate to the size and resources of the area; and

(b) Development and evaluation: Trauma prevention activities to identify and address area problems shall be supported.

(12) Disaster Management: Provisions for addressing triage of trauma system patients to non-trauma hospitals during a natural or manmade disaster must be addressed and include:

(a) Implementation and termination of the disaster management plan; and

(b) Reporting requirements of the Oregon Trauma Registry and Oregon Trauma Program.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, 431A.065

EXHIBIT 2
OAR chapter 333, division 200

National Guideline for the Field Triage of Injured Patients

RED CRITERIA

High Risk for Serious Injury

Injury Patterns	Mental Status & Vital Signs
<ul style="list-style-type: none"> • Penetrating injuries to head, neck, torso, and proximal extremities • Skull deformity, suspected skull fracture • Suspected spinal injury with new motor or sensory loss • Chest wall instability, deformity, or suspected flail chest • Suspected pelvic fracture • Suspected fracture of two or more proximal long bones (humerus or femur) • Crushed, degloved, mangled, or pulseless extremity • Amputation proximal to wrist or ankle • Active bleeding requiring a tourniquet or wound packing with continuous pressure 	<p>All Patients</p> <ul style="list-style-type: none"> • Unable to follow commands (motor GCS less than 6) • RR less than 10 or greater than 29 breaths/min • Respiratory distress or need for respiratory support • Room-air pulse oximetry less than 90% <p>Age 0-9 years</p> <ul style="list-style-type: none"> • SBP less than 70 mmHg + (2 x age years) <p>Age 10-64 years</p> <ul style="list-style-type: none"> • SBP less than 90 mmHg OR • HR greater than SBP <p>Age 65 years or older</p> <ul style="list-style-type: none"> • SBP less than 110 mmHg OR • HR greater than SBP

Patients meeting any one of the above RED criteria should be transported to the highest-level trauma center available within the geographic constraints of the regional trauma system

YELLOW CRITERIA

Moderate Risk for Serious Injury

Mechanism of Injury	EMS Judgment
<ul style="list-style-type: none"> • High-Risk Auto Crash <ul style="list-style-type: none"> - Partial or complete ejection - Significant intrusion (including roof) <ul style="list-style-type: none"> ▪ Greater than 12 inches occupant site OR ▪ Greater than 18 inches any site OR ▪ Need for extrication for entrapped patient - Death in passenger compartment - Child (Age 0-9) unrestrained or in unsecured child safety seat - Vehicle telemetry data consistent with severe injury • Rider separated from transport vehicle with significant impact (e.g., motorcycle, ATV, horse, etc.) • Pedestrian/bicycle rider thrown, run over, or with significant impact • Fall from height greater than 10 feet (all ages) 	<p>Consider risk factors, including:</p> <ul style="list-style-type: none"> • Low-level falls in young children (ages 5 years or younger) or older adults (ages 65 years or older) with significant head impact • Anticoagulant use • Suspicion of child abuse • Special, high-resource healthcare needs • Pregnancy greater than 20 weeks • Burns in conjunction with trauma • Children should be triaged preferentially to pediatric capable centers <p>If concerned, take to a trauma center</p>

Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)

EXHIBIT 3
OAR chapter 333, division 200

OREGON HOSPITAL TRAUMA TEAM ACTIVATION CRITERIA

<ul style="list-style-type: none">• Confirmed blood pressure less than 90 mmHg at any time in adults, and age-specific hypotension in children aged 0-9 years less than 70 mmHg + (2 x age years)• All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee• Glasgow Coma Scale less than 9 (with mechanism attributed to trauma)• Transfer patients from another hospital who require ongoing blood transfusions• Patients intubated in the field and directly transported to the trauma center• Patients who have respiratory compromise or are in need of an emergent airway <p>Emergency physician's discretion</p>	<p>YES</p> <p>→</p> <p>Activate Full Trauma Team</p>	<p style="text-align: center;">Full Trauma Team</p> <ul style="list-style-type: none">- General Surgeon- Emergency Physician- Emergency Nurse(s)- Laboratory- Radiology- Respiratory Therapist <p><u>Response times from patient arrival:</u></p> <p>Level I & II – 15 minutes Level III & IV – 30 minutes</p>
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Oregon Hospital Trauma Team Activation Criteria (continued)

- Glasgow Coma Scale of 9 - 13
- Chest wall instability, deformity, or suspected flail chest
- Suspected fracture of two or more proximal long bones (humerus or femur)
- Suspected spinal cord injury with motor sensory deficit
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Skull deformity, suspected skull fracture
- Suspected pelvic fracture
- Falls from a height greater than 10 feet (all ages)
- High-risk auto crash
 - Partial or complete ejection
 - Significant intrusion including roof: greater than 12 inches occupant site; **OR** greater than 18 inches any site; **OR** need for extrication for entrapped patient
 - Death in passenger compartment
 - Child (age 0-9 years) unrestrained or in unsecured child safety seat
 - Vehicle telemetry data consistent with severe injury
- Pedestrian/bicycle rider thrown, run over, or with significant impact
- Rider separated from transport vehicle with significant impact (e.g., motorcycle, ATV, horse, etc.)

Emergency physician's discretion

Consider risk factors, including:

- Low-level falls in young children (age 0-5 years) or older adults (age 65 years or greater) with significant head impact
- Anticoagulant use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy greater than 20 weeks
- Burns in conjunction with trauma
- Systolic blood pressure (SBP) less than 110 mmHg **OR** heart rate greater than SBP (age 65 years or greater)
- Children should be triaged preferentially to pediatric capable trauma centers

YES



**Activate
Modified
Trauma
Team**

Modified Trauma Team

- Emergency Physician
- Emergency Nurse(s)
- Laboratory
- Radiology

EXHIBIT 4
OAR Chapter 333, Division 200

OREGON TRAUMA HOSPITAL RESOURCE STANDARDS

AAAM	Association of the Advancement of Automotive Medicine	ICU	intensive care unit
ACS	American College of Surgeons	ISS	Injury Severity Score
AIS	Abbreviated Injury Scale	MRI	magnetic resonance imaging
ATLS	Advance Trauma Life Support	MTP	massive transfusion protocol
CAISS	Certified Abbreviated Injury Scale Specialist	OPO	organ procurement organization
CE	continuing education	OPPE	Ongoing Professional Practice Evaluation
CME	continuing medical education	OR	operating room
CRNA	certified registered nurse anesthetist	PI	performance improvement
CT	computed tomography	PIPS	Performance Improvement and Patient Safety
DIED	Died in emergency department	TBI	traumatic brain injury
DMEP	Disaster Management and Emergency Preparedness	TMD	trauma medical director
DOA	Dead on arrival	TPM	trauma program manager
EMS	emergency medical services	TQP	Trauma Quality Programs
FTE	full-time equivalent	VRC	Verification, Review, and Consultation
GCS	Glasgow Coma Scale		

Type: Verification standards are divided into Type 1 and Type 2 standards. Type 1 standards are considered critical standards that directly impact patient care. The trauma program should be in compliance with all applicable standards at the time of the survey visit. If noncompliance with any standard is identified, the trauma program must demonstrate compliance through a Corrective Action Review to achieve or extend

EFFECTIVE: October 1, 2025

verification. The type of Corrective Action Review will depend on the standard(s) in question. Noncompliance with a Type I standard would result in the trauma program not being verified.

LI, LII, LIII, LIII-N, LIV = Level I, Level II, Level III, Level III-Neuro, Level IV

PTCI & PTCII = Pediatric Trauma Center I & Pediatric Trauma Center II

R = Required standard

■ = Standard not required

Tag	Standard	Type	LI & PTCI	LII & PTCII	LIII (LIII-N*)	LIV
1: Institutional Administrative Commitment						
1.1	In all trauma centers, the institutional governing body, hospital leadership, and medical staff must demonstrate continuous commitment and provide the necessary human and physical resources to properly administer trauma care consistent with the level of verification throughout the verification cycle.	1	R	R	R	R
1.2	The hospital administration of a Level I trauma center must demonstrate support for the research program.	2	R	■	■	■
2: Program Scope & Governance						
2.1	All trauma centers must participate in the regional and/or statewide trauma system.	2	R	R	R	R
2.2	All trauma centers must participate in regional disaster/emergency management committees, health care coalitions, and regional mass casualty exercises.	2	R	R	R	R
2.3	All trauma programs must participate in two hospital drills or disaster plan activations per year that include a trauma response and are designed to refine the hospital’s response to mass casualty events. In Level I, II and III trauma programs must be integrated into the hospital’s disaster plan to ensure a robust surgical response: <ul style="list-style-type: none"> A trauma surgeon from the trauma panel must be included as a member of the hospital’s disaster committee and be responsible for the development of a surgical response to a mass casualty event. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The surgical response must outline the critical personnel, means of contact, initial surgical triage (including subspecialty triage when appropriate), and coordination of secondary procedures. <p>Level I trauma centers must also include an orthopedic surgeon from the orthopedic trauma call panel as a member of the hospital's disaster committee.</p>					
2.4	A Level I adult trauma center must care for at least 1,200 trauma patients per year or at least 240 trauma patients with an Injury Severity Score (ISS) greater than 15 per year.	1	R			
2.5	A Level I pediatric trauma center must care for 200 or more injured patients under 15 years of age per year.	1	PTCI			
2.6	<p>Adult trauma centers that annually admits to the hospital 100 or more injured children under 15 years of age must have the following:</p> <ul style="list-style-type: none"> Pediatric emergency department area Pediatric intensive care area Appropriate resuscitation equipment, as outlined in the pediatric readiness toolkit 	1	R	R	R	
2.7	<p>All trauma centers must have a trauma multidisciplinary PIPS committee chaired by the TMD or an associate TMD which meet at a minimum of quarterly.</p> <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must hold separate adult and pediatric trauma multidisciplinary PIPS meetings with distinct minutes.</p>	1	R	R	R	R
2.8	<p>In all trauma centers, the TMD must fulfill the following requirement:</p> <ul style="list-style-type: none"> Hold current Advanced Trauma Life Support (ATLS) Certification. <p>In Level I, II, and III trauma centers, the TMD must fulfill the following requirements:</p> <ul style="list-style-type: none"> Hold current board certification or board eligibility in general surgery or pediatric surgery by the American Board of Medical Specialties (ABMS), American Osteopathic Association (AOA), or Royal College of Physicians and Surgeons of Canada (RCPS-C). Serve as the director of a single trauma program. Be credentialed to provide trauma care. Participate on the trauma call panel Provide evidence of 36 hours of trauma-related continuing medical education (CME) during the verification cycle. For pediatric TMD, 9 of 36 hours must be pediatric-specific CME In Level I trauma centers, the TMD must hold active membership in at least one national trauma organization and have attended at least one meeting during the verification cycle. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> In Level II or III trauma centers, TMD active membership in at least one regional, state, or national trauma organization and attendance at least one meeting during the verification cycle is recommended. <p>If a board-certified general surgeon who is not board-certified or board-eligible in pediatric surgery serves as the pediatric TMD, then the following are required:</p> <ul style="list-style-type: none"> The pediatric TMD must hold current Pediatric Advanced Life Support (PALS) certification The center must have a written affiliation agreement with a current pediatric TMD at another ACS verified Level I pediatric trauma center. This agreement must identify the affiliate pediatric TMD and at minimum include the following responsibilities: <ul style="list-style-type: none"> Assist with process improvement, guideline development, and complex case discussions Attend at least 50% of trauma multidisciplinary PIPS committee meetings Attend the VRC site visit at the time of verification <p>In Level IV trauma centers, the TMD is a physician that is currently board certified or board eligible in general surgery or pediatric surgery, or may be a physician practicing emergency medicine, responsible for coordinating the care of injured patients, verifies continuing medical education (CME) of personnel, and has oversight of the trauma quality improvement process. The TMD is clinically involved with trauma patient management and responsible for credentialing of trauma team members.</p>					
2.9	<p>In all trauma centers, the TMD must be responsible for and have the authority to:</p> <ul style="list-style-type: none"> Develop and enforce policies and procedures relevant to care of the injured patient. Ensure providers meet all requirements and adhere to institutional standards of practice. Work across departments and/or other administrative units to address deficiencies in care. Determine (with their liaisons) provider participation in trauma care, which might be guided by findings from the PIPS process or an Ongoing Professional Practice Evaluation (OPPE). Oversee the structure and process of the trauma PIPS program. 	2	R	R	R	R
2.10	<p>In Level I, II, and III trauma centers, the TPM must fulfill the following requirements:</p> <ul style="list-style-type: none"> Have 1.0 full-time equivalent (FTE) commitment to the trauma program Provide evidence of 36 hours of trauma-related continuing education (CE) during the verification cycle Hold current membership in a national or regional trauma organization 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<p>In Level II and III trauma centers, at least 0.5 FTE of the TPM's time must be spent on TPM-related activities. The remaining time must be dedicated to other roles within the trauma program.</p> <p>In combined programs that are Level II adult and Level II pediatric trauma centers, it is acceptable for the pediatric TPM of a Level II pediatric trauma center to serve at least 0.5 FTE as the pediatric TPM. The remaining time must be devoted to other roles within the adult or pediatric trauma program.</p> <p>In Level IV trauma centers, a proportionate FTE Trauma Coordinator must be employed for trauma centers with less than 250 patients per year.</p>					
2.11	<p>In all trauma centers, the trauma program manager (TPM) must have a reporting structure that includes the TMD and they are to assume at minimum, the following leadership responsibilities in conjunction with the TMD and/or hospital administration:</p> <ul style="list-style-type: none"> • Oversight of the trauma program • Assist with the budgetary process for the trauma program • Develop and implement clinical protocols and practice management guidelines • Provide educational opportunities for staff development • Monitor performance improvement activities in conjunction with a PI coordinator (where applicable) • Service as a liaison to administration and represent the trauma program on hospital and regional committees to enhance trauma care • Have oversight of the trauma registry 	2	R	R	R	R
2.12	<p>All trauma centers must have an injury prevention program that:</p> <ul style="list-style-type: none"> • Has a designated injury prevention professional • Prioritizes injury prevention work based on trends identified in the trauma registry and local epidemiological data • Implements at least two activities over the course of the verification cycle with specific objectives and deliverables that address separate major causes of injury in the community • Demonstrates evidence of partnerships with community organizations to support their injury prevention efforts 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level I trauma centers, the injury prevention professional must be someone other than the TPM or PI personnel.					
2.13	In all trauma centers, an organ procurement program must be available and consist of at least the following: <ul style="list-style-type: none"> • An affiliation with an organ procurement organization (OPO) • A written policy for notification of the regional OPO • Protocols defining clinical criteria and confirmatory tests for the diagnosis of brain death 	2	R	R	R	R
2.14	All pediatric trauma centers must have a child life program.	2	PTCI	PTCII		
3: Facilities and Equipment Resources						
3.1	In Level I and II trauma centers, an operating room (OR) must be staffed and available within 15 minutes of notification, and in Level III trauma centers an OR must be staffed and available within 30 minutes of notification.	1	R	R	R	
3.2	In Level I and II trauma centers, if the first OR is occupied, an additional OR must be staffed and available.	2	R	R		
3.3	Level I and II trauma centers must have a dedicated OR prioritized for fracture care in nonemergent orthopedic trauma. In a Level III trauma center, access to the OR must be made available for nonemergent orthopedic trauma.	2	R	R	R	
3.4	Level I and II trauma centers must have an adequate supply of blood products available. Level III and IV trauma centers must have an adequate supply of red blood cells and plasma available.	1	R	R	R	R
3.5	In Level I and II trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—15 minutes • Computed tomography (CT)—15 minutes • Point-of-care ultrasound—15 minutes • Interventional radiologic procedures—1 hour • Magnetic resonance imaging (MRI)—2 hours 	1	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level III and IV trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—30 minutes • CT—30 minutes • Point-of-care ultrasound—15 minutes 					
3.6	Level I and II trauma centers must have a mechanism to remotely view radiographic images from referring hospitals within their catchment area.	2	R	R		
3.7	Level I, Level II, and Level III-N trauma centers must have cerebral monitoring equipment available.	1	R	R	*	
3.8	In Level I and II trauma centers, cardiopulmonary bypass equipment must be immediately available when required, or a contingency plan must exist to provide emergency cardiac surgical care.	2	R	R		
4: Personnel and Services						
4.1	Trauma surgeons must have direct patient care responsibilities at the institution and must meet the following qualifications: <ul style="list-style-type: none"> • Complete the ATLS course at least once • Have privileges in general and/or pediatric surgery • Hold current board certification or board eligibility in general surgery, or have been approved through the Alternate Pathway <ul style="list-style-type: none"> – Level I pediatric trauma centers must have at least two surgeons board-certified or board-eligible in pediatric surgery. – Level II pediatric trauma centers must have at least one surgeon board-certified or board-eligible in pediatric surgery. 	2	R	R	R	R
4.2	In Level I, II, and III trauma centers, trauma surgery coverage must be continuously available. In Level I and II trauma centers, the trauma surgeon must be dedicated to a single trauma center while on call.	1	R	R	R	
4.3	Level I and II trauma centers must have a published backup call schedule for trauma surgery. Level III trauma centers must have a documented backup call schedule or a backup plan for trauma surgery.	2	R	R	R	
4.4	In Level I, II, and III trauma centers, the trauma surgeon must be present in the operating suite for the key portions of operative procedures for which they are the responsible surgeon and must be immediately available throughout the procedure.	2	R	R	R	

EFFECTIVE: October 1, 2025

4.5	<p>The trauma program must have the following designated liaisons:</p> <p>LI, LII, PTCI, PTCII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist • Board-certified or board-eligible neurosurgeon • Board-certified or board-eligible radiologist • Board-certified or board-eligible intensive care unit (ICU) physician • Geriatric provider (applies only to LI and LII) <p>LIII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist or certified registered nurse anesthetist • Board-certified or board-eligible neurosurgeon (applies only to LIII-N) • Board-certified or board-eligible ICU physician <p>In Level I trauma centers, the orthopedic trauma surgeon liaison must have completed an orthopedic traumatology fellowship approved by the Orthopaedic Trauma Association (OTA). In Level I pediatric trauma centers, this requirement may be met by having a pediatric fellowship-trained orthopedic surgeon.</p>	2	R	R	R	
4.6	<p>In Level I and II trauma centers, the emergency department medical director must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine.</p> <p>In Level I and Level II trauma centers, physicians who completed primary training prior to 2016 and are board-certified in a specialty other than emergency medicine or pediatric emergency medicine may serve as the emergency department director.</p> <p>In Level III trauma centers, the emergency department director must be board-certified or board-eligible.</p> <p>In Level IV trauma centers, the emergency department must have a designated emergency physician director.</p>	1	R	R	R	R

EFFECTIVE: October 1, 2025

4.7	<p>In all trauma centers, emergency medicine physicians involved in the care of trauma patients must be currently board-certified or board-eligible or have been approved through the Alternate Pathway.</p> <ul style="list-style-type: none"> In Level I and II trauma centers, physicians must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine. <ul style="list-style-type: none"> Physicians who completed primary training in a specialty other than emergency medicine or pediatric emergency medicine prior to 2016 may participate in trauma care. In Level I pediatric trauma centers, at least one physician must be board-certified or board-eligible in pediatric emergency medicine. In Level III and Level IV trauma centers, physicians must be board-certified or board-eligible in emergency medicine, pediatric emergency medicine, or a specialty other than emergency medicine. <p>All emergency physicians must have completed the ATLS course at least once. Physicians who are board-certified or board-eligible in a specialty other than emergency medicine must hold current ATLS certification.</p>	2	R	R	R	R	
4.8	<p>In Level I and II trauma centers, a board-certified or board-eligible emergency medicine physician must be present in the emergency department at all times. This requirement may also be met with a board-certified or board-eligible physician who completed primary training prior to 2016 in a specialty other than emergency medicine or pediatric emergency medicine.</p>	1	R	R			
4.9	<p>In Level I pediatric trauma centers, there must be at least two physicians who are board-certified or board-eligible in pediatric critical care medicine or in both pediatric surgery and surgical critical care.</p> <p>These two physicians must practice at least part of their time in the ICU where the majority of pediatric trauma patients are cared for.</p>	2	PTCI				
4.10	<p>Level I and II trauma centers must have board-certified or board-eligible neurosurgeons continuously available for the care of neurotrauma patients.</p> <p>Level III-N trauma centers must have board-certified or board-eligible neurosurgeons.</p> <p>In Level I pediatric trauma centers, there must be at least one board-certified or board-eligible neurosurgeon who has completed a pediatric neurosurgery fellowship.</p>	1	R				R

EFFECTIVE: October 1, 2025

4.11	Level I, II, and III trauma centers must have board-certified or board-eligible orthopedic surgeons continuously available for the care of orthopedic trauma patients and must have a contingency plan for when orthopedic trauma capabilities become encumbered or overwhelmed. In Level I pediatric trauma centers, at least one board-certified or board-eligible orthopedic surgeon must have completed a pediatric orthopedic fellowship.	1	R	R	R	
4.12	Trauma centers must have an orthopedic surgeon who has completed an Orthopedic Trauma Association-approved fellowship or has met the alternate training criteria. This requirement may also be met by having transfer protocols specifying the type of patients/injuries that will be transferred to a center with an orthopedic surgeon who has completed an OTA-approved fellowship or meets the alternate training criteria.	2	PTCI	R		
4.13	In Level I and II trauma centers, anesthesia services must be available within 15 minutes of request. Furthermore, the attending anesthesiologist must be present within 30 minutes of request for all operations. In Level III trauma centers, anesthesia services must be available within 30 minutes of request.	1	R	R	R	
4.14	In Level I, II, and III trauma centers, a radiologist must have access to patient images and be available for imaging interpretation, in-person or by phone, within 30 minutes of request.	1	R	R	R	
4.15	Level I and II trauma centers must have the necessary human and physical resources continuously available so that an endovascular or interventional radiology procedure for hemorrhage control can begin within 60 minutes of request.	2	R	R		
4.16	In Level I, II, and III trauma centers must have an ICU surgical director who is board-certified or board-eligible in general surgery and actively participates in unit administration. In Level I adult trauma centers, the ICU surgical director must be board-certified or board-eligible in surgical critical care.	2	R	R	R	
4.17	In Level I and II trauma centers, the ICU must be staffed with physicians who are continuously available within 15 minutes of request and whose primary responsibility is to the ICU.	1	R	R		
4.18	In Level II adult trauma centers, at least one surgeon must be board-certified or board-eligible in surgical critical care.	2		R		
4.19	In Level III trauma centers, provider coverage of the ICU must be available within 30 minutes of request, with a formal plan in place for emergency coverage.	1			R	
4.20	In all trauma centers, the patient-to-nurse ratio in the ICU must be 1:1 or 2:1, depending on patient acuity as defined by the hospital policy for ICU nursing staffing.	2	R	R	R	R
4.21	Level I trauma centers must have continuous availability of the surgical expertise listed below:	1	R	R		

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Cardiothoracic surgery • Vascular surgery • Hand surgery • Plastic surgery • Obstetrics/Gynecology surgery • Otolaryngology • Urology <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have surgical expertise listed above available.</p>				
4.22	<p>Level I trauma centers must have continuous availability of ophthalmology.</p> <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have ophthalmology available.</p>	2	R	R	
4.23	<p>Level I trauma centers must have the capability for comprehensive soft tissue coverage of wounds, including microvascular expertise for free flaps.</p>	1	R		
4.24	<p>Level I trauma centers must have the capability to diagnose and manage acute facial fractures of the entire craniomaxillofacial skeleton, including the skull, cranial base, orbit, midface, and occlusal skeleton, with expertise contributed by any of the following specialists: otolaryngology, oral maxillofacial surgery, or plastic surgery.</p>	1	R		
4.25	<p>Level I and II trauma centers must have replantation capability continuously available or must have in place a triage and transfer process with a replant center.</p>	2	R	R	
4.26	<p>Level I and II trauma centers must have all of the following medical specialists:</p> <ul style="list-style-type: none"> • Cardiology* • Gastroenterology* • Internal medicine or pediatrics* • Infectious disease* • Nephrology* • Pain management (with expertise to perform regional nerve blocks) • Physiatry • Psychiatry • Pulmonary medicine* 	2	R	R	R

EFFECTIVE: October 1, 2025

	An asterisk (*) denotes services that must be continuously available. Level III trauma centers must have internal medicine continuously available.					
4.27	Level I and II pediatric trauma centers must have either a physician on the medical staff who is board-certified or board-eligible in child abuse pediatrics or a physician with special interest in child abuse (nonaccidental trauma) who provides expertise to the trauma center.	2	PTCI	PTCII		
4.28	Trauma centers must have the following allied health services available: LI, LII, PTCI, PTCII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Speech therapy • Social worker (7 days per week) • Occupational therapy (7 days per week) • Physical therapy (7 days per week) LIII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Social worker • Occupational therapy • Physical therapy • Speech therapy 	2	R	R	R	
4.29	Level I and Level II trauma centers must have renal therapy services available to support patients with acute renal failure. Level III trauma centers must have renal replacement therapy services available to support patients with acute renal failure or a transfer agreement in place if this service is not available.	2	R	R	R	
4.30	In all trauma centers, trauma and/or emergency department advanced practice providers who are clinically involved in the initial evaluation and resuscitation of trauma patients during the activation phase must have current ATLS certification.	2	R	R	R	R
4.31	In all trauma centers, there must be at least 0.5 full-time equivalent (FTE) dedicated to the trauma registry per 200-300 annual patient entries. A proportionate FTE must be employed for hospitals with less than 200 annual patient entries. The count of entries is defined as all patients who meet Oregon Trauma Registry inclusion criteria.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Combined adult and pediatric programs (Level I/II adult trauma center with Level II pediatric trauma center) may share resources, but someone must be identified as the lead pediatric registrar.					
4.32	In Level I or other trauma centers seeking ACS verification, at least one registrar must be a current Certified Abbreviated Injury Scale Specialist (CAISS).	2	R			
4.33	In all trauma centers, all staff members who have a registry role in data abstraction and entry, injury coding, ISS calculation, data reporting, or data validation for the trauma registry must fulfill all of the following requirements: <ul style="list-style-type: none"> • Participate in and pass the Association of the Advancement of Automotive Medicine’s (AAAM’s) Abbreviated Injury Scale (AIS) course for the version used at your center • Participate in a trauma registry course that includes all of the following content: <ul style="list-style-type: none"> – Abstraction – Data management – Reports/report analysis – Data validation – HIPAA • Participate in an ICD-10 course or an ICD-10 refresher course every five years 	2	R	R	R	R
4.34	In all trauma centers, each trauma registrar must accrue at least 24 hours of trauma-related CE during the verification cycle.	2	R	R	R	R
4.35	In Level I, II, and III trauma centers, there must be at least 0.5 FTE dedicated performance improvement (PI) personnel when the annual volume of registry patient entries exceeds 500 patients. The count of entries is defined as all patients that meet Oregon Trauma Registry inclusion criteria. When the annual volume exceeds 1,000 registry patient entries, the trauma center must have at least 1.0 FTE PI personnel.	2	R	R	R	
4.36	In Level I adult and pediatric trauma centers, the trauma surgeon liaison to the disaster committee must successfully complete the Disaster Management and Emergency Preparedness (DMEP) course at least once.	2	R			
5: Patient Care: Expectations and Protocols						
5.1	All trauma centers must have evidence-based clinical practice guidelines, protocols, or algorithms that are reviewed every three years.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.2	In all trauma centers, the shared roles and responsibilities of trauma surgeons and emergency medicine physicians for trauma resuscitation must be defined and approved by the TMD.	2	R	R	R	R
5.3	In all trauma centers, the criteria for tiered activations must be clearly defined. For the highest level of activation, the following eight criteria must be included: <ul style="list-style-type: none"> • Confirmed blood pressure less than 90 mm Hg at any time in adults, and age-specific hypotension in children aged 0-9 years less than 70 mmHg + (2 x age years) • All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee • Glasgow Coma Scale less than 9 (with mechanism attributed to trauma) • Transfer patients from another hospital who require ongoing blood transfusions • Patients intubated in the field and directly transported to the trauma center • Patients who have respiratory compromise or are in need of an emergent airway • Emergency physician's discretion 	2	R	R	R	R
5.4	In all trauma centers providing trauma surgical services, for the highest level of activation, at least 80 percent of the time, the trauma surgeon must be at the patient's bedside within 15 minutes (Level I and Level II trauma centers) or 30 minutes (Level III and Level IV trauma centers) of patient arrival.	1	R	R	R	R
5.5	In all trauma centers providing trauma surgical services, the trauma program must define and meet acceptable response time to trauma surgical evaluation for activations other than the highest level.	2	R	R	R	R
5.6	All trauma centers must have the following protocols for care of the injured older adult: <ul style="list-style-type: none"> • Identification of vulnerable geriatric patients • Identification of patients who will benefit from the input of a health care provider with geriatric expertise • Prevention, identification, and management of dementia, depression, and delirium • Process to capture and document what matters to patients, including preferences and goals of care, code status, advanced directives, and identification of a proxy decision maker • Medication reconciliation and avoidance of inappropriate medications • Screening for mobility limitations and assurance of early, frequent, and safe mobility • Implementation of safe transitions to home or other health care facility 	2	R	R	R	R
5.7	All trauma centers must have a process in place to assess children for nonaccidental trauma.	2	R	R	R	R
5.8	All trauma centers must have a massive transfusion protocol (MTP) developed collaboratively between the trauma service and the blood bank.	1	R	R	R	R
5.9	All trauma centers must have a rapid reversal protocol in place for patients on anticoagulants.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.10	In all trauma centers, each emergency department must perform a pediatric readiness assessment during the verification cycle and have a plan to address identified gaps.	2	R	R	R	R
5.11	All trauma centers must have a provider and equipment immediately available to establish an emergency airway.	1	R	R	R	R
5.12	All trauma centers must have clearly defined transfer protocols that include the types of patients, expected time frame for initiating and accepting a transfer, and predetermined referral centers for outgoing transfers.	2	R	R	R	R
5.13	In all trauma centers, the decision to transfer an injured patient must be based solely on the needs of the patient, without consideration of their health plan or payor status.	2	R	R	R	R
5.14	In all trauma centers, when trauma patients are transferred, the transferring provider must directly communicate with the receiving provider to ensure safe transition of care. This communication may occur through a transfer center.	2	R	R	R	R
5.15	In all trauma centers, diversion protocols must be approved by the TMD and include: <ul style="list-style-type: none"> • Agreement of the trauma surgeon in the decision to divert, for all trauma centers that provide trauma surgical services • A process for notification of dispatch and EMS agencies • A diversion log to record reasons for and duration of diversions 	2	R	R	R	R
5.16	All trauma centers must not exceed 400 hours of diversion during the reporting period.	2	R	R	R	R
5.17	Neurosurgical evaluation must occur within 30 minutes of request for the following: <ul style="list-style-type: none"> • Severe TBI (GCS less than 9) with head CT evidence of intracranial trauma • Moderate TBI (GCS 9–12) with head CT evidence of potential intracranial mass lesion • Neurologic deficit as a result of potential spinal cord injury (applicable to spine surgeon, whether a neurosurgeon or orthopedic surgeon) • Trauma surgeon discretion <p>In Level I, II, and III-N trauma centers, neurosurgical provider response times must be documented.</p> <p>In Level I and II trauma centers, the neurosurgery attending must be involved in clinical decision-making.</p>	2	R	R	*	
5.18	All Level III and IV trauma centers must have a written plan approved by the TMD that defines the types of neurotrauma injuries that may be treated at the center.	2			R	R
5.19	Level I and II trauma centers must have a neurotrauma contingency plan and must implement the plan when neurosurgery capabilities are encumbered or overwhelmed.	2	R	R	*	

EFFECTIVE: October 1, 2025

	<p>Level III-N trauma centers must have a neurotrauma contingency plan that includes the potential for diversion and must implement the plan when neurosurgery capabilities are encumbered, overwhelmed, or unavailable.</p> <p>The plan must include the following criteria:</p> <ul style="list-style-type: none"> • A thorough review of each instance by the PIPS program • Monitoring of the effectiveness of the process by the PIPS program 					
5.20	<p>In Level I, II, and III trauma centers must have treatment guidelines for, at minimum, the following orthopedic injuries:</p> <ul style="list-style-type: none"> • Patients who are hemodynamically unstable attributable to pelvic ring injuries • Long bone fractures in patients with multiple injuries (e.g., time to fixation, order of fixation, and damage control versus definitive fixation strategies) • Open extremity fractures (e.g., time to antibiotics, time to OR for operative debridement, and time to wound coverage for open fractures) • Hip fractures in geriatric patients (e.g., expected time to OR (LI, LII, LIII)) 	2	R	R	R	
5.21	<p>In Level I, II, and III trauma centers, an orthopedic surgeon must be at bedside within 30 minutes of request for the following:</p> <ul style="list-style-type: none"> • hemodynamically unstable, secondary to pelvic fracture • suspected extremity compartment syndrome • fractures/dislocations with risk of avascular necrosis (e.g., femoral head or talus) • vascular compromise related to a fracture or dislocation • trauma surgeon discretion <p>The attending orthopedic surgeon must be involved in the clinical decision-making for care of these patients.</p>	2	R	R	R	
5.22	<p>In Level I, II, and III trauma centers must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p> <p>Level IV trauma centers that provide surgical services must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p>	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.23	In all trauma centers providing trauma surgical services, trauma patients requiring ICU admission must be admitted to, or be evaluated by, a surgical service.	2	R	R	R	R
5.24	In all trauma centers providing trauma surgical services, the trauma surgeon must retain responsibility for the trauma patient in the ICU up to the point where the trauma surgeon documents transfer of primary responsibility to another service.	2	R	R	R	R
5.25	In all trauma centers, documentation of preliminary diagnostic imaging must include evidence that critical findings were communicated to the trauma team. The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretations.	2	R	R	R	R
5.26	In all trauma centers, documentation of the final interpretation of CT scans must occur no later than 12 hours after completion of the scan.	2	R	R	R	R
5.27	In Level I, II, and III trauma centers must meet the rehabilitation needs of trauma patients by: <ul style="list-style-type: none"> • Developing protocols that identify which patients will require rehabilitation services during their acute inpatient stay • Establishing processes that determine the rehabilitation care, needs, and services required during the acute inpatient stay • Ensuring that the required services during acute inpatient stay are provided in a timely manner 	2	R	R	R	
5.28	All trauma centers must have a process to determine the level of care patients require after trauma center discharge, as well as the specific rehabilitation care services required at the next level of care. The level of care and services required must be documented in the medical record.	2	R	R	R	R
5.29	All trauma centers must meet the mental health needs of trauma patients by having: <ul style="list-style-type: none"> • A protocol to screen patients at high risk for psychological sequelae with subsequent referral to a mental health provider (LI, LII, PTCI, PTCII) • A process for referral to a mental health provider when required (LIII, LIV) 	2	R	R	R	R
5.30	All trauma centers must screen all admitted trauma patients greater than 12 years old for alcohol misuse with a validated tool or routine blood alcohol content testing. Programs must achieve a screening rate of at least 80 percent.	2	R	R	R	R
5.31	In all trauma centers, at least 80 percent of patients who have screened positive for alcohol misuse must receive a brief intervention by appropriately trained staff prior to discharge. This intervention must be documented.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Level III and Level IV trauma centers must have a mechanism for referral if brief intervention is not available as an inpatient.					
6: Data Surveillance and Systems						
6.1	All trauma centers must have a written data quality plan and demonstrate compliance with that plan. At minimum, the plan must require quarterly review of data quality.	2	R	R	R	R
6.2	In all trauma centers, the trauma registry must be concurrent, defined as having a minimum of 80 percent of patient records completed within 60 days of the patient discharge date.	2	R	R	R	R
6.3	In all trauma centers, trauma registry data must be collected in compliance with the Oregon Trauma Registry inclusion criteria and Oregon Trauma Registry Data Dictionary data elements index. In Level I and Level II trauma centers, data must be submitted to the National Trauma Data Bank® every year in a timely fashion so that it can be aggregated and analyzed at the national level.	2	R	R	R	R
7: Performance Improvement and Patient Safety						
7.1	In all trauma centers, the trauma PIPS program must be independent of the hospital or departmental performance improvement (PI) program, but it must report to the hospital or departmental PI program.	2	R	R	R	R
7.2	All trauma centers must have a written PIPS plan that: <ul style="list-style-type: none"> • Outlines the organizational structure of the trauma PIPS process, with a clearly defined relationship to the hospital PI program • Specifies the processes for event identification. As an example, these events may be brought forth by a variety of sources, including but not limited to: individual personnel reporting, morning report or daily sign-outs, case abstraction, registry surveillance, use of clinical guideline variances, patient relations, or risk management. The scope for event review must extend from prehospital care to hospital discharge. • Includes a list of audit filters, event review, and report review that must include, at minimum, those listed in the Resources section • Defines levels of review (primary, secondary, tertiary, and/or quaternary), with a listing for each level that clarifies: <ul style="list-style-type: none"> – Which cases are to be reviewed 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> – Who performs the review – When cases can be closed or must be advanced to the next level • Specifies the members and responsibilities of the trauma multidisciplinary PIPS committee • Outlines an annual process for identification of priority areas for PI, based on audit filters, event reviews, and benchmarking reports 					
7.3	All trauma centers must have documented evidence of event identification; effective use of audit filters; demonstrated loop closure; attempts at corrective actions; strategies for sustained improvement measured over time.	2	R	R	R	R
7.4	All trauma centers must participate in a benchmarking program and use the results to determine whether there are opportunities for improvement in patient care and registry data quality.	2	R	R	R	R
7.5	In all trauma centers, a physician from the emergency department or trauma program must participate in the prehospital PIPS program, including assisting in the development of prehospital care protocols relevant to the care of trauma patients.	2	R	R	R	R
7.6	<p>All trauma centers must meet the following trauma multidisciplinary PIPS committee meeting attendance thresholds:</p> <ul style="list-style-type: none"> • 60 percent of meetings for the TMD (cannot be delegated to the associate TMD) • 50 percent of meetings for each trauma surgeon • 50 percent of meetings for the liaisons (or one predetermined alternate) from emergency medicine, neurosurgery, orthopedic surgery, critical care medicine, and anesthesia, • 50 percent of meetings for the liaison (or one predetermined alternate) from radiology (LI, LII, PTCI, PTCII) <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must have 50 percent attendance by a representative (TMD or one predetermined alternative) from the other program; this representative is responsible for disseminating information to panel members of the other program.</p> <p>Level IV trauma centers must have 50 percent attendance by medical staff active in trauma resuscitation.</p>	2	R	R	R	R
7.7	<p>In all trauma centers, all cases of trauma-related mortality and transfer to hospice must be reviewed and classified for potential opportunities for improvement.</p> <p>Deaths must be categorized as:</p> <ul style="list-style-type: none"> • Mortality with opportunity for improvement 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Mortality without opportunity for improvement 					
7.8	<p>In all trauma centers, all nonsurgical trauma admissions must be reviewed by the trauma program.</p> <p>As part of secondary review, the Trauma Medical Director must review non-surgical admissions according to the criteria in the Nelson Criteria for Nonsurgical Admission.</p>	2	R	R	R	R
7.9	In all trauma centers, all instances of diversion must be reviewed by the trauma operations committee.	2	R	R	R	R
7.10	<p>All trauma centers must have a process of reviewing and providing feedback to:</p> <ul style="list-style-type: none"> • EMS agencies, related to accuracy of triage and provision of care • Referring providers, related to the care and outcomes of their patients and any potential opportunities for improvement in initial care 	2	R	R	R	R
8: Education: Professional and Community Outreach						
8.1	All trauma centers must provide public and professional trauma education.	2	R	R	R	R
8.2	<p>All trauma centers must provide trauma orientation to new nursing staff caring for trauma patients.</p> <p>Nurses must participate in trauma continuing education (CE) corresponding to their scope of practice and patient population served.</p>	2	R	R	R	R
8.3	In all trauma centers, the trauma program must participate in the training of prehospital personnel.	2	R	R	R	R
8.4	<p>Level I trauma centers must demonstrate commitment to postgraduate training and education by having residency rotations in trauma that meet all of the following conditions:</p> <ul style="list-style-type: none"> • There must be a defined trauma curriculum and trauma-specific objectives for junior and senior residents • The rotations must be available to, at minimum, general surgery, orthopedic, neurosurgery, and emergency medicine residents • All residents on the trauma service must be from an Accreditation Council for Graduate Medicine Education (ACGME) accredited program • There must be a sufficient volume and breadth of cases to provide general surgery senior residents the opportunity to meet the competency requirements for senior general surgery residents in trauma set forth by the ACGME 	2	R			

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The rotation must be continuously available to residents to assure ample exposure to trauma care 			
9: Research				
9.1	<p>Level I trauma centers must demonstrate the following scholarly activities during the verification cycle:</p> <ul style="list-style-type: none"> At least 10 trauma-related research articles* Participation by at least one trauma program faculty member as a visiting professor, invited lecturer, or speaker at a regional, national, or international trauma conference Support of residents or fellows in any of the following scholarly activities: laboratory experiences; clinical trials; resident trauma paper competitions at the state, regional, or national level; and other resident trauma research presentations <p>*Fulfillment of the research requirement must also meet the following criteria:</p> <ul style="list-style-type: none"> At least three articles must be authored by general surgery/pediatric trauma providers Research activity must be performed at the trauma center If case series are to be counted, they must include more than five patients Basic science research must involve topics directly related to the pathophysiology of injury At least three articles must be from disciplines other than general/pediatric surgery All articles must be published or accepted for publication in peer-reviewed and indexed journals Authors from the trauma center must meet accepted authorship requirements of the International Committee of Medical Journal Editors One paper from acute care surgery may be included 	2	R	

EXHIBIT 5

OAR Chapter 333, Division 200

OREGON CRITERIA for CONSIDERATION of TRANSFER to a LEVEL I or II TRAUMA CENTER

HEAD AND CENTRAL NERVOUS SYSTEM

- Penetrating injuries or open fracture of the skull
- GCS < 14 or lateralizing neurologic signs (if no neurosurgical consultation is available.)
- Spinal fracture or spinal cord deficit
- Carotid or vertebral arterial injury

CHEST

- More than two unilateral rib fractures or bilateral rib fractures with pulmonary contusion (if no critical care consultation is available)
- Torn thoracic aorta or great vessel
- Cardiac injury or rupture
- Bilateral pulmonary contusion with Pao₂:Flo₂ ratio less than 200 (require protracted ventilation)

ABDOMEN AND PELVIS

- Major abdominal vascular injury
- Grade IV or V liver injuries requiring transfusion
- Unstable pelvic fracture requiring transfusion
- Complex pelvis/acetabulum fractures
- Open pelvic injury

MULTIPLE SYSTEM INJURY

- Significant head injury combined with significant face, chest, abdominal, or pelvic injury
- Significant torso injury with advanced comorbid disease (such as coronary artery disease, chronic obstructive pulmonary disease, type 1 diabetes mellitus, or immunosuppression)
- Burns with associated injuries
- Fracture or dislocation with loss of distal pulses

SECONDARY DETERIORATION (LATE SEQUELAE)

- Patients requiring long term ventilation
- Sepsis
- Single or multiple organ system failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal or coagulation systems)
- Major tissue necrosis

AMEND: 333-200-0090

RULE TITLE: Trauma Hospital Approval and Categorization

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0090

Clarifies that if a trauma hospital fails to meet prescribed standards, the Oregon Health Authority will take action in accordance with OAR 333-200-0295(3). Exhibit 4 is being replaced in entirety and the new Exhibit 4 aligns with the 2022 standards (revised December 2023), Resources for Optimal Care of the Injured Patient. These new standards remove redundancy, as well as standards that are no longer supported by evidence-based practice, and aligns information into 9 chapters from the previous 21 chapters. Trauma system hospitals must comply with the Exhibit 4 standards on or before October 1, 2025.

RULE TEXT:

(1)(a) A trauma system hospital shall comply with the standards contained in Exhibit 4 on or before October 1, 2025.

(b) A trauma system hospital must remain in compliance with the Exhibit 4 standards dated September 25, 2018 (available at <http://www.healthoregon.org/emsrules>) until meeting the requirements of subsection (1)(a) of this rule.

(2) The Oregon Health Authority (Authority) shall approve trauma system hospitals by levels of care capability as defined by the standards contained in Exhibit 4 and by any criteria contained in the approved area plan. Approval will be renewed every three years if the hospital submits an application for renewal, and if the Authority's review finds that the hospital continues to meet the prescribed standards in Exhibit 4. If the Authority finds that the hospital does not meet the prescribed standard in Exhibit 4, the process outlined in OAR 333-200-0295(3)(c) will be applied.

(3) Upon determining the level of a hospital's trauma care capability and whether prescribed hospital resource standards have been met in accordance with OAR 333-200-0080, the Authority shall categorize a trauma system hospital as a Level I, Level II, Level III or Level IV trauma hospital. A trauma hospital may also be categorized as a Level I or Level II Pediatric Trauma Center and must meet prescribed pediatric trauma care standards in Exhibit 4. The Authority may accept American College of Surgeons (ACS) verification in accordance with OAR 333-200-0250.

(4) For area trauma system plans prescribing categorization of hospitals, the Authority shall approve all hospitals which meet the standards of the area trauma system plan.

(5) For area trauma system plans prescribing designation of hospitals, the Authority shall approve selected hospitals which meet the standards of the area trauma system plan. The Authority shall select hospitals based on the assessment that the best interests of the patients of the area are served by the particular applicant and expected patient volume. Competing applicants shall be judged on the on-site survey assessments of which hospital(s) provides the highest quality of compliance with the standards in Exhibit 4.

(6) A trauma system's hospital categorization may be transferable to a successor operator if the successor provides written acknowledgment that the successor will comply with all of the responsibilities and obligations imposed upon the transferor and under these rules including probationary status, and the successor agrees to be substituted in pending proceedings regarding the approval status. The Authority may decline, at its discretion, to transfer approval if it reasonably believes the successor cannot meet the standards, rules, policies or protocols set forth in the approved area plan.

(7) A trauma system hospital may, without cause, terminate its trauma system hospital status upon 90-days written notice to the Authority and the Area Trauma Advisory Board's list of interested parties.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, 431A.065, 431A.090

EXHIBIT 4
OAR Chapter 333, Division 200

OREGON TRAUMA HOSPITAL RESOURCE STANDARDS

AAAM	Association of the Advancement of Automotive Medicine	ICU	intensive care unit
ACS	American College of Surgeons	ISS	Injury Severity Score
AIS	Abbreviated Injury Scale	MRI	magnetic resonance imaging
ATLS	Advance Trauma Life Support	MTP	massive transfusion protocol
CAISS	Certified Abbreviated Injury Scale Specialist	OPO	organ procurement organization
CE	continuing education	OPPE	Ongoing Professional Practice Evaluation
CME	continuing medical education	OR	operating room
CRNA	certified registered nurse anesthetist	PI	performance improvement
CT	computed tomography	PIPS	Performance Improvement and Patient Safety
DIED	Died in emergency department	TBI	traumatic brain injury
DMEP	Disaster Management and Emergency Preparedness	TMD	trauma medical director
DOA	Dead on arrival	TPM	trauma program manager
EMS	emergency medical services	TQP	Trauma Quality Programs
FTE	full-time equivalent	VRC	Verification, Review, and Consultation
GCS	Glasgow Coma Scale		

Type: Verification standards are divided into Type 1 and Type 2 standards. Type 1 standards are considered critical standards that directly impact patient care. The trauma program should be in compliance with all applicable standards at the time of the survey visit. If noncompliance with any standard is identified, the trauma program must demonstrate compliance through a Corrective Action Review to achieve or extend

EFFECTIVE: October 1, 2025

verification. The type of Corrective Action Review will depend on the standard(s) in question. Noncompliance with a Type I standard would result in the trauma program not being verified.

LI, LII, LIII, LIII-N, LIV = Level I, Level II, Level III, Level III-Neuro, Level IV

PTCI & PTCII = Pediatric Trauma Center I & Pediatric Trauma Center II

R = Required standard

■ = Standard not required

Tag	Standard	Type	LI & PTCI	LII & PTCII	LIII (LIII-N*)	LIV
1: Institutional Administrative Commitment						
1.1	In all trauma centers, the institutional governing body, hospital leadership, and medical staff must demonstrate continuous commitment and provide the necessary human and physical resources to properly administer trauma care consistent with the level of verification throughout the verification cycle.	1	R	R	R	R
1.2	The hospital administration of a Level I trauma center must demonstrate support for the research program.	2	R	■	■	■
2: Program Scope & Governance						
2.1	All trauma centers must participate in the regional and/or statewide trauma system.	2	R	R	R	R
2.2	All trauma centers must participate in regional disaster/emergency management committees, health care coalitions, and regional mass casualty exercises.	2	R	R	R	R
2.3	All trauma programs must participate in two hospital drills or disaster plan activations per year that include a trauma response and are designed to refine the hospital’s response to mass casualty events. In Level I, II and III trauma programs must be integrated into the hospital’s disaster plan to ensure a robust surgical response: <ul style="list-style-type: none"> A trauma surgeon from the trauma panel must be included as a member of the hospital’s disaster committee and be responsible for the development of a surgical response to a mass casualty event. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The surgical response must outline the critical personnel, means of contact, initial surgical triage (including subspecialty triage when appropriate), and coordination of secondary procedures. <p>Level I trauma centers must also include an orthopedic surgeon from the orthopedic trauma call panel as a member of the hospital's disaster committee.</p>					
2.4	A Level I adult trauma center must care for at least 1,200 trauma patients per year or at least 240 trauma patients with an Injury Severity Score (ISS) greater than 15 per year.	1	R			
2.5	A Level I pediatric trauma center must care for 200 or more injured patients under 15 years of age per year.	1	PTCI			
2.6	<p>Adult trauma centers that annually admits to the hospital 100 or more injured children under 15 years of age must have the following:</p> <ul style="list-style-type: none"> Pediatric emergency department area Pediatric intensive care area Appropriate resuscitation equipment, as outlined in the pediatric readiness toolkit 	1	R	R	R	
2.7	<p>All trauma centers must have a trauma multidisciplinary PIPS committee chaired by the TMD or an associate TMD which meet at a minimum of quarterly.</p> <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must hold separate adult and pediatric trauma multidisciplinary PIPS meetings with distinct minutes.</p>	1	R	R	R	R
2.8	<p>In all trauma centers, the TMD must fulfill the following requirement:</p> <ul style="list-style-type: none"> Hold current Advanced Trauma Life Support (ATLS) Certification. <p>In Level I, II, and III trauma centers, the TMD must fulfill the following requirements:</p> <ul style="list-style-type: none"> Hold current board certification or board eligibility in general surgery or pediatric surgery by the American Board of Medical Specialties (ABMS), American Osteopathic Association (AOA), or Royal College of Physicians and Surgeons of Canada (RCPS-C). Serve as the director of a single trauma program. Be credentialed to provide trauma care. Participate on the trauma call panel Provide evidence of 36 hours of trauma-related continuing medical education (CME) during the verification cycle. For pediatric TMD, 9 of 36 hours must be pediatric-specific CME In Level I trauma centers, the TMD must hold active membership in at least one national trauma organization and have attended at least one meeting during the verification cycle. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> In Level II or III trauma centers, TMD active membership in at least one regional, state, or national trauma organization and attendance at least one meeting during the verification cycle is recommended. <p>If a board-certified general surgeon who is not board-certified or board-eligible in pediatric surgery serves as the pediatric TMD, then the following are required:</p> <ul style="list-style-type: none"> The pediatric TMD must hold current Pediatric Advanced Life Support (PALS) certification The center must have a written affiliation agreement with a current pediatric TMD at another ACS verified Level I pediatric trauma center. This agreement must identify the affiliate pediatric TMD and at minimum include the following responsibilities: <ul style="list-style-type: none"> Assist with process improvement, guideline development, and complex case discussions Attend at least 50% of trauma multidisciplinary PIPS committee meetings Attend the VRC site visit at the time of verification <p>In Level IV trauma centers, the TMD is a physician that is currently board certified or board eligible in general surgery or pediatric surgery, or may be a physician practicing emergency medicine, responsible for coordinating the care of injured patients, verifies continuing medical education (CME) of personnel, and has oversight of the trauma quality improvement process. The TMD is clinically involved with trauma patient management and responsible for credentialing of trauma team members.</p>					
2.9	<p>In all trauma centers, the TMD must be responsible for and have the authority to:</p> <ul style="list-style-type: none"> Develop and enforce policies and procedures relevant to care of the injured patient. Ensure providers meet all requirements and adhere to institutional standards of practice. Work across departments and/or other administrative units to address deficiencies in care. Determine (with their liaisons) provider participation in trauma care, which might be guided by findings from the PIPS process or an Ongoing Professional Practice Evaluation (OPPE). Oversee the structure and process of the trauma PIPS program. 	2	R	R	R	R
2.10	<p>In Level I, II, and III trauma centers, the TPM must fulfill the following requirements:</p> <ul style="list-style-type: none"> Have 1.0 full-time equivalent (FTE) commitment to the trauma program Provide evidence of 36 hours of trauma-related continuing education (CE) during the verification cycle Hold current membership in a national or regional trauma organization 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<p>In Level II and III trauma centers, at least 0.5 FTE of the TPM's time must be spent on TPM-related activities. The remaining time must be dedicated to other roles within the trauma program.</p> <p>In combined programs that are Level II adult and Level II pediatric trauma centers, it is acceptable for the pediatric TPM of a Level II pediatric trauma center to serve at least 0.5 FTE as the pediatric TPM. The remaining time must be devoted to other roles within the adult or pediatric trauma program.</p> <p>In Level IV trauma centers, a proportionate FTE Trauma Coordinator must be employed for trauma centers with less than 250 patients per year.</p>					
2.11	<p>In all trauma centers, the trauma program manager (TPM) must have a reporting structure that includes the TMD and they are to assume at minimum, the following leadership responsibilities in conjunction with the TMD and/or hospital administration:</p> <ul style="list-style-type: none"> • Oversight of the trauma program • Assist with the budgetary process for the trauma program • Develop and implement clinical protocols and practice management guidelines • Provide educational opportunities for staff development • Monitor performance improvement activities in conjunction with a PI coordinator (where applicable) • Service as a liaison to administration and represent the trauma program on hospital and regional committees to enhance trauma care • Have oversight of the trauma registry 	2	R	R	R	R
2.12	<p>All trauma centers must have an injury prevention program that:</p> <ul style="list-style-type: none"> • Has a designated injury prevention professional • Prioritizes injury prevention work based on trends identified in the trauma registry and local epidemiological data • Implements at least two activities over the course of the verification cycle with specific objectives and deliverables that address separate major causes of injury in the community • Demonstrates evidence of partnerships with community organizations to support their injury prevention efforts 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level I trauma centers, the injury prevention professional must be someone other than the TPM or PI personnel.					
2.13	In all trauma centers, an organ procurement program must be available and consist of at least the following: <ul style="list-style-type: none"> • An affiliation with an organ procurement organization (OPO) • A written policy for notification of the regional OPO • Protocols defining clinical criteria and confirmatory tests for the diagnosis of brain death 	2	R	R	R	R
2.14	All pediatric trauma centers must have a child life program.	2	PTCI	PTCII		
3: Facilities and Equipment Resources						
3.1	In Level I and II trauma centers, an operating room (OR) must be staffed and available within 15 minutes of notification, and in Level III trauma centers an OR must be staffed and available within 30 minutes of notification.	1	R	R	R	
3.2	In Level I and II trauma centers, if the first OR is occupied, an additional OR must be staffed and available.	2	R	R		
3.3	Level I and II trauma centers must have a dedicated OR prioritized for fracture care in nonemergent orthopedic trauma. In a Level III trauma center, access to the OR must be made available for nonemergent orthopedic trauma.	2	R	R	R	
3.4	Level I and II trauma centers must have an adequate supply of blood products available. Level III and IV trauma centers must have an adequate supply of red blood cells and plasma available.	1	R	R	R	R
3.5	In Level I and II trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—15 minutes • Computed tomography (CT)—15 minutes • Point-of-care ultrasound—15 minutes • Interventional radiologic procedures—1 hour • Magnetic resonance imaging (MRI)—2 hours 	1	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level III and IV trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—30 minutes • CT—30 minutes • Point-of-care ultrasound—15 minutes 					
3.6	Level I and II trauma centers must have a mechanism to remotely view radiographic images from referring hospitals within their catchment area.	2	R	R		
3.7	Level I, Level II, and Level III-N trauma centers must have cerebral monitoring equipment available.	1	R	R	*	
3.8	In Level I and II trauma centers, cardiopulmonary bypass equipment must be immediately available when required, or a contingency plan must exist to provide emergency cardiac surgical care.	2	R	R		
4: Personnel and Services						
4.1	Trauma surgeons must have direct patient care responsibilities at the institution and must meet the following qualifications: <ul style="list-style-type: none"> • Complete the ATLS course at least once • Have privileges in general and/or pediatric surgery • Hold current board certification or board eligibility in general surgery, or have been approved through the Alternate Pathway <ul style="list-style-type: none"> – Level I pediatric trauma centers must have at least two surgeons board-certified or board-eligible in pediatric surgery. – Level II pediatric trauma centers must have at least one surgeon board-certified or board-eligible in pediatric surgery. 	2	R	R	R	R
4.2	In Level I, II, and III trauma centers, trauma surgery coverage must be continuously available. In Level I and II trauma centers, the trauma surgeon must be dedicated to a single trauma center while on call.	1	R	R	R	
4.3	Level I and II trauma centers must have a published backup call schedule for trauma surgery. Level III trauma centers must have a documented backup call schedule or a backup plan for trauma surgery.	2	R	R	R	
4.4	In Level I, II, and III trauma centers, the trauma surgeon must be present in the operating suite for the key portions of operative procedures for which they are the responsible surgeon and must be immediately available throughout the procedure.	2	R	R	R	

EFFECTIVE: October 1, 2025

4.5	<p>The trauma program must have the following designated liaisons:</p> <p>LI, LII, PTCI, PTCII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist • Board-certified or board-eligible neurosurgeon • Board-certified or board-eligible radiologist • Board-certified or board-eligible intensive care unit (ICU) physician • Geriatric provider (applies only to LI and LII) <p>LIII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist or certified registered nurse anesthetist • Board-certified or board-eligible neurosurgeon (applies only to LIII-N) • Board-certified or board-eligible ICU physician <p>In Level I trauma centers, the orthopedic trauma surgeon liaison must have completed an orthopedic traumatology fellowship approved by the Orthopaedic Trauma Association (OTA). In Level I pediatric trauma centers, this requirement may be met by having a pediatric fellowship-trained orthopedic surgeon.</p>	2	R	R	R	
4.6	<p>In Level I and II trauma centers, the emergency department medical director must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine.</p> <p>In Level I and Level II trauma centers, physicians who completed primary training prior to 2016 and are board-certified in a specialty other than emergency medicine or pediatric emergency medicine may serve as the emergency department director.</p> <p>In Level III trauma centers, the emergency department director must be board-certified or board-eligible.</p> <p>In Level IV trauma centers, the emergency department must have a designated emergency physician director.</p>	1	R	R	R	R

EFFECTIVE: October 1, 2025

4.7	<p>In all trauma centers, emergency medicine physicians involved in the care of trauma patients must be currently board-certified or board-eligible or have been approved through the Alternate Pathway.</p> <ul style="list-style-type: none"> In Level I and II trauma centers, physicians must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine. <ul style="list-style-type: none"> Physicians who completed primary training in a specialty other than emergency medicine or pediatric emergency medicine prior to 2016 may participate in trauma care. In Level I pediatric trauma centers, at least one physician must be board-certified or board-eligible in pediatric emergency medicine. In Level III and Level IV trauma centers, physicians must be board-certified or board-eligible in emergency medicine, pediatric emergency medicine, or a specialty other than emergency medicine. <p>All emergency physicians must have completed the ATLS course at least once. Physicians who are board-certified or board-eligible in a specialty other than emergency medicine must hold current ATLS certification.</p>	2	R	R	R	R
4.8	<p>In Level I and II trauma centers, a board-certified or board-eligible emergency medicine physician must be present in the emergency department at all times. This requirement may also be met with a board-certified or board-eligible physician who completed primary training prior to 2016 in a specialty other than emergency medicine or pediatric emergency medicine.</p>	1	R	R		
4.9	<p>In Level I pediatric trauma centers, there must be at least two physicians who are board-certified or board-eligible in pediatric critical care medicine or in both pediatric surgery and surgical critical care.</p> <p>These two physicians must practice at least part of their time in the ICU where the majority of pediatric trauma patients are cared for.</p>	2	PTCI			
4.10	<p>Level I and II trauma centers must have board-certified or board-eligible neurosurgeons continuously available for the care of neurotrauma patients.</p> <p>Level III-N trauma centers must have board-certified or board-eligible neurosurgeons.</p> <p>In Level I pediatric trauma centers, there must be at least one board-certified or board-eligible neurosurgeon who has completed a pediatric neurosurgery fellowship.</p>	1	R			R

EFFECTIVE: October 1, 2025

4.11	Level I, II, and III trauma centers must have board-certified or board-eligible orthopedic surgeons continuously available for the care of orthopedic trauma patients and must have a contingency plan for when orthopedic trauma capabilities become encumbered or overwhelmed. In Level I pediatric trauma centers, at least one board-certified or board-eligible orthopedic surgeon must have completed a pediatric orthopedic fellowship.	1	R	R	R	
4.12	Trauma centers must have an orthopedic surgeon who has completed an Orthopedic Trauma Association-approved fellowship or has met the alternate training criteria. This requirement may also be met by having transfer protocols specifying the type of patients/injuries that will be transferred to a center with an orthopedic surgeon who has completed an OTA-approved fellowship or meets the alternate training criteria.	2	PTCI	R		
4.13	In Level I and II trauma centers, anesthesia services must be available within 15 minutes of request. Furthermore, the attending anesthesiologist must be present within 30 minutes of request for all operations. In Level III trauma centers, anesthesia services must be available within 30 minutes of request.	1	R	R	R	
4.14	In Level I, II, and III trauma centers, a radiologist must have access to patient images and be available for imaging interpretation, in-person or by phone, within 30 minutes of request.	1	R	R	R	
4.15	Level I and II trauma centers must have the necessary human and physical resources continuously available so that an endovascular or interventional radiology procedure for hemorrhage control can begin within 60 minutes of request.	2	R	R		
4.16	In Level I, II, and III trauma centers must have an ICU surgical director who is board-certified or board-eligible in general surgery and actively participates in unit administration. In Level I adult trauma centers, the ICU surgical director must be board-certified or board-eligible in surgical critical care.	2	R	R	R	
4.17	In Level I and II trauma centers, the ICU must be staffed with physicians who are continuously available within 15 minutes of request and whose primary responsibility is to the ICU.	1	R	R		
4.18	In Level II adult trauma centers, at least one surgeon must be board-certified or board-eligible in surgical critical care.	2		R		
4.19	In Level III trauma centers, provider coverage of the ICU must be available within 30 minutes of request, with a formal plan in place for emergency coverage.	1			R	
4.20	In all trauma centers, the patient-to-nurse ratio in the ICU must be 1:1 or 2:1, depending on patient acuity as defined by the hospital policy for ICU nursing staffing.	2	R	R	R	R
4.21	Level I trauma centers must have continuous availability of the surgical expertise listed below:	1	R	R		

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Cardiothoracic surgery • Vascular surgery • Hand surgery • Plastic surgery • Obstetrics/Gynecology surgery • Otolaryngology • Urology <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have surgical expertise listed above available.</p>				
4.22	<p>Level I trauma centers must have continuous availability of ophthalmology.</p> <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have ophthalmology available.</p>	2	R	R	
4.23	<p>Level I trauma centers must have the capability for comprehensive soft tissue coverage of wounds, including microvascular expertise for free flaps.</p>	1	R		
4.24	<p>Level I trauma centers must have the capability to diagnose and manage acute facial fractures of the entire craniomaxillofacial skeleton, including the skull, cranial base, orbit, midface, and occlusal skeleton, with expertise contributed by any of the following specialists: otolaryngology, oral maxillofacial surgery, or plastic surgery.</p>	1	R		
4.25	<p>Level I and II trauma centers must have replantation capability continuously available or must have in place a triage and transfer process with a replant center.</p>	2	R	R	
4.26	<p>Level I and II trauma centers must have all of the following medical specialists:</p> <ul style="list-style-type: none"> • Cardiology* • Gastroenterology* • Internal medicine or pediatrics* • Infectious disease* • Nephrology* • Pain management (with expertise to perform regional nerve blocks) • Physiatry • Psychiatry • Pulmonary medicine* 	2	R	R	R

EFFECTIVE: October 1, 2025

	An asterisk (*) denotes services that must be continuously available. Level III trauma centers must have internal medicine continuously available.					
4.27	Level I and II pediatric trauma centers must have either a physician on the medical staff who is board-certified or board-eligible in child abuse pediatrics or a physician with special interest in child abuse (nonaccidental trauma) who provides expertise to the trauma center.	2	PTCI	PTCII		
4.28	Trauma centers must have the following allied health services available: LI, LII, PTCI, PTCII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Speech therapy • Social worker (7 days per week) • Occupational therapy (7 days per week) • Physical therapy (7 days per week) LIII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Social worker • Occupational therapy • Physical therapy • Speech therapy 	2	R	R	R	
4.29	Level I and Level II trauma centers must have renal therapy services available to support patients with acute renal failure. Level III trauma centers must have renal replacement therapy services available to support patients with acute renal failure or a transfer agreement in place if this service is not available.	2	R	R	R	
4.30	In all trauma centers, trauma and/or emergency department advanced practice providers who are clinically involved in the initial evaluation and resuscitation of trauma patients during the activation phase must have current ATLS certification.	2	R	R	R	R
4.31	In all trauma centers, there must be at least 0.5 full-time equivalent (FTE) dedicated to the trauma registry per 200-300 annual patient entries. A proportionate FTE must be employed for hospitals with less than 200 annual patient entries. The count of entries is defined as all patients who meet Oregon Trauma Registry inclusion criteria.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Combined adult and pediatric programs (Level I/II adult trauma center with Level II pediatric trauma center) may share resources, but someone must be identified as the lead pediatric registrar.					
4.32	In Level I or other trauma centers seeking ACS verification, at least one registrar must be a current Certified Abbreviated Injury Scale Specialist (CAISS).	2	R			
4.33	In all trauma centers, all staff members who have a registry role in data abstraction and entry, injury coding, ISS calculation, data reporting, or data validation for the trauma registry must fulfill all of the following requirements: <ul style="list-style-type: none"> • Participate in and pass the Association of the Advancement of Automotive Medicine’s (AAAM’s) Abbreviated Injury Scale (AIS) course for the version used at your center • Participate in a trauma registry course that includes all of the following content: <ul style="list-style-type: none"> – Abstraction – Data management – Reports/report analysis – Data validation – HIPAA • Participate in an ICD-10 course or an ICD-10 refresher course every five years 	2	R	R	R	R
4.34	In all trauma centers, each trauma registrar must accrue at least 24 hours of trauma-related CE during the verification cycle.	2	R	R	R	R
4.35	In Level I, II, and III trauma centers, there must be at least 0.5 FTE dedicated performance improvement (PI) personnel when the annual volume of registry patient entries exceeds 500 patients. The count of entries is defined as all patients that meet Oregon Trauma Registry inclusion criteria. When the annual volume exceeds 1,000 registry patient entries, the trauma center must have at least 1.0 FTE PI personnel.	2	R	R	R	
4.36	In Level I adult and pediatric trauma centers, the trauma surgeon liaison to the disaster committee must successfully complete the Disaster Management and Emergency Preparedness (DMEP) course at least once.	2	R			
5: Patient Care: Expectations and Protocols						
5.1	All trauma centers must have evidence-based clinical practice guidelines, protocols, or algorithms that are reviewed every three years.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.2	In all trauma centers, the shared roles and responsibilities of trauma surgeons and emergency medicine physicians for trauma resuscitation must be defined and approved by the TMD.	2	R	R	R	R
5.3	In all trauma centers, the criteria for tiered activations must be clearly defined. For the highest level of activation, the following eight criteria must be included: <ul style="list-style-type: none"> • Confirmed blood pressure less than 90 mm Hg at any time in adults, and age-specific hypotension in children aged 0-9 years less than 70 mmHg + (2 x age years) • All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee • Glasgow Coma Scale less than 9 (with mechanism attributed to trauma) • Transfer patients from another hospital who require ongoing blood transfusions • Patients intubated in the field and directly transported to the trauma center • Patients who have respiratory compromise or are in need of an emergent airway • Emergency physician's discretion 	2	R	R	R	R
5.4	In all trauma centers providing trauma surgical services, for the highest level of activation, at least 80 percent of the time, the trauma surgeon must be at the patient's bedside within 15 minutes (Level I and Level II trauma centers) or 30 minutes (Level III and Level IV trauma centers) of patient arrival.	1	R	R	R	R
5.5	In all trauma centers providing trauma surgical services, the trauma program must define and meet acceptable response time to trauma surgical evaluation for activations other than the highest level.	2	R	R	R	R
5.6	All trauma centers must have the following protocols for care of the injured older adult: <ul style="list-style-type: none"> • Identification of vulnerable geriatric patients • Identification of patients who will benefit from the input of a health care provider with geriatric expertise • Prevention, identification, and management of dementia, depression, and delirium • Process to capture and document what matters to patients, including preferences and goals of care, code status, advanced directives, and identification of a proxy decision maker • Medication reconciliation and avoidance of inappropriate medications • Screening for mobility limitations and assurance of early, frequent, and safe mobility • Implementation of safe transitions to home or other health care facility 	2	R	R	R	R
5.7	All trauma centers must have a process in place to assess children for nonaccidental trauma.	2	R	R	R	R
5.8	All trauma centers must have a massive transfusion protocol (MTP) developed collaboratively between the trauma service and the blood bank.	1	R	R	R	R
5.9	All trauma centers must have a rapid reversal protocol in place for patients on anticoagulants.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.10	In all trauma centers, each emergency department must perform a pediatric readiness assessment during the verification cycle and have a plan to address identified gaps.	2	R	R	R	R
5.11	All trauma centers must have a provider and equipment immediately available to establish an emergency airway.	1	R	R	R	R
5.12	All trauma centers must have clearly defined transfer protocols that include the types of patients, expected time frame for initiating and accepting a transfer, and predetermined referral centers for outgoing transfers.	2	R	R	R	R
5.13	In all trauma centers, the decision to transfer an injured patient must be based solely on the needs of the patient, without consideration of their health plan or payor status.	2	R	R	R	R
5.14	In all trauma centers, when trauma patients are transferred, the transferring provider must directly communicate with the receiving provider to ensure safe transition of care. This communication may occur through a transfer center.	2	R	R	R	R
5.15	In all trauma centers, diversion protocols must be approved by the TMD and include: <ul style="list-style-type: none"> • Agreement of the trauma surgeon in the decision to divert, for all trauma centers that provide trauma surgical services • A process for notification of dispatch and EMS agencies • A diversion log to record reasons for and duration of diversions 	2	R	R	R	R
5.16	All trauma centers must not exceed 400 hours of diversion during the reporting period.	2	R	R	R	R
5.17	Neurosurgical evaluation must occur within 30 minutes of request for the following: <ul style="list-style-type: none"> • Severe TBI (GCS less than 9) with head CT evidence of intracranial trauma • Moderate TBI (GCS 9–12) with head CT evidence of potential intracranial mass lesion • Neurologic deficit as a result of potential spinal cord injury (applicable to spine surgeon, whether a neurosurgeon or orthopedic surgeon) • Trauma surgeon discretion <p>In Level I, II, and III-N trauma centers, neurosurgical provider response times must be documented.</p> <p>In Level I and II trauma centers, the neurosurgery attending must be involved in clinical decision-making.</p>	2	R	R	*	
5.18	All Level III and IV trauma centers must have a written plan approved by the TMD that defines the types of neurotrauma injuries that may be treated at the center.	2			R	R
5.19	Level I and II trauma centers must have a neurotrauma contingency plan and must implement the plan when neurosurgery capabilities are encumbered or overwhelmed.	2	R	R	*	

EFFECTIVE: October 1, 2025

	<p>Level III-N trauma centers must have a neurotrauma contingency plan that includes the potential for diversion and must implement the plan when neurosurgery capabilities are encumbered, overwhelmed, or unavailable.</p> <p>The plan must include the following criteria:</p> <ul style="list-style-type: none"> • A thorough review of each instance by the PIPS program • Monitoring of the effectiveness of the process by the PIPS program 					
5.20	<p>In Level I, II, and III trauma centers must have treatment guidelines for, at minimum, the following orthopedic injuries:</p> <ul style="list-style-type: none"> • Patients who are hemodynamically unstable attributable to pelvic ring injuries • Long bone fractures in patients with multiple injuries (e.g., time to fixation, order of fixation, and damage control versus definitive fixation strategies) • Open extremity fractures (e.g., time to antibiotics, time to OR for operative debridement, and time to wound coverage for open fractures) • Hip fractures in geriatric patients (e.g., expected time to OR (LI, LII, LIII)) 	2	R	R	R	
5.21	<p>In Level I, II, and III trauma centers, an orthopedic surgeon must be at bedside within 30 minutes of request for the following:</p> <ul style="list-style-type: none"> • hemodynamically unstable, secondary to pelvic fracture • suspected extremity compartment syndrome • fractures/dislocations with risk of avascular necrosis (e.g., femoral head or talus) • vascular compromise related to a fracture or dislocation • trauma surgeon discretion <p>The attending orthopedic surgeon must be involved in the clinical decision-making for care of these patients.</p>	2	R	R	R	
5.22	<p>In Level I, II, and III trauma centers must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p> <p>Level IV trauma centers that provide surgical services must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p>	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.23	In all trauma centers providing trauma surgical services, trauma patients requiring ICU admission must be admitted to, or be evaluated by, a surgical service.	2	R	R	R	R
5.24	In all trauma centers providing trauma surgical services, the trauma surgeon must retain responsibility for the trauma patient in the ICU up to the point where the trauma surgeon documents transfer of primary responsibility to another service.	2	R	R	R	R
5.25	In all trauma centers, documentation of preliminary diagnostic imaging must include evidence that critical findings were communicated to the trauma team. The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretations.	2	R	R	R	R
5.26	In all trauma centers, documentation of the final interpretation of CT scans must occur no later than 12 hours after completion of the scan.	2	R	R	R	R
5.27	In Level I, II, and III trauma centers must meet the rehabilitation needs of trauma patients by: <ul style="list-style-type: none"> • Developing protocols that identify which patients will require rehabilitation services during their acute inpatient stay • Establishing processes that determine the rehabilitation care, needs, and services required during the acute inpatient stay • Ensuring that the required services during acute inpatient stay are provided in a timely manner 	2	R	R	R	
5.28	All trauma centers must have a process to determine the level of care patients require after trauma center discharge, as well as the specific rehabilitation care services required at the next level of care. The level of care and services required must be documented in the medical record.	2	R	R	R	R
5.29	All trauma centers must meet the mental health needs of trauma patients by having: <ul style="list-style-type: none"> • A protocol to screen patients at high risk for psychological sequelae with subsequent referral to a mental health provider (LI, LII, PTCI, PTCII) • A process for referral to a mental health provider when required (LIII, LIV) 	2	R	R	R	R
5.30	All trauma centers must screen all admitted trauma patients greater than 12 years old for alcohol misuse with a validated tool or routine blood alcohol content testing. Programs must achieve a screening rate of at least 80 percent.	2	R	R	R	R
5.31	In all trauma centers, at least 80 percent of patients who have screened positive for alcohol misuse must receive a brief intervention by appropriately trained staff prior to discharge. This intervention must be documented.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Level III and Level IV trauma centers must have a mechanism for referral if brief intervention is not available as an inpatient.					
6: Data Surveillance and Systems						
6.1	All trauma centers must have a written data quality plan and demonstrate compliance with that plan. At minimum, the plan must require quarterly review of data quality.	2	R	R	R	R
6.2	In all trauma centers, the trauma registry must be concurrent, defined as having a minimum of 80 percent of patient records completed within 60 days of the patient discharge date.	2	R	R	R	R
6.3	In all trauma centers, trauma registry data must be collected in compliance with the Oregon Trauma Registry inclusion criteria and Oregon Trauma Registry Data Dictionary data elements index. In Level I and Level II trauma centers, data must be submitted to the National Trauma Data Bank® every year in a timely fashion so that it can be aggregated and analyzed at the national level.	2	R	R	R	R
7: Performance Improvement and Patient Safety						
7.1	In all trauma centers, the trauma PIPS program must be independent of the hospital or departmental performance improvement (PI) program, but it must report to the hospital or departmental PI program.	2	R	R	R	R
7.2	All trauma centers must have a written PIPS plan that: <ul style="list-style-type: none"> • Outlines the organizational structure of the trauma PIPS process, with a clearly defined relationship to the hospital PI program • Specifies the processes for event identification. As an example, these events may be brought forth by a variety of sources, including but not limited to: individual personnel reporting, morning report or daily sign-outs, case abstraction, registry surveillance, use of clinical guideline variances, patient relations, or risk management. The scope for event review must extend from prehospital care to hospital discharge. • Includes a list of audit filters, event review, and report review that must include, at minimum, those listed in the Resources section • Defines levels of review (primary, secondary, tertiary, and/or quaternary), with a listing for each level that clarifies: <ul style="list-style-type: none"> – Which cases are to be reviewed 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> – Who performs the review – When cases can be closed or must be advanced to the next level • Specifies the members and responsibilities of the trauma multidisciplinary PIPS committee • Outlines an annual process for identification of priority areas for PI, based on audit filters, event reviews, and benchmarking reports 					
7.3	All trauma centers must have documented evidence of event identification; effective use of audit filters; demonstrated loop closure; attempts at corrective actions; strategies for sustained improvement measured over time.	2	R	R	R	R
7.4	All trauma centers must participate in a benchmarking program and use the results to determine whether there are opportunities for improvement in patient care and registry data quality.	2	R	R	R	R
7.5	In all trauma centers, a physician from the emergency department or trauma program must participate in the prehospital PIPS program, including assisting in the development of prehospital care protocols relevant to the care of trauma patients.	2	R	R	R	R
7.6	<p>All trauma centers must meet the following trauma multidisciplinary PIPS committee meeting attendance thresholds:</p> <ul style="list-style-type: none"> • 60 percent of meetings for the TMD (cannot be delegated to the associate TMD) • 50 percent of meetings for each trauma surgeon • 50 percent of meetings for the liaisons (or one predetermined alternate) from emergency medicine, neurosurgery, orthopedic surgery, critical care medicine, and anesthesia, • 50 percent of meetings for the liaison (or one predetermined alternate) from radiology (LI, LII, PTCI, PTCII) <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must have 50 percent attendance by a representative (TMD or one predetermined alternative) from the other program; this representative is responsible for disseminating information to panel members of the other program.</p> <p>Level IV trauma centers must have 50 percent attendance by medical staff active in trauma resuscitation.</p>	2	R	R	R	R
7.7	<p>In all trauma centers, all cases of trauma-related mortality and transfer to hospice must be reviewed and classified for potential opportunities for improvement.</p> <p>Deaths must be categorized as:</p> <ul style="list-style-type: none"> • Mortality with opportunity for improvement 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Mortality without opportunity for improvement 					
7.8	<p>In all trauma centers, all nonsurgical trauma admissions must be reviewed by the trauma program.</p> <p>As part of secondary review, the Trauma Medical Director must review non-surgical admissions according to the criteria in the Nelson Criteria for Nonsurgical Admission.</p>	2	R	R	R	R
7.9	In all trauma centers, all instances of diversion must be reviewed by the trauma operations committee.	2	R	R	R	R
7.10	<p>All trauma centers must have a process of reviewing and providing feedback to:</p> <ul style="list-style-type: none"> • EMS agencies, related to accuracy of triage and provision of care • Referring providers, related to the care and outcomes of their patients and any potential opportunities for improvement in initial care 	2	R	R	R	R
8: Education: Professional and Community Outreach						
8.1	All trauma centers must provide public and professional trauma education.	2	R	R	R	R
8.2	<p>All trauma centers must provide trauma orientation to new nursing staff caring for trauma patients.</p> <p>Nurses must participate in trauma continuing education (CE) corresponding to their scope of practice and patient population served.</p>	2	R	R	R	R
8.3	In all trauma centers, the trauma program must participate in the training of prehospital personnel.	2	R	R	R	R
8.4	<p>Level I trauma centers must demonstrate commitment to postgraduate training and education by having residency rotations in trauma that meet all of the following conditions:</p> <ul style="list-style-type: none"> • There must be a defined trauma curriculum and trauma-specific objectives for junior and senior residents • The rotations must be available to, at minimum, general surgery, orthopedic, neurosurgery, and emergency medicine residents • All residents on the trauma service must be from an Accreditation Council for Graduate Medicine Education (ACGME) accredited program • There must be a sufficient volume and breadth of cases to provide general surgery senior residents the opportunity to meet the competency requirements for senior general surgery residents in trauma set forth by the ACGME 	2	R			

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The rotation must be continuously available to residents to assure ample exposure to trauma care 			
9: Research				
9.1	<p>Level I trauma centers must demonstrate the following scholarly activities during the verification cycle:</p> <ul style="list-style-type: none"> At least 10 trauma-related research articles* Participation by at least one trauma program faculty member as a visiting professor, invited lecturer, or speaker at a regional, national, or international trauma conference Support of residents or fellows in any of the following scholarly activities: laboratory experiences; clinical trials; resident trauma paper competitions at the state, regional, or national level; and other resident trauma research presentations <p>*Fulfillment of the research requirement must also meet the following criteria:</p> <ul style="list-style-type: none"> At least three articles must be authored by general surgery/pediatric trauma providers Research activity must be performed at the trauma center If case series are to be counted, they must include more than five patients Basic science research must involve topics directly related to the pathophysiology of injury At least three articles must be from disciplines other than general/pediatric surgery All articles must be published or accepted for publication in peer-reviewed and indexed journals Authors from the trauma center must meet accepted authorship requirements of the International Committee of Medical Journal Editors One paper from acute care surgery may be included 	2	R	

AMEND: 333-200-0250

RULE TITLE: Hospitals Seeking Verification from American College of Surgeons

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0250

Clarifies that the Oregon Health Authority will provide a written report of survey findings to the trauma hospital.

RULE TEXT:

(1) Notwithstanding OAR 333-200-0235 and 333-200-0245, a hospital seeking verification from the American College of Surgeons (ACS) shall submit the following information to the Oregon Health Authority (Authority):

(a) Notification of intent to seek verification;

(b) Notification of the date and time of the site visit to be conducted by ACS;

(c) A copy of the ACS Preview Review Questionnaire; and

(d) Any additional information necessary to determine compliance with state specific standards.

(2) An Authority representative shall be present at the verification site visit and may request additional information to determine compliance with state specific standards.

(3) In accordance with OAR 333-200-0295, the Authority shall provide a written report of the survey findings for state specific standards and a corrective action plan shall be submitted by the hospital to the Authority, if applicable.

(4) A hospital shall submit a copy of the ACS verification report to the Authority upon receipt.

(5) The Authority may accept ACS verification if the verification is recognized by the Authority as addressing the ACS trauma system standards and any additional state standards identified in these rules.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, ORS 431A.065, ORS 431A.090

AMEND: 333-200-0265

RULE TITLE: Trauma System Hospital Responsibilities

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0265

Reference to the Oregon Trauma Registry Abstract Manual was updated to Oregon Trauma Registry Data Dictionary. Removes requirement that patient resuscitation data must be recorded on the state trauma resuscitation flow sheet, or any form that contains same information as the flow sheet. Exhibit 4 is being replaced in entirety and the new Exhibit 4 aligns with the 2022 standards (revised December 2023), Resources for Optimal Care of the Injured Patient. These new standards remove redundancy, as well as standards that are no longer supported by evidence-based practice, and aligns information into 9 chapters from the previous 21 chapters. Exhibits 3 and 5 are included with this filing for reference only; no changes are being made to them.

RULE TEXT:

A trauma system hospital shall:

- (1) Be responsible for all expenses incurred by the hospital in planning, developing and participating in the trauma system, including attorney fees and costs;
- (2) Be responsible for all expenses incurred when a re-survey of the hospital is conducted by the Oregon Health Authority (Authority) or its designee(s);
- (3) Comply with all requirements in these rules, all current state and area trauma system standards, and all policies, protocols and procedures as set forth in the approved area trauma system plan;
- (4) Comply with any reasonable survey process that the Authority may utilize including but not limited to submission of information such as attestations, electronic medical records, and other documents determined necessary by the Authority to evaluate the hospital's trauma program;
- (5) Meet or exceed the standards for hospital resources as set forth in Exhibit 4 and hospital activation and transfer criteria as set forth in Exhibits 3 and 5;
- (6) Provide the resources, personnel, equipment and response required by these rules;
- (7) Provide care to trauma system patients which is consistent with the standards advocated by the Advanced Trauma Life Support Course, American College of Surgeons, Committee on Trauma;
- (8) Report to the Oregon Trauma Registry all required data as set forth in the Oregon Trauma Registry Data Dictionary for each and every trauma patient as defined in these rules:
 - (a) Data must be reported within 60 days of death or discharge of that patient; and
 - (b) Data shall be submitted in electronic media using a format prescribed by the Authority.
 - (c) The Authority may, at its sole discretion, permit data submission by alternative means where use of the Authority's prescribed format would impose a severe hardship on the reporting institution.
- (9) Participate in evaluation and research studies as prescribed by the Authority;
- (10) Identify and submit to the Authority the name of the individual that will serve as the Trauma Registrar, Trauma Coordinator or Trauma Program Manager, and Trauma Medical Director. Any changes to persons serving in these roles must be reported to the Authority within 60 days.

STATUTORY/OTHER AUTHORITY: ORS 431A.065, ORS 431A.085

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, ORS 431A.065, ORS 431A.085, ORS 431A.090

EXHIBIT 3
OAR chapter 333, division 200

OREGON HOSPITAL TRAUMA TEAM ACTIVATION CRITERIA

<ul style="list-style-type: none">• Confirmed blood pressure less than 90 mmHg at any time in adults, and age-specific hypotension in children aged 0-9 years less than 70 mmHg + (2 x age years)• All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee• Glasgow Coma Scale less than 9 (with mechanism attributed to trauma)• Transfer patients from another hospital who require ongoing blood transfusions• Patients intubated in the field and directly transported to the trauma center• Patients who have respiratory compromise or are in need of an emergent airway <p>Emergency physician's discretion</p>	<p>YES</p> <p>→</p> <p>Activate Full Trauma Team</p>	<p style="text-align: center;">Full Trauma Team</p> <ul style="list-style-type: none">- General Surgeon- Emergency Physician- Emergency Nurse(s)- Laboratory- Radiology- Respiratory Therapist <p><u>Response times from patient arrival:</u></p> <p>Level I & II – 15 minutes Level III & IV – 30 minutes</p>
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Oregon Hospital Trauma Team Activation Criteria (continued)

- Glasgow Coma Scale of 9 - 13
- Chest wall instability, deformity, or suspected flail chest
- Suspected fracture of two or more proximal long bones (humerus or femur)
- Suspected spinal cord injury with motor sensory deficit
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Skull deformity, suspected skull fracture
- Suspected pelvic fracture
- Falls from a height greater than 10 feet (all ages)
- High-risk auto crash
 - Partial or complete ejection
 - Significant intrusion including roof: greater than 12 inches occupant site; **OR** greater than 18 inches any site; **OR** need for extrication for entrapped patient
 - Death in passenger compartment
 - Child (age 0-9 years) unrestrained or in unsecured child safety seat
 - Vehicle telemetry data consistent with severe injury
- Pedestrian/bicycle rider thrown, run over, or with significant impact
- Rider separated from transport vehicle with significant impact (e.g., motorcycle, ATV, horse, etc.)

Emergency physician's discretion

Consider risk factors, including:

- Low-level falls in young children (age 0-5 years) or older adults (age 65 years or greater) with significant head impact
- Anticoagulant use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy greater than 20 weeks
- Burns in conjunction with trauma
- Systolic blood pressure (SBP) less than 110 mmHg **OR** heart rate greater than SBP (age 65 years or greater)
- Children should be triaged preferentially to pediatric capable trauma centers

YES



**Activate
Modified
Trauma
Team**

Modified Trauma Team

- Emergency Physician
- Emergency Nurse(s)
- Laboratory
- Radiology

EXHIBIT 4
OAR Chapter 333, Division 200

OREGON TRAUMA HOSPITAL RESOURCE STANDARDS

AAAM	Association of the Advancement of Automotive Medicine	ICU	intensive care unit
ACS	American College of Surgeons	ISS	Injury Severity Score
AIS	Abbreviated Injury Scale	MRI	magnetic resonance imaging
ATLS	Advance Trauma Life Support	MTP	massive transfusion protocol
CAISS	Certified Abbreviated Injury Scale Specialist	OPO	organ procurement organization
CE	continuing education	OPPE	Ongoing Professional Practice Evaluation
CME	continuing medical education	OR	operating room
CRNA	certified registered nurse anesthetist	PI	performance improvement
CT	computed tomography	PIPS	Performance Improvement and Patient Safety
DIED	Died in emergency department	TBI	traumatic brain injury
DMEP	Disaster Management and Emergency Preparedness	TMD	trauma medical director
DOA	Dead on arrival	TPM	trauma program manager
EMS	emergency medical services	TQP	Trauma Quality Programs
FTE	full-time equivalent	VRC	Verification, Review, and Consultation
GCS	Glasgow Coma Scale		

Type: Verification standards are divided into Type 1 and Type 2 standards. Type 1 standards are considered critical standards that directly impact patient care. The trauma program should be in compliance with all applicable standards at the time of the survey visit. If noncompliance with any standard is identified, the trauma program must demonstrate compliance through a Corrective Action Review to achieve or extend

EFFECTIVE: October 1, 2025

verification. The type of Corrective Action Review will depend on the standard(s) in question. Noncompliance with a Type I standard would result in the trauma program not being verified.

LI, LII, LIII, LIII-N, LIV = Level I, Level II, Level III, Level III-Neuro, Level IV

PTCI & PTCII = Pediatric Trauma Center I & Pediatric Trauma Center II

R = Required standard

■ = Standard not required

Tag	Standard	Type	LI & PTCI	LII & PTCII	LIII (LIII-N*)	LIV
1: Institutional Administrative Commitment						
1.1	In all trauma centers, the institutional governing body, hospital leadership, and medical staff must demonstrate continuous commitment and provide the necessary human and physical resources to properly administer trauma care consistent with the level of verification throughout the verification cycle.	1	R	R	R	R
1.2	The hospital administration of a Level I trauma center must demonstrate support for the research program.	2	R	■	■	■
2: Program Scope & Governance						
2.1	All trauma centers must participate in the regional and/or statewide trauma system.	2	R	R	R	R
2.2	All trauma centers must participate in regional disaster/emergency management committees, health care coalitions, and regional mass casualty exercises.	2	R	R	R	R
2.3	All trauma programs must participate in two hospital drills or disaster plan activations per year that include a trauma response and are designed to refine the hospital’s response to mass casualty events. In Level I, II and III trauma programs must be integrated into the hospital’s disaster plan to ensure a robust surgical response: <ul style="list-style-type: none"> A trauma surgeon from the trauma panel must be included as a member of the hospital’s disaster committee and be responsible for the development of a surgical response to a mass casualty event. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The surgical response must outline the critical personnel, means of contact, initial surgical triage (including subspecialty triage when appropriate), and coordination of secondary procedures. <p>Level I trauma centers must also include an orthopedic surgeon from the orthopedic trauma call panel as a member of the hospital's disaster committee.</p>					
2.4	A Level I adult trauma center must care for at least 1,200 trauma patients per year or at least 240 trauma patients with an Injury Severity Score (ISS) greater than 15 per year.	1	R			
2.5	A Level I pediatric trauma center must care for 200 or more injured patients under 15 years of age per year.	1	PTCI			
2.6	<p>Adult trauma centers that annually admits to the hospital 100 or more injured children under 15 years of age must have the following:</p> <ul style="list-style-type: none"> Pediatric emergency department area Pediatric intensive care area Appropriate resuscitation equipment, as outlined in the pediatric readiness toolkit 	1	R	R	R	
2.7	<p>All trauma centers must have a trauma multidisciplinary PIPS committee chaired by the TMD or an associate TMD which meet at a minimum of quarterly.</p> <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must hold separate adult and pediatric trauma multidisciplinary PIPS meetings with distinct minutes.</p>	1	R	R	R	R
2.8	<p>In all trauma centers, the TMD must fulfill the following requirement:</p> <ul style="list-style-type: none"> Hold current Advanced Trauma Life Support (ATLS) Certification. <p>In Level I, II, and III trauma centers, the TMD must fulfill the following requirements:</p> <ul style="list-style-type: none"> Hold current board certification or board eligibility in general surgery or pediatric surgery by the American Board of Medical Specialties (ABMS), American Osteopathic Association (AOA), or Royal College of Physicians and Surgeons of Canada (RCPS-C). Serve as the director of a single trauma program. Be credentialed to provide trauma care. Participate on the trauma call panel Provide evidence of 36 hours of trauma-related continuing medical education (CME) during the verification cycle. For pediatric TMD, 9 of 36 hours must be pediatric-specific CME In Level I trauma centers, the TMD must hold active membership in at least one national trauma organization and have attended at least one meeting during the verification cycle. 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> In Level II or III trauma centers, TMD active membership in at least one regional, state, or national trauma organization and attendance at least one meeting during the verification cycle is recommended. <p>If a board-certified general surgeon who is not board-certified or board-eligible in pediatric surgery serves as the pediatric TMD, then the following are required:</p> <ul style="list-style-type: none"> The pediatric TMD must hold current Pediatric Advanced Life Support (PALS) certification The center must have a written affiliation agreement with a current pediatric TMD at another ACS verified Level I pediatric trauma center. This agreement must identify the affiliate pediatric TMD and at minimum include the following responsibilities: <ul style="list-style-type: none"> Assist with process improvement, guideline development, and complex case discussions Attend at least 50% of trauma multidisciplinary PIPS committee meetings Attend the VRC site visit at the time of verification <p>In Level IV trauma centers, the TMD is a physician that is currently board certified or board eligible in general surgery or pediatric surgery, or may be a physician practicing emergency medicine, responsible for coordinating the care of injured patients, verifies continuing medical education (CME) of personnel, and has oversight of the trauma quality improvement process. The TMD is clinically involved with trauma patient management and responsible for credentialing of trauma team members.</p>					
2.9	<p>In all trauma centers, the TMD must be responsible for and have the authority to:</p> <ul style="list-style-type: none"> Develop and enforce policies and procedures relevant to care of the injured patient. Ensure providers meet all requirements and adhere to institutional standards of practice. Work across departments and/or other administrative units to address deficiencies in care. Determine (with their liaisons) provider participation in trauma care, which might be guided by findings from the PIPS process or an Ongoing Professional Practice Evaluation (OPPE). Oversee the structure and process of the trauma PIPS program. 	2	R	R	R	R
2.10	<p>In Level I, II, and III trauma centers, the TPM must fulfill the following requirements:</p> <ul style="list-style-type: none"> Have 1.0 full-time equivalent (FTE) commitment to the trauma program Provide evidence of 36 hours of trauma-related continuing education (CE) during the verification cycle Hold current membership in a national or regional trauma organization 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<p>In Level II and III trauma centers, at least 0.5 FTE of the TPM's time must be spent on TPM-related activities. The remaining time must be dedicated to other roles within the trauma program.</p> <p>In combined programs that are Level II adult and Level II pediatric trauma centers, it is acceptable for the pediatric TPM of a Level II pediatric trauma center to serve at least 0.5 FTE as the pediatric TPM. The remaining time must be devoted to other roles within the adult or pediatric trauma program.</p> <p>In Level IV trauma centers, a proportionate FTE Trauma Coordinator must be employed for trauma centers with less than 250 patients per year.</p>					
2.11	<p>In all trauma centers, the trauma program manager (TPM) must have a reporting structure that includes the TMD and they are to assume at minimum, the following leadership responsibilities in conjunction with the TMD and/or hospital administration:</p> <ul style="list-style-type: none"> • Oversight of the trauma program • Assist with the budgetary process for the trauma program • Develop and implement clinical protocols and practice management guidelines • Provide educational opportunities for staff development • Monitor performance improvement activities in conjunction with a PI coordinator (where applicable) • Service as a liaison to administration and represent the trauma program on hospital and regional committees to enhance trauma care • Have oversight of the trauma registry 	2	R	R	R	R
2.12	<p>All trauma centers must have an injury prevention program that:</p> <ul style="list-style-type: none"> • Has a designated injury prevention professional • Prioritizes injury prevention work based on trends identified in the trauma registry and local epidemiological data • Implements at least two activities over the course of the verification cycle with specific objectives and deliverables that address separate major causes of injury in the community • Demonstrates evidence of partnerships with community organizations to support their injury prevention efforts 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level I trauma centers, the injury prevention professional must be someone other than the TPM or PI personnel.					
2.13	In all trauma centers, an organ procurement program must be available and consist of at least the following: <ul style="list-style-type: none"> • An affiliation with an organ procurement organization (OPO) • A written policy for notification of the regional OPO • Protocols defining clinical criteria and confirmatory tests for the diagnosis of brain death 	2	R	R	R	R
2.14	All pediatric trauma centers must have a child life program.	2	PTCI	PTCII		
3: Facilities and Equipment Resources						
3.1	In Level I and II trauma centers, an operating room (OR) must be staffed and available within 15 minutes of notification, and in Level III trauma centers an OR must be staffed and available within 30 minutes of notification.	1	R	R	R	
3.2	In Level I and II trauma centers, if the first OR is occupied, an additional OR must be staffed and available.	2	R	R		
3.3	Level I and II trauma centers must have a dedicated OR prioritized for fracture care in nonemergent orthopedic trauma. In a Level III trauma center, access to the OR must be made available for nonemergent orthopedic trauma.	2	R	R	R	
3.4	Level I and II trauma centers must have an adequate supply of blood products available. Level III and IV trauma centers must have an adequate supply of red blood cells and plasma available.	1	R	R	R	R
3.5	In Level I and II trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—15 minutes • Computed tomography (CT)—15 minutes • Point-of-care ultrasound—15 minutes • Interventional radiologic procedures—1 hour • Magnetic resonance imaging (MRI)—2 hours 	1	R	R	R	R

EFFECTIVE: October 1, 2025

	In Level III and IV trauma centers, the following services must be available 24 hours per day and be accessible for patient care within the time interval specified: <ul style="list-style-type: none"> • Conventional radiography—30 minutes • CT—30 minutes • Point-of-care ultrasound—15 minutes 					
3.6	Level I and II trauma centers must have a mechanism to remotely view radiographic images from referring hospitals within their catchment area.	2	R	R		
3.7	Level I, Level II, and Level III-N trauma centers must have cerebral monitoring equipment available.	1	R	R	*	
3.8	In Level I and II trauma centers, cardiopulmonary bypass equipment must be immediately available when required, or a contingency plan must exist to provide emergency cardiac surgical care.	2	R	R		
4: Personnel and Services						
4.1	Trauma surgeons must have direct patient care responsibilities at the institution and must meet the following qualifications: <ul style="list-style-type: none"> • Complete the ATLS course at least once • Have privileges in general and/or pediatric surgery • Hold current board certification or board eligibility in general surgery, or have been approved through the Alternate Pathway <ul style="list-style-type: none"> – Level I pediatric trauma centers must have at least two surgeons board-certified or board-eligible in pediatric surgery. – Level II pediatric trauma centers must have at least one surgeon board-certified or board-eligible in pediatric surgery. 	2	R	R	R	R
4.2	In Level I, II, and III trauma centers, trauma surgery coverage must be continuously available. In Level I and II trauma centers, the trauma surgeon must be dedicated to a single trauma center while on call.	1	R	R	R	
4.3	Level I and II trauma centers must have a published backup call schedule for trauma surgery. Level III trauma centers must have a documented backup call schedule or a backup plan for trauma surgery.	2	R	R	R	
4.4	In Level I, II, and III trauma centers, the trauma surgeon must be present in the operating suite for the key portions of operative procedures for which they are the responsible surgeon and must be immediately available throughout the procedure.	2	R	R	R	

EFFECTIVE: October 1, 2025

4.5	<p>The trauma program must have the following designated liaisons:</p> <p>LI, LII, PTCI, PTCII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist • Board-certified or board-eligible neurosurgeon • Board-certified or board-eligible radiologist • Board-certified or board-eligible intensive care unit (ICU) physician • Geriatric provider (applies only to LI and LII) <p>LIII:</p> <ul style="list-style-type: none"> • Board-certified or board-eligible emergency medicine physician • Board-certified or board-eligible orthopedic surgeon • Board-certified or board-eligible anesthesiologist or certified registered nurse anesthetist • Board-certified or board-eligible neurosurgeon (applies only to LIII-N) • Board-certified or board-eligible ICU physician <p>In Level I trauma centers, the orthopedic trauma surgeon liaison must have completed an orthopedic traumatology fellowship approved by the Orthopaedic Trauma Association (OTA). In Level I pediatric trauma centers, this requirement may be met by having a pediatric fellowship-trained orthopedic surgeon.</p>	2	R	R	R	
4.6	<p>In Level I and II trauma centers, the emergency department medical director must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine.</p> <p>In Level I and Level II trauma centers, physicians who completed primary training prior to 2016 and are board-certified in a specialty other than emergency medicine or pediatric emergency medicine may serve as the emergency department director.</p> <p>In Level III trauma centers, the emergency department director must be board-certified or board-eligible.</p> <p>In Level IV trauma centers, the emergency department must have a designated emergency physician director.</p>	1	R	R	R	R

EFFECTIVE: October 1, 2025

4.7	<p>In all trauma centers, emergency medicine physicians involved in the care of trauma patients must be currently board-certified or board-eligible or have been approved through the Alternate Pathway.</p> <ul style="list-style-type: none"> In Level I and II trauma centers, physicians must be board-certified or board-eligible in emergency medicine or pediatric emergency medicine. <ul style="list-style-type: none"> Physicians who completed primary training in a specialty other than emergency medicine or pediatric emergency medicine prior to 2016 may participate in trauma care. In Level I pediatric trauma centers, at least one physician must be board-certified or board-eligible in pediatric emergency medicine. In Level III and Level IV trauma centers, physicians must be board-certified or board-eligible in emergency medicine, pediatric emergency medicine, or a specialty other than emergency medicine. <p>All emergency physicians must have completed the ATLS course at least once. Physicians who are board-certified or board-eligible in a specialty other than emergency medicine must hold current ATLS certification.</p>	2	R	R	R	R	
4.8	<p>In Level I and II trauma centers, a board-certified or board-eligible emergency medicine physician must be present in the emergency department at all times. This requirement may also be met with a board-certified or board-eligible physician who completed primary training prior to 2016 in a specialty other than emergency medicine or pediatric emergency medicine.</p>	1	R	R			
4.9	<p>In Level I pediatric trauma centers, there must be at least two physicians who are board-certified or board-eligible in pediatric critical care medicine or in both pediatric surgery and surgical critical care.</p> <p>These two physicians must practice at least part of their time in the ICU where the majority of pediatric trauma patients are cared for.</p>	2	PTCI				
4.10	<p>Level I and II trauma centers must have board-certified or board-eligible neurosurgeons continuously available for the care of neurotrauma patients.</p> <p>Level III-N trauma centers must have board-certified or board-eligible neurosurgeons.</p> <p>In Level I pediatric trauma centers, there must be at least one board- certified or board-eligible neurosurgeon who has completed a pediatric neurosurgery fellowship.</p>	1	R				R

EFFECTIVE: October 1, 2025

4.11	Level I, II, and III trauma centers must have board-certified or board-eligible orthopedic surgeons continuously available for the care of orthopedic trauma patients and must have a contingency plan for when orthopedic trauma capabilities become encumbered or overwhelmed. In Level I pediatric trauma centers, at least one board-certified or board-eligible orthopedic surgeon must have completed a pediatric orthopedic fellowship.	1	R	R	R	
4.12	Trauma centers must have an orthopedic surgeon who has completed an Orthopedic Trauma Association-approved fellowship or has met the alternate training criteria. This requirement may also be met by having transfer protocols specifying the type of patients/injuries that will be transferred to a center with an orthopedic surgeon who has completed an OTA-approved fellowship or meets the alternate training criteria.	2	PTCI	R		
4.13	In Level I and II trauma centers, anesthesia services must be available within 15 minutes of request. Furthermore, the attending anesthesiologist must be present within 30 minutes of request for all operations. In Level III trauma centers, anesthesia services must be available within 30 minutes of request.	1	R	R	R	
4.14	In Level I, II, and III trauma centers, a radiologist must have access to patient images and be available for imaging interpretation, in-person or by phone, within 30 minutes of request.	1	R	R	R	
4.15	Level I and II trauma centers must have the necessary human and physical resources continuously available so that an endovascular or interventional radiology procedure for hemorrhage control can begin within 60 minutes of request.	2	R	R		
4.16	In Level I, II, and III trauma centers must have an ICU surgical director who is board-certified or board-eligible in general surgery and actively participates in unit administration. In Level I adult trauma centers, the ICU surgical director must be board-certified or board-eligible in surgical critical care.	2	R	R	R	
4.17	In Level I and II trauma centers, the ICU must be staffed with physicians who are continuously available within 15 minutes of request and whose primary responsibility is to the ICU.	1	R	R		
4.18	In Level II adult trauma centers, at least one surgeon must be board-certified or board-eligible in surgical critical care.	2		R		
4.19	In Level III trauma centers, provider coverage of the ICU must be available within 30 minutes of request, with a formal plan in place for emergency coverage.	1			R	
4.20	In all trauma centers, the patient-to-nurse ratio in the ICU must be 1:1 or 2:1, depending on patient acuity as defined by the hospital policy for ICU nursing staffing.	2	R	R	R	R
4.21	Level I trauma centers must have continuous availability of the surgical expertise listed below:	1	R	R		

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Cardiothoracic surgery • Vascular surgery • Hand surgery • Plastic surgery • Obstetrics/Gynecology surgery • Otolaryngology • Urology <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have surgical expertise listed above available.</p>				
4.22	<p>Level I trauma centers must have continuous availability of ophthalmology.</p> <p>Sporadic gaps in coverage due to vacation or conference attendance must be addressed with a contingency plan.</p> <p>Level II trauma centers must have ophthalmology available.</p>	2	R	R	
4.23	<p>Level I trauma centers must have the capability for comprehensive soft tissue coverage of wounds, including microvascular expertise for free flaps.</p>	1	R		
4.24	<p>Level I trauma centers must have the capability to diagnose and manage acute facial fractures of the entire craniomaxillofacial skeleton, including the skull, cranial base, orbit, midface, and occlusal skeleton, with expertise contributed by any of the following specialists: otolaryngology, oral maxillofacial surgery, or plastic surgery.</p>	1	R		
4.25	<p>Level I and II trauma centers must have replantation capability continuously available or must have in place a triage and transfer process with a replant center.</p>	2	R	R	
4.26	<p>Level I and II trauma centers must have all of the following medical specialists:</p> <ul style="list-style-type: none"> • Cardiology* • Gastroenterology* • Internal medicine or pediatrics* • Infectious disease* • Nephrology* • Pain management (with expertise to perform regional nerve blocks) • Physiatry • Psychiatry • Pulmonary medicine* 	2	R	R	R

EFFECTIVE: October 1, 2025

	An asterisk (*) denotes services that must be continuously available. Level III trauma centers must have internal medicine continuously available.					
4.27	Level I and II pediatric trauma centers must have either a physician on the medical staff who is board-certified or board-eligible in child abuse pediatrics or a physician with special interest in child abuse (nonaccidental trauma) who provides expertise to the trauma center.	2	PTCI	PTCII		
4.28	Trauma centers must have the following allied health services available: LI, LII, PTCI, PTCII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Speech therapy • Social worker (7 days per week) • Occupational therapy (7 days per week) • Physical therapy (7 days per week) LIII: <ul style="list-style-type: none"> • Respiratory therapy (24/7/365) • Nutrition support • Social worker • Occupational therapy • Physical therapy • Speech therapy 	2	R	R	R	
4.29	Level I and Level II trauma centers must have renal therapy services available to support patients with acute renal failure. Level III trauma centers must have renal replacement therapy services available to support patients with acute renal failure or a transfer agreement in place if this service is not available.	2	R	R	R	
4.30	In all trauma centers, trauma and/or emergency department advanced practice providers who are clinically involved in the initial evaluation and resuscitation of trauma patients during the activation phase must have current ATLS certification.	2	R	R	R	R
4.31	In all trauma centers, there must be at least 0.5 full-time equivalent (FTE) dedicated to the trauma registry per 200-300 annual patient entries. A proportionate FTE must be employed for hospitals with less than 200 annual patient entries. The count of entries is defined as all patients who meet Oregon Trauma Registry inclusion criteria.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Combined adult and pediatric programs (Level I/II adult trauma center with Level II pediatric trauma center) may share resources, but someone must be identified as the lead pediatric registrar.					
4.32	In Level I or other trauma centers seeking ACS verification, at least one registrar must be a current Certified Abbreviated Injury Scale Specialist (CAISS).	2	R			
4.33	In all trauma centers, all staff members who have a registry role in data abstraction and entry, injury coding, ISS calculation, data reporting, or data validation for the trauma registry must fulfill all of the following requirements: <ul style="list-style-type: none"> • Participate in and pass the Association of the Advancement of Automotive Medicine’s (AAAM’s) Abbreviated Injury Scale (AIS) course for the version used at your center • Participate in a trauma registry course that includes all of the following content: <ul style="list-style-type: none"> – Abstraction – Data management – Reports/report analysis – Data validation – HIPAA • Participate in an ICD-10 course or an ICD-10 refresher course every five years 	2	R	R	R	R
4.34	In all trauma centers, each trauma registrar must accrue at least 24 hours of trauma-related CE during the verification cycle.	2	R	R	R	R
4.35	In Level I, II, and III trauma centers, there must be at least 0.5 FTE dedicated performance improvement (PI) personnel when the annual volume of registry patient entries exceeds 500 patients. The count of entries is defined as all patients that meet Oregon Trauma Registry inclusion criteria. When the annual volume exceeds 1,000 registry patient entries, the trauma center must have at least 1.0 FTE PI personnel.	2	R	R	R	
4.36	In Level I adult and pediatric trauma centers, the trauma surgeon liaison to the disaster committee must successfully complete the Disaster Management and Emergency Preparedness (DMEP) course at least once.	2	R			
5: Patient Care: Expectations and Protocols						
5.1	All trauma centers must have evidence-based clinical practice guidelines, protocols, or algorithms that are reviewed every three years.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.2	In all trauma centers, the shared roles and responsibilities of trauma surgeons and emergency medicine physicians for trauma resuscitation must be defined and approved by the TMD.	2	R	R	R	R
5.3	In all trauma centers, the criteria for tiered activations must be clearly defined. For the highest level of activation, the following eight criteria must be included: <ul style="list-style-type: none"> • Confirmed blood pressure less than 90 mm Hg at any time in adults, and age-specific hypotension in children aged 0-9 years less than 70 mmHg + (2 x age years) • All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee • Glasgow Coma Scale less than 9 (with mechanism attributed to trauma) • Transfer patients from another hospital who require ongoing blood transfusions • Patients intubated in the field and directly transported to the trauma center • Patients who have respiratory compromise or are in need of an emergent airway • Emergency physician's discretion 	2	R	R	R	R
5.4	In all trauma centers providing trauma surgical services, for the highest level of activation, at least 80 percent of the time, the trauma surgeon must be at the patient's bedside within 15 minutes (Level I and Level II trauma centers) or 30 minutes (Level III and Level IV trauma centers) of patient arrival.	1	R	R	R	R
5.5	In all trauma centers providing trauma surgical services, the trauma program must define and meet acceptable response time to trauma surgical evaluation for activations other than the highest level.	2	R	R	R	R
5.6	All trauma centers must have the following protocols for care of the injured older adult: <ul style="list-style-type: none"> • Identification of vulnerable geriatric patients • Identification of patients who will benefit from the input of a health care provider with geriatric expertise • Prevention, identification, and management of dementia, depression, and delirium • Process to capture and document what matters to patients, including preferences and goals of care, code status, advanced directives, and identification of a proxy decision maker • Medication reconciliation and avoidance of inappropriate medications • Screening for mobility limitations and assurance of early, frequent, and safe mobility • Implementation of safe transitions to home or other health care facility 	2	R	R	R	R
5.7	All trauma centers must have a process in place to assess children for nonaccidental trauma.	2	R	R	R	R
5.8	All trauma centers must have a massive transfusion protocol (MTP) developed collaboratively between the trauma service and the blood bank.	1	R	R	R	R
5.9	All trauma centers must have a rapid reversal protocol in place for patients on anticoagulants.	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.10	In all trauma centers, each emergency department must perform a pediatric readiness assessment during the verification cycle and have a plan to address identified gaps.	2	R	R	R	R
5.11	All trauma centers must have a provider and equipment immediately available to establish an emergency airway.	1	R	R	R	R
5.12	All trauma centers must have clearly defined transfer protocols that include the types of patients, expected time frame for initiating and accepting a transfer, and predetermined referral centers for outgoing transfers.	2	R	R	R	R
5.13	In all trauma centers, the decision to transfer an injured patient must be based solely on the needs of the patient, without consideration of their health plan or payor status.	2	R	R	R	R
5.14	In all trauma centers, when trauma patients are transferred, the transferring provider must directly communicate with the receiving provider to ensure safe transition of care. This communication may occur through a transfer center.	2	R	R	R	R
5.15	In all trauma centers, diversion protocols must be approved by the TMD and include: <ul style="list-style-type: none"> • Agreement of the trauma surgeon in the decision to divert, for all trauma centers that provide trauma surgical services • A process for notification of dispatch and EMS agencies • A diversion log to record reasons for and duration of diversions 	2	R	R	R	R
5.16	All trauma centers must not exceed 400 hours of diversion during the reporting period.	2	R	R	R	R
5.17	Neurosurgical evaluation must occur within 30 minutes of request for the following: <ul style="list-style-type: none"> • Severe TBI (GCS less than 9) with head CT evidence of intracranial trauma • Moderate TBI (GCS 9–12) with head CT evidence of potential intracranial mass lesion • Neurologic deficit as a result of potential spinal cord injury (applicable to spine surgeon, whether a neurosurgeon or orthopedic surgeon) • Trauma surgeon discretion <p>In Level I, II, and III-N trauma centers, neurosurgical provider response times must be documented.</p> <p>In Level I and II trauma centers, the neurosurgery attending must be involved in clinical decision-making.</p>	2	R	R	*	
5.18	All Level III and IV trauma centers must have a written plan approved by the TMD that defines the types of neurotrauma injuries that may be treated at the center.	2			R	R
5.19	Level I and II trauma centers must have a neurotrauma contingency plan and must implement the plan when neurosurgery capabilities are encumbered or overwhelmed.	2	R	R	*	

EFFECTIVE: October 1, 2025

	<p>Level III-N trauma centers must have a neurotrauma contingency plan that includes the potential for diversion and must implement the plan when neurosurgery capabilities are encumbered, overwhelmed, or unavailable.</p> <p>The plan must include the following criteria:</p> <ul style="list-style-type: none"> • A thorough review of each instance by the PIPS program • Monitoring of the effectiveness of the process by the PIPS program 					
5.20	<p>In Level I, II, and III trauma centers must have treatment guidelines for, at minimum, the following orthopedic injuries:</p> <ul style="list-style-type: none"> • Patients who are hemodynamically unstable attributable to pelvic ring injuries • Long bone fractures in patients with multiple injuries (e.g., time to fixation, order of fixation, and damage control versus definitive fixation strategies) • Open extremity fractures (e.g., time to antibiotics, time to OR for operative debridement, and time to wound coverage for open fractures) • Hip fractures in geriatric patients (e.g., expected time to OR (LI, LII, LIII)) 	2	R	R	R	
5.21	<p>In Level I, II, and III trauma centers, an orthopedic surgeon must be at bedside within 30 minutes of request for the following:</p> <ul style="list-style-type: none"> • hemodynamically unstable, secondary to pelvic fracture • suspected extremity compartment syndrome • fractures/dislocations with risk of avascular necrosis (e.g., femoral head or talus) • vascular compromise related to a fracture or dislocation • trauma surgeon discretion <p>The attending orthopedic surgeon must be involved in the clinical decision-making for care of these patients.</p>	2	R	R	R	
5.22	<p>In Level I, II, and III trauma centers must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p> <p>Level IV trauma centers that provide surgical services must have an OR booking policy that specifies targets for timely access to the OR based on level of urgency and includes access targets for a range of clinical trauma priorities.</p>	2	R	R	R	R

EFFECTIVE: October 1, 2025

5.23	In all trauma centers providing trauma surgical services, trauma patients requiring ICU admission must be admitted to, or be evaluated by, a surgical service.	2	R	R	R	R
5.24	In all trauma centers providing trauma surgical services, the trauma surgeon must retain responsibility for the trauma patient in the ICU up to the point where the trauma surgeon documents transfer of primary responsibility to another service.	2	R	R	R	R
5.25	In all trauma centers, documentation of preliminary diagnostic imaging must include evidence that critical findings were communicated to the trauma team. The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretations.	2	R	R	R	R
5.26	In all trauma centers, documentation of the final interpretation of CT scans must occur no later than 12 hours after completion of the scan.	2	R	R	R	R
5.27	In Level I, II, and III trauma centers must meet the rehabilitation needs of trauma patients by: <ul style="list-style-type: none"> • Developing protocols that identify which patients will require rehabilitation services during their acute inpatient stay • Establishing processes that determine the rehabilitation care, needs, and services required during the acute inpatient stay • Ensuring that the required services during acute inpatient stay are provided in a timely manner 	2	R	R	R	
5.28	All trauma centers must have a process to determine the level of care patients require after trauma center discharge, as well as the specific rehabilitation care services required at the next level of care. The level of care and services required must be documented in the medical record.	2	R	R	R	R
5.29	All trauma centers must meet the mental health needs of trauma patients by having: <ul style="list-style-type: none"> • A protocol to screen patients at high risk for psychological sequelae with subsequent referral to a mental health provider (LI, LII, PTCI, PTCII) • A process for referral to a mental health provider when required (LIII, LIV) 	2	R	R	R	R
5.30	All trauma centers must screen all admitted trauma patients greater than 12 years old for alcohol misuse with a validated tool or routine blood alcohol content testing. Programs must achieve a screening rate of at least 80 percent.	2	R	R	R	R
5.31	In all trauma centers, at least 80 percent of patients who have screened positive for alcohol misuse must receive a brief intervention by appropriately trained staff prior to discharge. This intervention must be documented.	2	R	R	R	R

EFFECTIVE: October 1, 2025

	Level III and Level IV trauma centers must have a mechanism for referral if brief intervention is not available as an inpatient.					
6: Data Surveillance and Systems						
6.1	All trauma centers must have a written data quality plan and demonstrate compliance with that plan. At minimum, the plan must require quarterly review of data quality.	2	R	R	R	R
6.2	In all trauma centers, the trauma registry must be concurrent, defined as having a minimum of 80 percent of patient records completed within 60 days of the patient discharge date.	2	R	R	R	R
6.3	In all trauma centers, trauma registry data must be collected in compliance with the Oregon Trauma Registry inclusion criteria and Oregon Trauma Registry Data Dictionary data elements index. In Level I and Level II trauma centers, data must be submitted to the National Trauma Data Bank® every year in a timely fashion so that it can be aggregated and analyzed at the national level.	2	R	R	R	R
7: Performance Improvement and Patient Safety						
7.1	In all trauma centers, the trauma PIPS program must be independent of the hospital or departmental performance improvement (PI) program, but it must report to the hospital or departmental PI program.	2	R	R	R	R
7.2	All trauma centers must have a written PIPS plan that: <ul style="list-style-type: none"> • Outlines the organizational structure of the trauma PIPS process, with a clearly defined relationship to the hospital PI program • Specifies the processes for event identification. As an example, these events may be brought forth by a variety of sources, including but not limited to: individual personnel reporting, morning report or daily sign-outs, case abstraction, registry surveillance, use of clinical guideline variances, patient relations, or risk management. The scope for event review must extend from prehospital care to hospital discharge. • Includes a list of audit filters, event review, and report review that must include, at minimum, those listed in the Resources section • Defines levels of review (primary, secondary, tertiary, and/or quaternary), with a listing for each level that clarifies: <ul style="list-style-type: none"> – Which cases are to be reviewed 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> – Who performs the review – When cases can be closed or must be advanced to the next level • Specifies the members and responsibilities of the trauma multidisciplinary PIPS committee • Outlines an annual process for identification of priority areas for PI, based on audit filters, event reviews, and benchmarking reports 					
7.3	All trauma centers must have documented evidence of event identification; effective use of audit filters; demonstrated loop closure; attempts at corrective actions; strategies for sustained improvement measured over time.	2	R	R	R	R
7.4	All trauma centers must participate in a benchmarking program and use the results to determine whether there are opportunities for improvement in patient care and registry data quality.	2	R	R	R	R
7.5	In all trauma centers, a physician from the emergency department or trauma program must participate in the prehospital PIPS program, including assisting in the development of prehospital care protocols relevant to the care of trauma patients.	2	R	R	R	R
7.6	<p>All trauma centers must meet the following trauma multidisciplinary PIPS committee meeting attendance thresholds:</p> <ul style="list-style-type: none"> • 60 percent of meetings for the TMD (cannot be delegated to the associate TMD) • 50 percent of meetings for each trauma surgeon • 50 percent of meetings for the liaisons (or one predetermined alternate) from emergency medicine, neurosurgery, orthopedic surgery, critical care medicine, and anesthesia, • 50 percent of meetings for the liaison (or one predetermined alternate) from radiology (LI, LII, PTCI, PTCII) <p>Combined adult (Level I/II) and pediatric (Level II) trauma centers must have 50 percent attendance by a representative (TMD or one predetermined alternative) from the other program; this representative is responsible for disseminating information to panel members of the other program.</p> <p>Level IV trauma centers must have 50 percent attendance by medical staff active in trauma resuscitation.</p>	2	R	R	R	R
7.7	<p>In all trauma centers, all cases of trauma-related mortality and transfer to hospice must be reviewed and classified for potential opportunities for improvement.</p> <p>Deaths must be categorized as:</p> <ul style="list-style-type: none"> • Mortality with opportunity for improvement 	2	R	R	R	R

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> • Mortality without opportunity for improvement 					
7.8	<p>In all trauma centers, all nonsurgical trauma admissions must be reviewed by the trauma program.</p> <p>As part of secondary review, the Trauma Medical Director must review non-surgical admissions according to the criteria in the Nelson Criteria for Nonsurgical Admission.</p>	2	R	R	R	R
7.9	In all trauma centers, all instances of diversion must be reviewed by the trauma operations committee.	2	R	R	R	R
7.10	<p>All trauma centers must have a process of reviewing and providing feedback to:</p> <ul style="list-style-type: none"> • EMS agencies, related to accuracy of triage and provision of care • Referring providers, related to the care and outcomes of their patients and any potential opportunities for improvement in initial care 	2	R	R	R	R
8: Education: Professional and Community Outreach						
8.1	All trauma centers must provide public and professional trauma education.	2	R	R	R	R
8.2	<p>All trauma centers must provide trauma orientation to new nursing staff caring for trauma patients.</p> <p>Nurses must participate in trauma continuing education (CE) corresponding to their scope of practice and patient population served.</p>	2	R	R	R	R
8.3	In all trauma centers, the trauma program must participate in the training of prehospital personnel.	2	R	R	R	R
8.4	<p>Level I trauma centers must demonstrate commitment to postgraduate training and education by having residency rotations in trauma that meet all of the following conditions:</p> <ul style="list-style-type: none"> • There must be a defined trauma curriculum and trauma-specific objectives for junior and senior residents • The rotations must be available to, at minimum, general surgery, orthopedic, neurosurgery, and emergency medicine residents • All residents on the trauma service must be from an Accreditation Council for Graduate Medicine Education (ACGME) accredited program • There must be a sufficient volume and breadth of cases to provide general surgery senior residents the opportunity to meet the competency requirements for senior general surgery residents in trauma set forth by the ACGME 	2	R			

EFFECTIVE: October 1, 2025

	<ul style="list-style-type: none"> The rotation must be continuously available to residents to assure ample exposure to trauma care 			
9: Research				
9.1	<p>Level I trauma centers must demonstrate the following scholarly activities during the verification cycle:</p> <ul style="list-style-type: none"> At least 10 trauma-related research articles* Participation by at least one trauma program faculty member as a visiting professor, invited lecturer, or speaker at a regional, national, or international trauma conference Support of residents or fellows in any of the following scholarly activities: laboratory experiences; clinical trials; resident trauma paper competitions at the state, regional, or national level; and other resident trauma research presentations <p>*Fulfillment of the research requirement must also meet the following criteria:</p> <ul style="list-style-type: none"> At least three articles must be authored by general surgery/pediatric trauma providers Research activity must be performed at the trauma center If case series are to be counted, they must include more than five patients Basic science research must involve topics directly related to the pathophysiology of injury At least three articles must be from disciplines other than general/pediatric surgery All articles must be published or accepted for publication in peer-reviewed and indexed journals Authors from the trauma center must meet accepted authorship requirements of the International Committee of Medical Journal Editors One paper from acute care surgery may be included 	2	R	

EXHIBIT 5

OAR Chapter 333, Division 200

OREGON CRITERIA for CONSIDERATION of TRANSFER to a LEVEL I or II TRAUMA CENTER

HEAD AND CENTRAL NERVOUS SYSTEM

- Penetrating injuries or open fracture of the skull
- GCS < 14 or lateralizing neurologic signs (if no neurosurgical consultation is available.)
- Spinal fracture or spinal cord deficit
- Carotid or vertebral arterial injury

CHEST

- More than two unilateral rib fractures or bilateral rib fractures with pulmonary contusion (if no critical care consultation is available)
- Torn thoracic aorta or great vessel
- Cardiac injury or rupture
- Bilateral pulmonary contusion with Pao₂:Flo₂ ratio less than 200 (require protracted ventilation)

ABDOMEN AND PELVIS

- Major abdominal vascular injury
- Grade IV or V liver injuries requiring transfusion
- Unstable pelvic fracture requiring transfusion
- Complex pelvis/acetabulum fractures
- Open pelvic injury

MULTIPLE SYSTEM INJURY

- Significant head injury combined with significant face, chest, abdominal, or pelvic injury
- Significant torso injury with advanced comorbid disease (such as coronary artery disease, chronic obstructive pulmonary disease, type 1 diabetes mellitus, or immunosuppression)
- Burns with associated injuries
- Fracture or dislocation with loss of distal pulses

SECONDARY DETERIORATION (LATE SEQUELAE)

- Patients requiring long term ventilation
- Sepsis
- Single or multiple organ system failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal or coagulation systems)
- Major tissue necrosis

AMEND: 333-200-0285

RULE TITLE: Violations

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0285

For purposes of determining a delay in reporting trauma patient data, clarifies that the data is calculated from date of patient discharge.

RULE TEXT:

(1) No person, emergency medical service, medical clinic, or hospital shall by any means advertise, assert, represent, offer, provide or imply that such person, service, clinic or hospital is a trauma system hospital or has the capabilities for providing treatment to trauma patients beyond the status for which the approval has been granted.

(2) No trauma system hospital shall in any manner advertise or publicly assert that its trauma approval affects the hospital's care capabilities for non-trauma system patients, nor that the approval should influence the referral of non-trauma system patients.

(3) Where a hospital is greater than three months in arrears in reporting required trauma patient data, calculated from the date of patient discharge, the Oregon Health Authority (Authority) may contract with an independent data collection and abstraction service to perform the data collection. The Authority shall assess the trauma system hospital for all costs associated with such collection of required data.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, 431A.065, 431A.090

AMEND: 333-200-0295

RULE TITLE: Enforcement

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-200-0295

Clarifies that the Oregon Health Authority (OHA) may suspend or revoke a hospital's categorization and further clarifies that failure of a trauma hospital to comply with data reporting requirements after the OHA has utilized an independent data collection and abstraction service is grounds for suspension or revocation as a trauma hospital.

RULE TEXT:

- (1) Following a survey, a member of the survey team may conduct an exit conference with the applicant or his or her designee. During the exit conference, a survey team member shall:
 - (a) Inform the applicant or designee of the preliminary findings of the survey; and
 - (b) Give the person a reasonable opportunity to submit additional facts or other information to the surveyor in response to those findings.
- (2) Following the survey, a determination shall be made and Oregon Health Authority (Authority) staff shall prepare and provide the applicant or his or her designee specific and timely written notice of the findings. An applicant shall have 30 days from receipt of the survey report to request a reconsideration of the categorization.
- (3) If during a survey, the survey team documents non-compliance with trauma rules or laws, the deficiencies will be identified in the survey report and the laws alleged to have been violated and the facts supporting the allegation.
 - (a) A corrective action plan must be mailed to the Authority within 45 to 60 calendar days from the date the survey report was received by the applicant.
 - (b) The Authority shall prescribe the time frame an applicant has to correct all deficiencies. The time frame shall be based on the seriousness of the deficiencies and whether any deficiencies affect patient safety.
 - (c) The Authority may determine that a focused review is necessary within one year of the date of the survey in order to determine that the deficiencies identified in the survey report have been corrected.
- (4) Upon receipt of the Authority's written survey report, an applicant shall be provided an opportunity to dispute any findings including identified deficiencies. If an applicant desires an informal conference to dispute the survey findings, the applicant shall notify the Authority in writing within 10 calendar days after receipt of the written survey report. The written request must include a detailed explanation of why the applicant believes the findings are inaccurate.
- (5) The Authority shall determine if a corrective action plan is acceptable. If the plan of correction is not acceptable to the Authority, the Authority shall notify the applicant in writing or by telephone:
 - (a) Identifying which provisions in the plan the Authority finds unacceptable;
 - (b) Citing the reasons the Authority finds them unacceptable; and
 - (c) Requesting that the plan of correction be modified and resubmitted no later than 30 calendar days from the date the letter of non-acceptance was received by the applicant.
- (6) The Authority may re-survey a trauma system hospital, immediately suspend or revoke a trauma system hospital categorization or place a hospital on probation under any of the following circumstances:
 - (a) Substantial failure, for any reason, of a hospital to comply with these rules, all current state and area trauma system standards, and all policies, protocols and procedures as set forth in the approved area trauma system plan; or
 - (b) Submission of reports to the Authority that are incorrect or incomplete in any material aspect.
- (7) Except as set forth in OAR 333-200-0285(3), occasional failure of a trauma system hospital to meet its obligations will not be grounds for probation, suspension or revocation by the Authority if the circumstances under which the failure occurred:
 - (a) Do not reflect an overall deterioration in quality of and commitment to trauma care; and
 - (b) Are corrected immediately by the hospital.
- (8) Failure of a trauma system hospital to comply with the data reporting requirements under OAR 333-200-0265(8) after the Authority has utilized an independent data collection and abstraction service pursuant to OAR 333-200-

0285(3) is grounds for suspension or revocation as a trauma hospital.

(9) A hospital which is dissatisfied with the decision of the Authority regarding revocation, suspension, or probation in section (6) or (8) of this rule may request a contested case hearing pursuant to ORS chapter 183.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, ORS 431A.065, ORS 431A.090

AMEND: 333-205-0000

RULE TITLE: Purpose

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-205-0000

Updates statutory authority and statutes implemented based on renumbering of statute. Clarifies rule numbers referenced.

RULE TEXT:

OAR 333-205-0000 through 333-205-0050 establish standards for the approval and designation of Level I trauma system hospitals in Trauma Area #1. OAR 333-205-0000 through 333-205-0050 establish standards in addition to OAR 333-200-0000 through 333-200-0295. For all standards addressed in both OAR 333-200-0000 through 333-200-0295 and 333-205-0000 through 333-205-0050, the rules contained in OAR 333-205-0000 through 333-205-0050 shall apply.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.050 - 431A.100

AMEND: 333-205-0010

RULE TITLE: Designation

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-205-0010

References to the "Division" have been updated to reflect the Oregon Health Authority (Authority). Updates statutory authority and statutes implemented based on renumbering of statute.

RULE TEXT:

(1) The designation method of selecting Level I trauma system hospitals shall be implemented in accordance with the provisions of OAR 333-200-0090(2) and (5), 333-200-0235, and 333-200-0245.

(2) Written notification of the trauma system hospital designation shall be provided to the applicant by the Oregon Health Authority (Authority). An applicant shall have 30 days from the receipt of notification of non-designation to file a request with the Authority for reconsideration.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, ORS 431A.065, ORS 431A.090

AMEND: 333-205-0040

RULE TITLE: Number of Facilities

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-205-0040

References to the "Division" have been updated to reflect the Oregon Health Authority (Authority). Updates statutory authority and statutes implemented based on renumbering of statute.

RULE TEXT:

(1) The Oregon Health Authority (Authority) shall designate a sufficient number of Level I trauma system hospitals to assure resources within ATAB 1 are routinely available to treat at least four major trauma patients within a 90-minute time period. Major trauma means serious injury caused by external forces which results in death or an injury severity score of 16 or greater, a three-day hospital length of stay, or requires intensive care admission or major surgical procedure within six hours of hospital admission.

(2) The Authority shall designate a maximum of two Level I hospitals and shall not designate any Level III or Level IV hospitals in Clackamas, Multnomah and Washington Counties.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, ORS 431A.065, ORS 431A.090

AMEND: 333-205-0050

RULE TITLE: Hospital Designation Criteria

NOTICE FILED DATE: 08/22/2024

RULE SUMMARY: Amend OAR 333-205-0050

References to the "Division" have been updated to reflect the Oregon Health Authority (Authority). Updates statutory authority and statutes implemented based on renumbering of statute. Updates the reference to the American College of Surgeons, Resources for Optimal Care of the Injured Patient specifying that the OHA will consider the 2022 standards (revised December 2023) for purposes of designating a trauma hospital.

RULE TEXT:

(1) The Oregon Health Authority (Authority) shall utilize criteria as set forth in OAR 333-200-0090(5) and may, in addition, utilize the following criteria for selecting trauma system hospitals:

- (a) Locations of major trauma incidents; and
- (b) Geographical barriers which impede air or ground transportation.

(2) The Authority shall consider the information contained in Resources for Optimal Care of the Injured Patient 2022 Standards, Revised December 2023; Verification, Review and Consultation Program, American College of Surgeons when interpreting the standards for the purpose of designating trauma system hospitals. This publication is not adopted as part of these rules.

STATUTORY/OTHER AUTHORITY: ORS 431A.065

STATUTES/OTHER IMPLEMENTED: ORS 431A.060, ORS 431A.065, ORS 431A.090