

EXHIBIT 4

Referenced in OAR 333-200-0080(4)(c) & (5)(b); 333-200-0090(1), (1)(b)(C), & (3); and 333-205-0020(1)

TRAUMA HOSPITAL RESOURCE STANDARDS

Note: Occasional variances from these standards may occur. These should be reviewed as part of the hospital's performance improvement process.

The following table shows levels of categorization and their essential "E" or desirable "D" characteristics.

Effective Date: May 4, 2000	LEVELS			
	Regional (I)	Area (II)	Local (III)	Community (IV)
(1) HOSPITAL ORGANIZATION				
Hospital				
Demonstrated institutional commitment by the hospital's Board of Directors and administration to maintain adequate resources to care for all trauma patients presented to the hospital.	E	E	E	E
Participation in a statewide system including submission of data to the Oregon Trauma Registry; support of regional and statewide quality improvement, commitment of financial, human, and physical resources to optimize trauma patient care.	E	E	E	E
Trauma Service				
Specific delineation of privileges for the trauma service must occur by the medical staff credentialing committee.	E	E	E	E
Trauma Team				
Trauma Team - organized and directed by a general surgeon verified in Advanced Trauma Life Support (ATLS) and committed to the care of the injured; all adult and pediatric patients with multiple system or major injury or who meet trauma system triage criteria must be initially evaluated by the trauma team; and the involved surgeon(s) who shall be responsible for the overall provision and standards of care for the multiply injured patient from resuscitation through discharge. A team approach is required for optimal care of patients with multiple system injuries.	E	E	E	

Effective Date: May 4, 2000	LEVELS			
	Regional (I)	Area (II)	Local (III)	Community (IV)
Trauma Team - organized and directed by a physician practicing emergency medicine, verified in ATLS and committed to the care of the injured; all adult and pediatric patients with multiple system or major injury or who meet trauma system triage criteria must be initially evaluated by the trauma team; and the physician who shall be responsible for overall care of a patient (the team leader) identified from resuscitation through discharge. A team approach is required for optimal care of patients with multiple system injuries.				E
Trauma Director				
Trauma Director - Board certified surgeon, responsible for coordinating the care of injured patients, the continuing medical education of personnel, and oversight of the trauma quality improvement process. Clinically involved with trauma patient management. Responsible for credentialing of trauma team members.	E	E	E	D
ATLS Instructor	E	D		
Trauma Director - Physician practicing emergency medicine, responsible for coordinating the care of injured patients, verification of continuing medical education of personnel, and oversight of the trauma quality improvement process. Clinically involved with trauma patient management. Responsible for credentialing of trauma team members.				E
Trauma Coordinator				
Trauma Coordinator - a registered nurse involved in clinical activities, education, research, quality improvement, data collection, liaison to the medical staff, prehospital community and the patient's family. There must be dedicated hours for this position.	E	E	E	E
(2) HOSPITAL DEPARTMENTS/ DIVISIONS/ SECTIONS				
Surgery	E	E	E	
Neurological Surgery	E	E		
Neurosurgical Trauma liaison	E			
Orthopedic Surgery	E	E		
Emergency Medicine	E	E	E	
Anesthesia	E	E	E	
(3) CLINICAL CAPABILITIES				
Published On-Call Schedule:	E	E	E	E

Effective Date: May 4, 2000	LEVELS			
	Regional (I)	Area (II)	Local (III)	Community (IV)
General surgery	E	E	E	
Published back-up schedule	E	E	D	
Anesthesia	E	E	E	D
Emergency Medicine	E	E	E	D
Emergency Department				E
On-call and Promptly Available (available to the patient within 30 minutes of physician notification):				
Neurologic surgery	E	E	D	
Orthopedic surgery	E	E	E	D
Cardiac surgery	E	D		
Microsurgery	E	D		
Obstetric/Gynecologic surgery	E	E	D	
Hand surgery	E	E	D	
Ophthalmic surgery	E	E	D	
Oral surgery - Dental	E	E	D	
Otorhinolaryngologic surgery	E	E	D	
Pediatric surgery	E	D		
Facial reconstructive surgery team	E	E	D	
Thoracic surgery	E	E	D	
Urologic surgery	E	E	D	
Vascular surgery	E	E	D	
Critical care medicine	E	E	D	
Pediatrics	E	E	D	D
Radiology	E	E	E	D
Neuroradiology	E	D		
(4) CLINICAL QUALIFICATIONS				
General/Trauma Surgeon				
Board certified (may be a surgeon who is a graduate of an ACGME approved residency and who is less than five years out of training. If the surgeon fails to obtain board certification within five years, s/he is no longer eligible).	E	E	E	D
Full, unrestricted general surgery privileges.	E	E	E	D

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	Regional (I)	Area (II)	Local (III)	Community (IV)
ATLS course completion.	E	E	E	E
ATLS re-verification every four years or 16 hours of trauma-related category I CME over a period of four years. Two of the hours must address acute pediatric trauma management.	E	E	E	E
Attendance of a general/trauma surgeon representative at 75% of multidisciplinary and peer review committee meetings.	E	E	E	D
Emergency Medicine				
Board certified or board eligible full-time emergency medicine practitioner with special competence in care of the critically injured adult and pediatric patient.	E	D	D	D
Physicians who are qualified and experienced in caring for patients with traumatic injuries and who can initiate resuscitative measures.		E	E	E
ATLS course completion.	E	E	E	E
ATLS re-verification every four years or 16 hours of trauma-related category I CME over a period of four years. Two of the hours must address acute pediatric trauma management.	E	E	E	E
Attendance of an emergency medicine representative at 75% of multidisciplinary and peer review committee meetings.	E	E	E	E
In-house and immediately available to the patient upon arrival in the emergency department.	E	E	E	D
Neurologic Surgery				
Board certified or board eligible with full, unrestricted neurosurgery privileges. On-call and promptly available to the patient.	E	E	D	
ATLS course completion.	D	D	D	
Attendance of a neurosurgery representative at 75% of multidisciplinary and peer review committee meetings.	E	D	D	
General surgeon who has been credentialed in the initial management of neurotrauma, as determined by the director of neurotrauma. In-house or promptly available to the patient.	E	E		
Back-up neurosurgeon promptly available to the patient.	E			
Orthopedic Surgery				
Board certified or board eligible with full, unrestricted orthopedic surgery privileges. On-call and promptly available to the patient.	E	D	D	D

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	Regional (I)	Area (II)	Local (III)	Community (IV)
Full, unrestricted orthopedic surgery privileges. On-call and promptly available to the patient.		E	E	E
ATLS course completion.	D	D	D	D
Attendance of an orthopedic surgery representative at 75% of multidisciplinary and peer review committee meetings.	E	D	D	D
Back-up orthopedic surgeon promptly available to the patient.	E			
Anesthesia				
Board certified or board eligible, anesthesiologist with full, unrestricted anesthesiology privileges.	E	E		
Anesthesiologist (full, unrestricted anesthesiology privileges) or nationally Certified Registered Nurse Anesthetist.			E	E
ATLS course completion.	D	D	D	D
Attendance of an anesthesiology representative at 75% of multidisciplinary and peer review committee meetings.	E	D	D	D
In-house and immediately available to the patient upon arrival in the emergency department, with a back-up physician promptly available to the patient.	E	D		
Anesthesiologist or Certified Registered Nurse Anesthetist on-call and promptly available to the patient.		E	E	E
(5) SPECIAL FACILITIES/RESOURCES/CAPABILITIES				
Volume Performance				
Trauma admissions of 1200 annually.	E			
Patients with an ISS of > 15 (240 total or 35 patients/surgeon).	E			
General surgeon in house and present to direct the patient's resuscitation in the emergency department, with a back-up surgeon promptly available.	E			
General surgeon on-call and available to direct the patient's resuscitation.		E	E	
Physician practicing emergency medicine on-call and available to direct the patient's resuscitation.				E
Attending Surgeon present at operative procedures.	E	E	E	E

Effective Date: May 4, 2000	LEVELS			
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Performance improvement processes to assure that the general surgeon (level I, II, or III) or the physician practicing emergency medicine (level IV) on-call for trauma will be notified in a timely manner of an impending trauma patient arrival and that the surgeon or the physician practicing emergency medicine will be present to direct the trauma team through the vital phases of resuscitation.	E	E	E	E
Hospital's trauma performance improvement process will monitor each surgeon's (level I, II, or III) or the physician practicing emergency medicine (level IV) response to trauma system patients and document both the physician notification and arrival times on the trauma flow sheet. The Health Division through annual reports and site surveys will monitor this performance category.	E	E	E	E
Emergency Department				
Personnel:				
Emergency department staffing shall ensure immediate care of the trauma patient.	E	E	E	E
Designated Physician Director	E	E	E	E
Registered Nurse who provides continual monitoring of the trauma patient from hospital arrival until disposition from the emergency department.	E	E	E	E
Initial 16 hour Health Division approved trauma life support course for nurses, followed by either recertification or 16 hours of trauma related CEUs over a period of four years.	E	E	E	E
At least two RNs in the Emergency Department and immediately available to the patient upon arrival.	E	E		
At least two RNs in-house and immediately available to the patient upon arrival to the emergency department.			E	D
At least two RNs in-house or on-call and promptly available to the patient upon arrival to the emergency department.				E
Equipment for Resuscitation for Patients of All Ages:				
Airway control and ventilation equipment including laryngoscope and endotracheal tubes of all sizes, bag-mask resuscitator, sources of oxygen, pulse oximeter, CO, monitoring and mechanical ventilator;	E	E	E	E

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Suction devices	E	E	E	E
Electrocardiograph-oscilloscope-defibrillator with infant and pediatric paddles;	E	E	E	E
Apparatus to establish central venous pressure monitoring;	E	E	E	E
All standard intravenous fluids and administration devices, including intravenous catheters and intraosseous needles;	E	E	E	E
Thermal warmers for fluids and blood, including rapid volume infuser system;	E	E	E	D
Sterile surgical sets for standard emergency procedures;	E	E	E	E
Gastric decompression equipment;	E	E	E	E
Drugs and supplies necessary for emergency care of adult and pediatric patients;	E	E	E	E
Two-way radio communications with prehospital care providers;	E	E	E	E
Skeletal Traction device for cervical injuries (Hard collar cervical immobilization may be used as an alternative); and	E	E	E	E
Special color coding of equipment based on age and size.	E	E	E	E
Radiology Equipment:				
X-ray capability 24 hours/day with in-house technicians;	E	E	D	D
Technician on-call and promptly available to the patient upon arrival to the emergency department;			E	E
Ultrasound	D	D	D	D
Operating Room				
Personnel:				
An operating room with in-house staff immediately available to the patient 24 hours/day. The primary function of the staff must be to the operating room.	E	D		
An operating room must be promptly available and adequately staffed 24 hours/day.		E	E	E
Equipment:				
Cardiopulmonary by-pass capability;	E	D		

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Operating microscope;	E	D	D	
Thermal control equipment:				
For patient; and	E	E	E	E
For blood and fluids.	E	E	E	E
X-ray capability; including c-arm image intensifier	E	E	E	E
Endoscopes, bronchoscope;	E	E	E	D
Craniotomy instruments;	E	E	D	D
Monitoring equipment; and	E	E	E	E
Rapid volume infuser system.	E	E	E	D
Postanesthetic Recovery Room (surgical intensive care unit is acceptable)				
Registered nurses available 24 hours/day	E	E	E	D
Appropriate monitoring and resuscitation equipment for adult and pediatric patients.	E	E	E	D
Intracranial pressure monitoring equipment. Intracranial pressure monitoring equipment is required at Level III trauma facilities where neurosurgical patients are acutely managed.	E	E	E	
Pulse oximetry	E	E	E	E
Thermal control	E	E	E	E
Intensive or Critical Care Unit for Injured Patients				
Personnel:				
Designated medical director;	E	E	E	
Surgical ICU service physician on-call or in-house 24 hours/day;	E	D	D	
Surgically directed and staffed ICU service; and	E	D	D	
Registered nurses with trauma education.	E	E	E	
Initial 16 hour Health Division approved trauma life support course for nurses involved with the acute management of trauma patients, followed by either recertification or 16 hours of trauma related CEUs over a period of four years.	E	E	E	
Equipment for monitoring and resuscitation	E	E	E	

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Intracranial pressure monitoring equipment. Intracranial pressure monitoring equipment is required at Level III trauma facilities where neurosurgical patients are acutely managed.	E	E	E	
Pulmonary artery monitoring equipment	E	E	E	
Respiratory Therapy Services				
Available in-house 24 hours/day	E	E	D	D
On-call and promptly available 24 hours/day			E	D
Radiological Special Capabilities				
Angiography of all types	E	E	D	
Sonography	E	E	E	D
Computed tomography	E	E	E	D
Technician in-house	E	D		
Technician on-call and promptly available		E	E	E
Clinical Laboratory services available 24 hours/day				
Standard analyses of blood, urine and other body fluids, including micro sampling.	E	E	E	E
Blood typing and cross-matching	E	E	E	E
Coagulation studies	E	E	E	E
Comprehensive blood bank or access to a community central blood bank and Red Cross approved hospital storage facilities	E	E	E	E
Blood gases and pH determinations	E	E	E	E
Microbiology	E	E	E	E
Acute Hemodialysis				
In-house	E	D		
Transfer agreement		E	E	E
Burn Care - Organized				
In-house or transfer agreement with a burn center	E	E	E	E
Acute Spinal Cord/ Head Injury Management				
In circumstances where a designated spinal cord injury rehabilitation center exists in the region, early transfer should be considered; transfer agreements should be in effect.	E	E	E	E
In circumstances where a head injury center exists in the region, transfer should be considered in selected patients; transfer agreements should be in effect.	E	E	E	E

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(6) REHABILITATION SERVICES				
Transfer agreement with an approved rehabilitation facility	E	E	E	E
Physical therapy	E	E	E	D
Occupational therapy	E	E	D	D
Speech therapy	E	E	D	
Social service	E	E	E	D
(7) QUALITY IMPROVEMENT				
Organized Performance Improvement Program for Trauma System Patients. There should be evidence of processes to demonstrate corrective action which affects patient care.	E	E	E	E
Special audit for all trauma deaths and other cases specified by the trauma committee.	E	E	E	E
Morbidity and mortality review of clinical care issues.	E	E	E	E
Trauma conference, multi-disciplinary	E	E	E	E
Regular and periodic multi-disciplinary trauma conferences that include all members of the trauma team. This conference shall be for the purpose of quality improvement through critiques of individual cases.	E	E	E	E
Participation in the review of prehospital and regional systems of trauma care as indicated by the ATAB Quality Improvement Plan.	E	E	E	E
Trauma Registry:	E	E	E	E
Full participation in the Oregon Trauma Registry with accurate and timely reporting.	E	E	E	E
Designated Trauma Registry Coordinator	E	E	E	E
(8) CONTINUING EDUCATION/OUTREACH PROGRAM:				
General surgery residency program	E			
ATLS course provider/ participant	E	D	D	D
Continuing education programs provided by the hospital for:				
Staff physicians	E	E	E	D
Nurses	E	E	E	D
Allied health personnel	E	E	E	D
Community physicians	E	E	E	D
Prehospital personnel	E	E	E	D

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	Regional (I)	Area (II)	Local (III)	Community (IV)
Telephone and on-site consultation with physicians of the community and outlying areas.	E	E	D	D
(9) PUBLIC EDUCATION/PREVENTION				
Injury control studies	E	D		
Collaboration with other institutions	E	D	D	D
Monitor progress/ effect of prevention programs	E	D	D	D
Designated prevention coordinator-spokesperson for injury control	E	E	D	
Outreach activities	E	E	D	D
Information resources for the public	E	E	D	
Collaboration with existing national, regional, and state programs	E	E	D	
Coordination and/or participation in community prevention activities	E	E	E	D
(10) TRAUMA RESEARCH PROGRAM				
Trauma registry quality improvement activities	E	E	E	
Research committee	E	D		
Identifiable IRB process	E	D		
At least four extramural educational presentations per year.	E	D	D	
Scientific publications in peer-reviewed journals. At least 10 for the trauma program over a three year period.	E	D		

