

2024

Annual Report

Transforming Trauma Care



TRAUMA
Center

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Highlights:

- **Patient Care:** The Trauma Service at OHSU treated 4138 patients in 2023
- **Injury:** Same level falls were the leading cause of injury and death
- **Age:** Patients over the age of 65 account for 38.6 percent of all trauma patients
- **Trunkey Center** Published 46 manuscripts, had 74 IRB approved studies, and \$ 7.5 million in funding

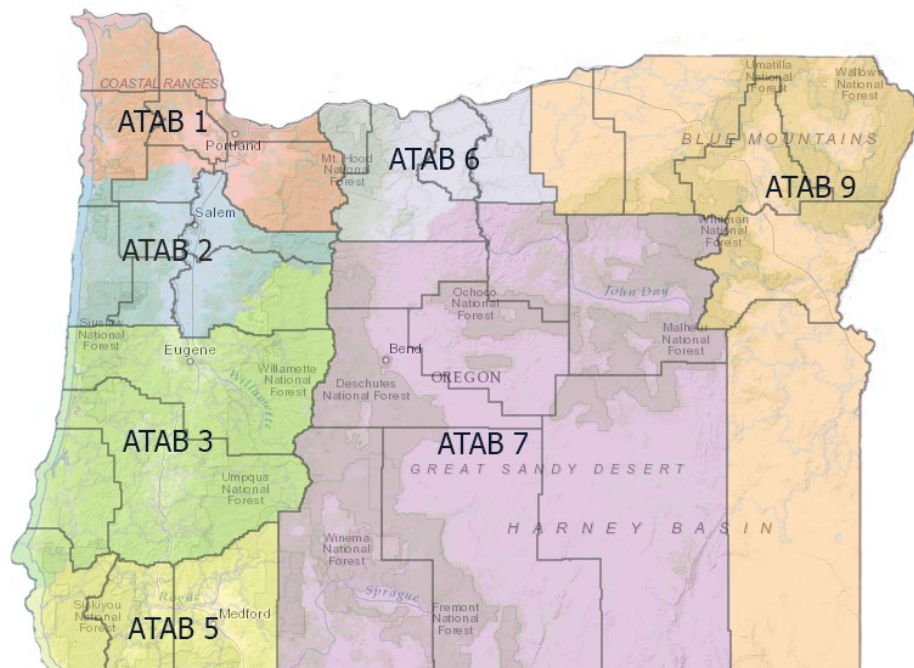


Photo by Aaron Bieleck, EdComm

OHSU Trauma System Background

Oregon's statewide trauma system is based on landmark legislation. The state Legislature passed statutory authority in 1985 as ORS 431.607 – 431.633, under the leadership of the president of the Oregon Senate, John Kitzhaber, M.D., and signed into law by Governor Victor Atiyeh. With the implementation of the trauma system in May 1988, only two Oregon hospitals, OHSU and Legacy Emanuel Medical Center, were designated as Level I trauma centers. Injured individuals in the four-county metropolitan regions identified by pre-hospital rescue personnel or emergency medical technicians as meeting the criteria for severe injury are transported to one of these Level I centers. The Oregon Trauma System continues to grow and expand services to all injured Oregonians. In 2018, the first two level 1 Pediatric Trauma Centers, Doernbecher Children's Hospital and Randel Children's Hospital, joined the state-wide trauma system: both are American College of Surgeons verified Level 1 Trauma Centers.

Published research comparing inter-hospital transfer practices before and after implementation showed improvement in rapid transfer of critically injured patients to Level 1 and 2 trauma centers as well as improved survival.



[Map retrieved from OHA Website](#)

2024 OHSU Trauma Center Summary

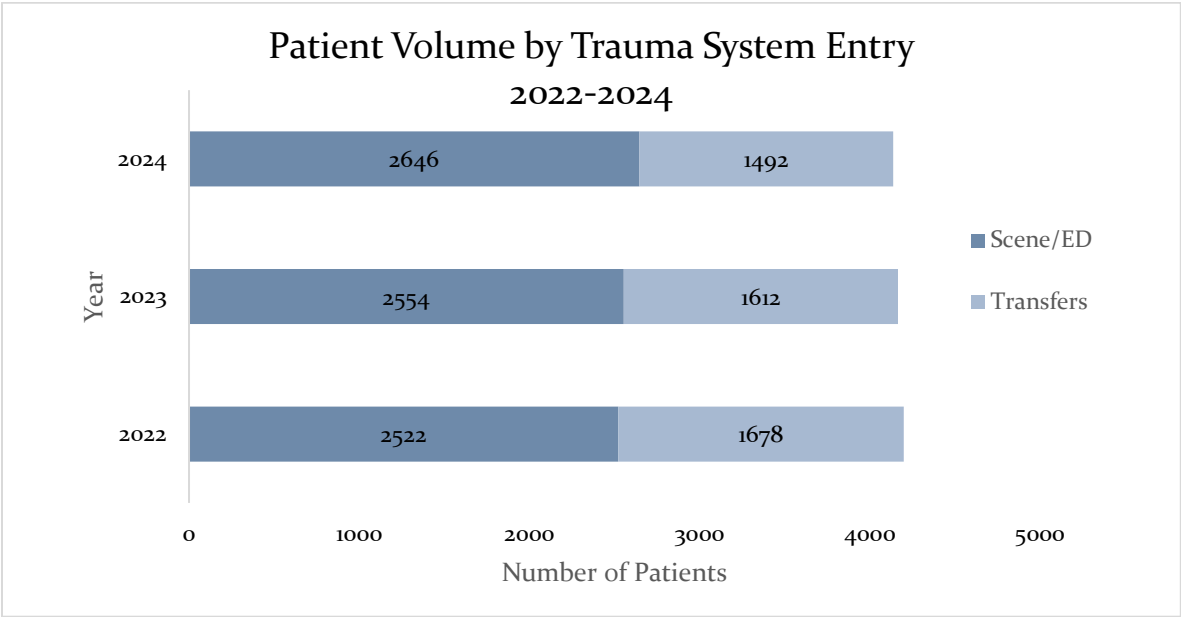
- 4138 patients were treated at OHSU for traumatic injury
- 2646 patients (63.9 percent) were brought to OHSU from the scene of injury (a slight increase from 2023); 1492 (36.1 percent) were transferred from another hospital (a slight decrease from 2023)
- Same level falls (30.2 percent) were the leading cause of injury, followed by high mechanism falls (19.2 percent), and finally motor vehicle collisions (16.5 percent) were the most common mechanism of injury for all patients
- Same level falls were the leading cause of death (42 percent)
- Penetrating trauma remained 8% of all traumas
- Injured patients remain predominantly male (64.1 percent), a slight increase from the previous year



Photo by Aaron Bieleck, EdComm

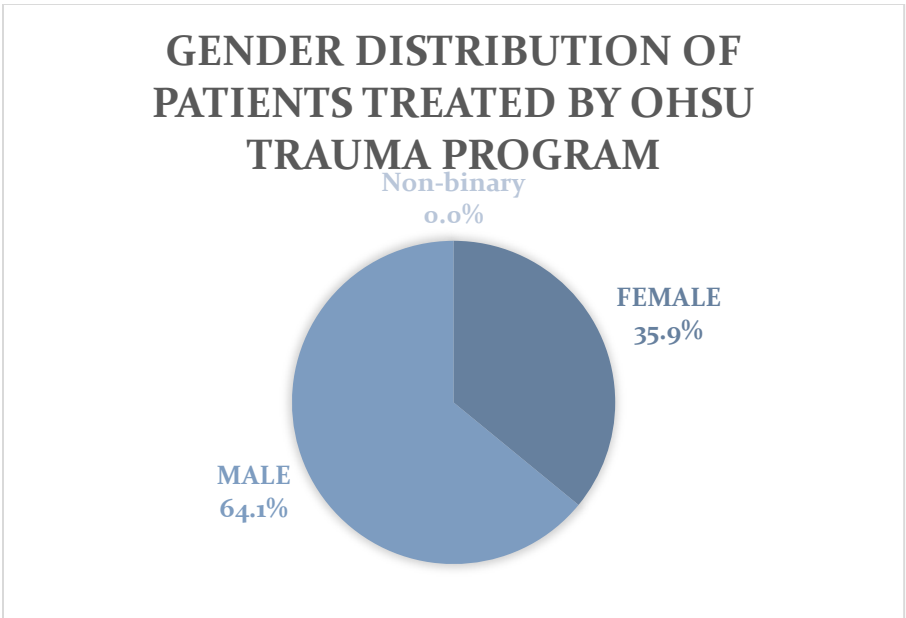
Trauma Statistics

Figure 1. Patient volume 2021-2023



In 2024, the OHSU Trauma Program total patient volume decreased by 28 patients, representing a 0.7 percent decrease from the previous year.

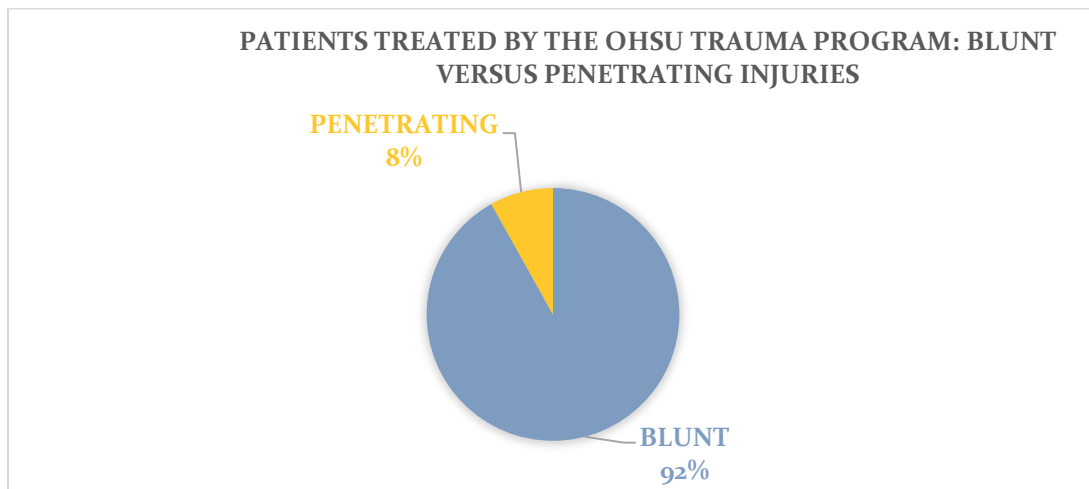
Figure 2. Gender distribution of patients treated by the OHSU Trauma Program



In 2024 male patients continued to experience trauma at a higher rate than female patients.

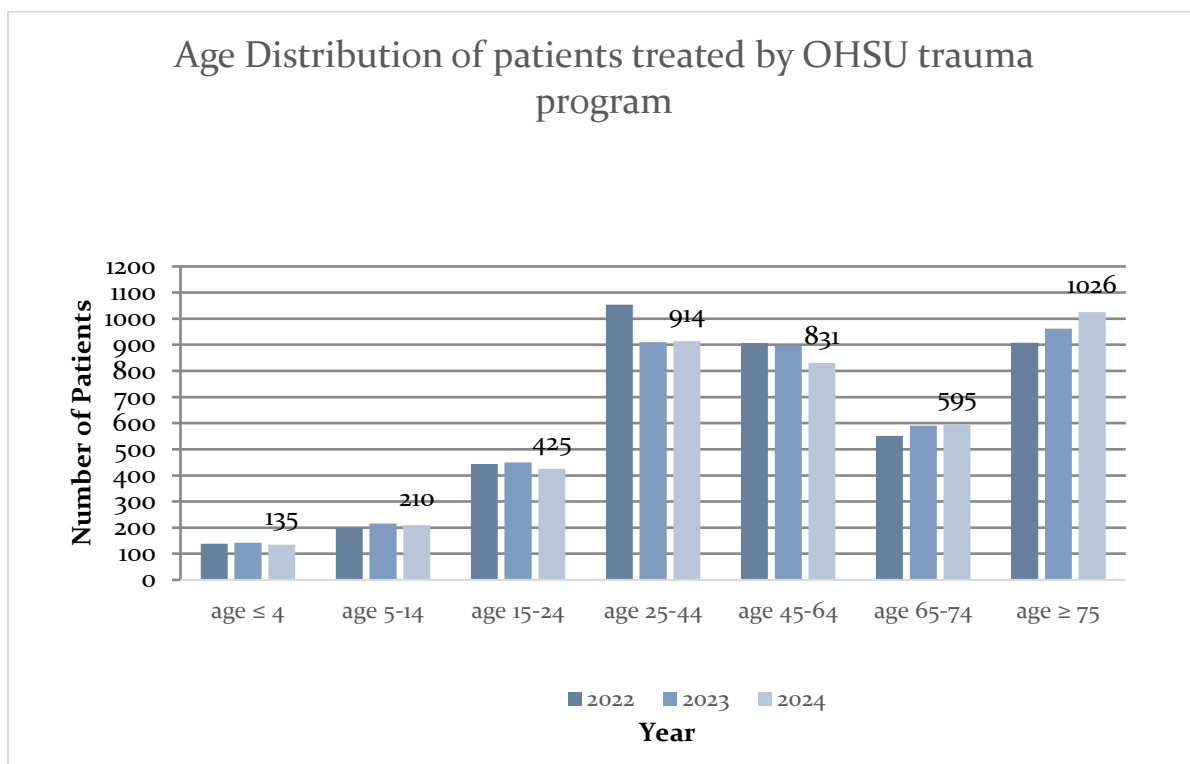
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Figure 3. Patients treated by the OHSU Trauma Program: blunt versus penetrating injuries



The rate of penetrating trauma remained at eight percent when compared to 2023, we saw a slight decrease of 14 patient cases with penetrating injury in 2024.

Figure 4. Age distribution of patients treated by the OHSU Trauma Program



Most patients treated were between the ages of 25-64 (42.2 percent), followed by patients age greater than 75 (24.8 percent).

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Figure 5. Incidence by age of patients treated by the OHSU Trauma Program

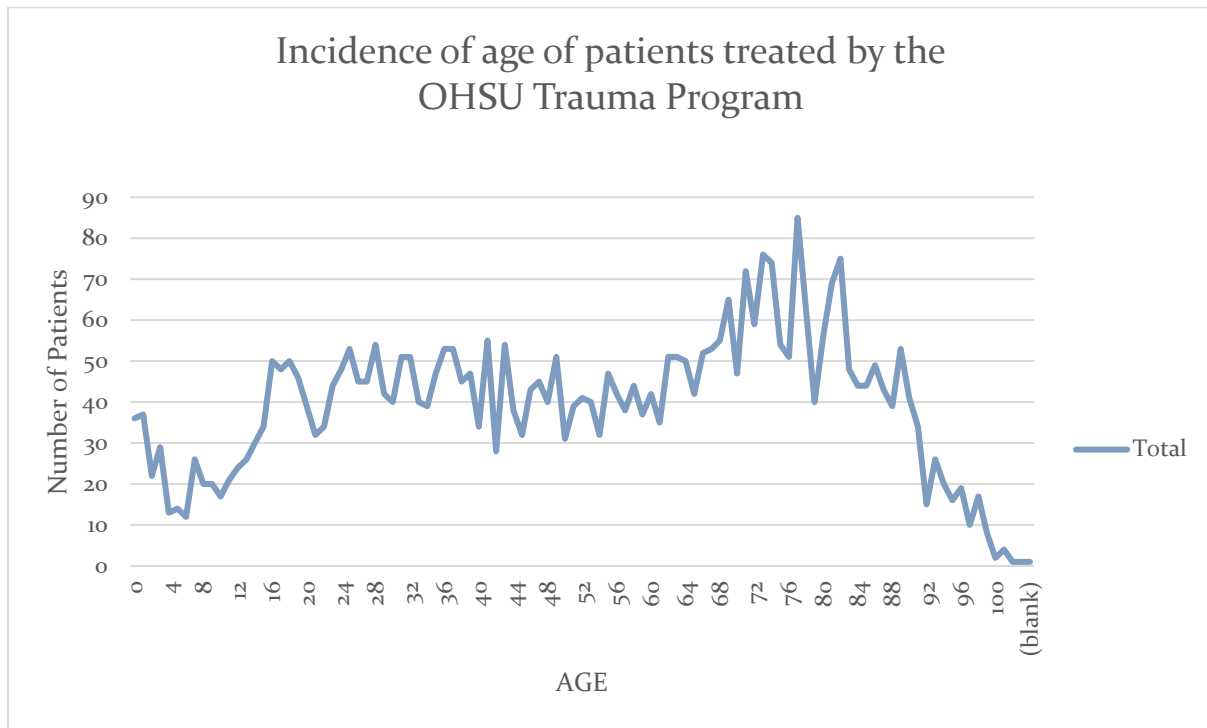
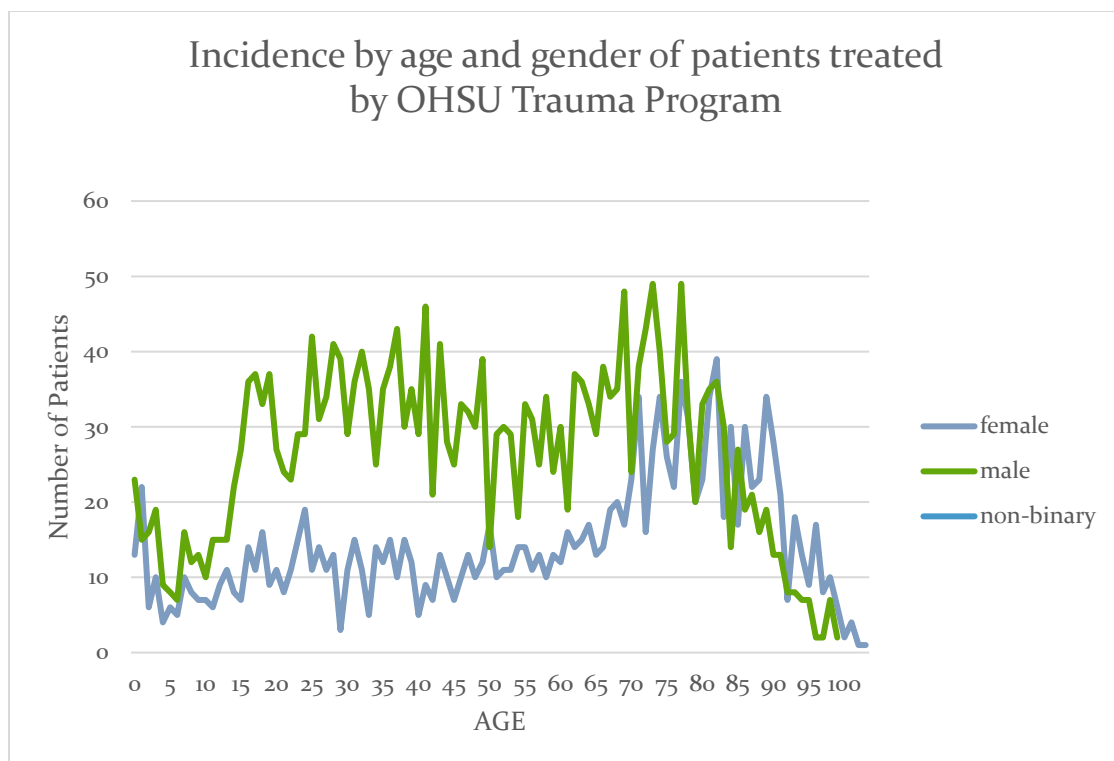


Figure 6. Incidence by age and gender of patients treated by the OHSU Trauma Program



Month, day and time

Figure 7. Distribution of patients by month

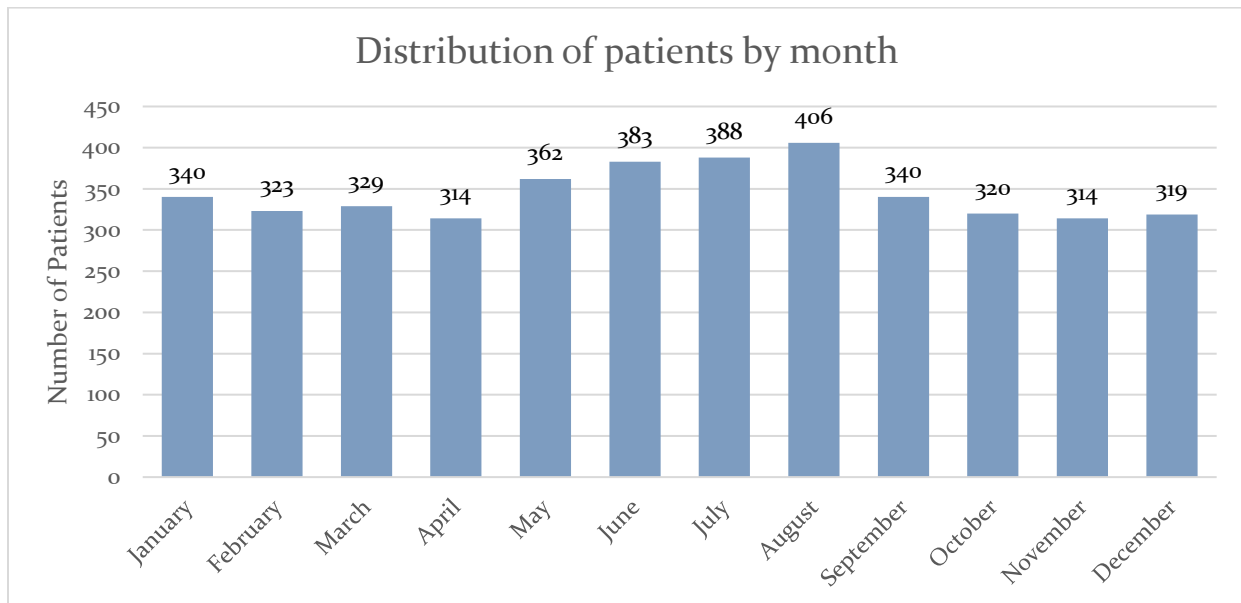


Figure 8. Distribution of patients by day of week

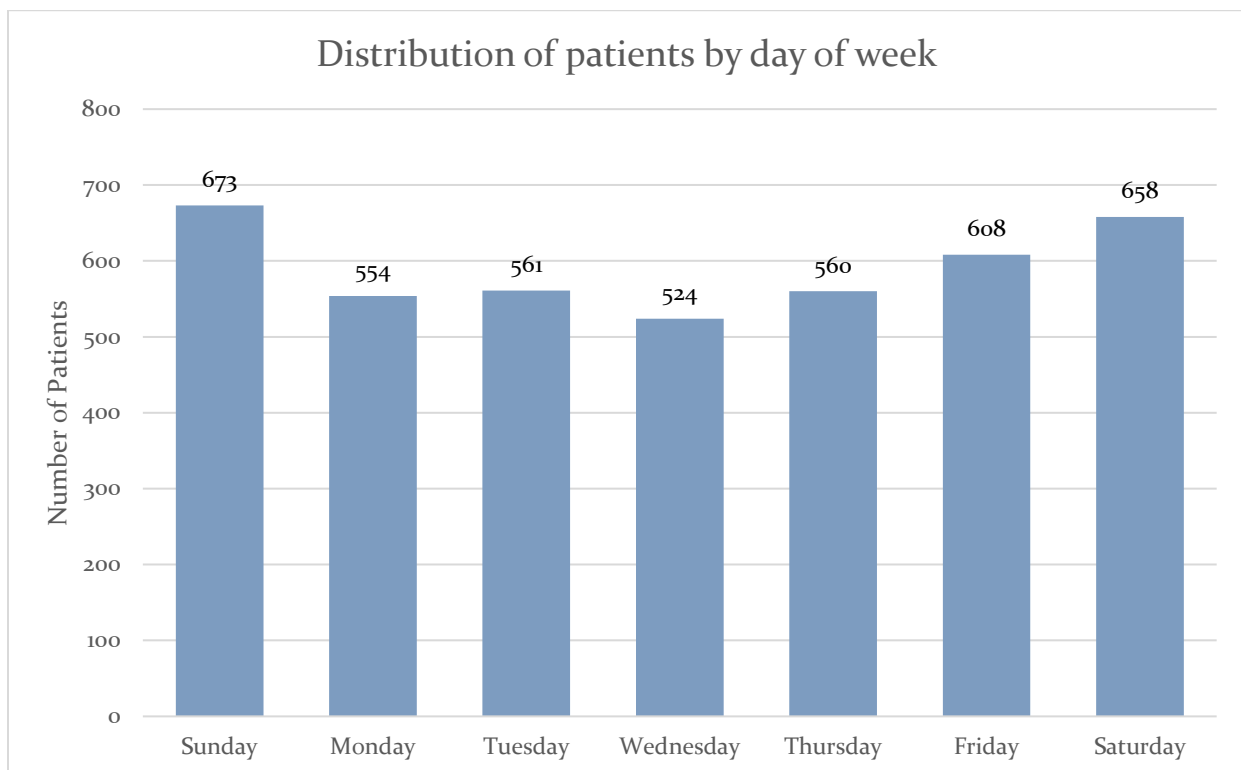
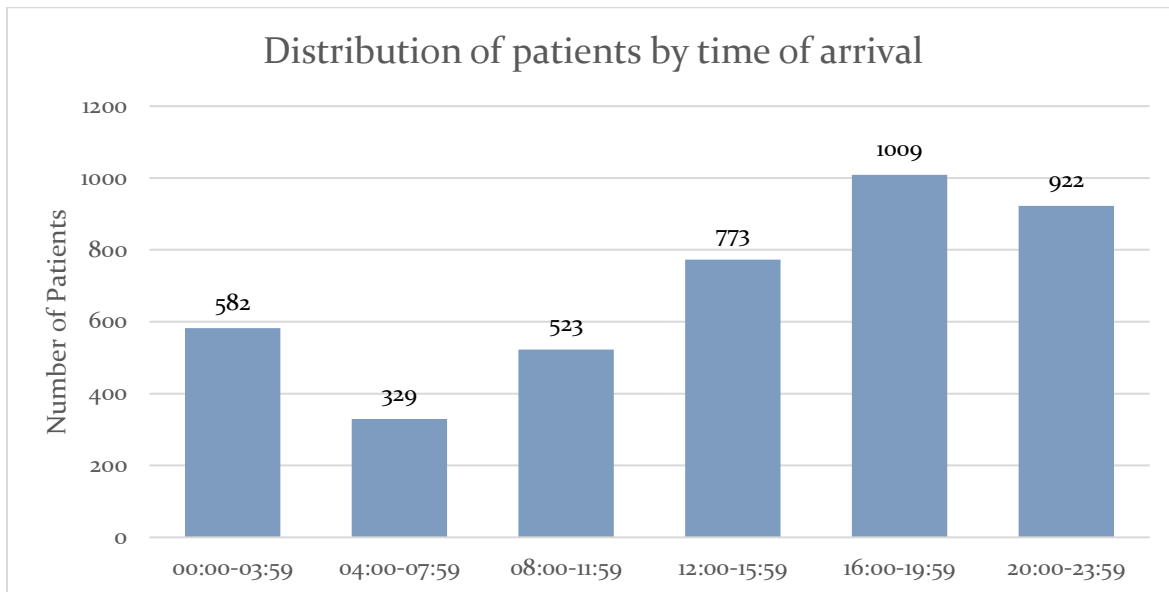


Figure 9. Distribution of patients by time of arrival



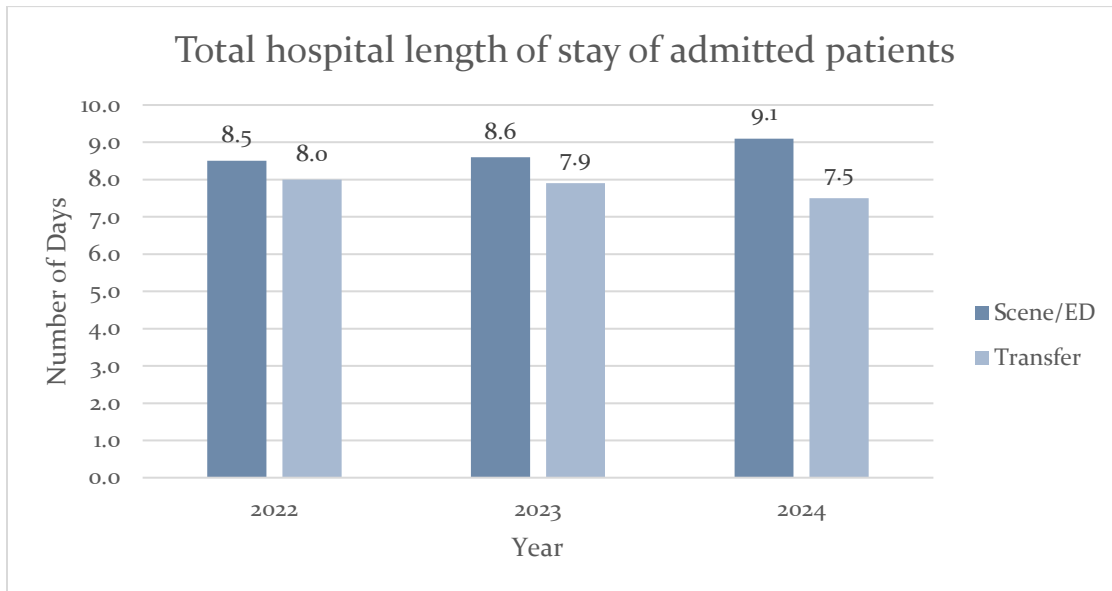
August, July, June, and May were the busiest months for trauma in 2024. August had the largest trauma volume in 2024, which was unusual as July has typically been the busiest month in past years. Weekends and evenings remain the busiest times for trauma patients presenting to OHSU.



Photo by Aaron Bieleck, EdComm

Length of stay

Figure 10. Total hospital length of stay of admitted patients



OHSU Trauma has seen an increase in total length of stay for patients admitted from scene/ED compared to transfer patients.



Photo by Aaron Bieleck, EdComm

Trauma Team Response

The OHSU Trauma Program continues to have a two-tiered system to evaluate injured patients. We monitor our over and under triage levels of all cases using the Cribari matrix and our need for urgent intervention. The level of activation is based on information provided by pre-hospital personnel and indicates the staff response to the trauma bay (Tables I and II). In the Portland metropolitan area, paramedics evaluate patients at the scene of injury and enter them into the trauma system if they meet established field triage criteria for serious injury. Our analyses indicate patients can be safely and efficiently treated with a limited team response, saving full trauma team activations for those truly critically injured patients.

Table I. OHSU trauma team configuration based on triage criteria

Full	Modified
Staff trauma surgeon	
Staff anesthesiologist	
Staff ED physician	Staff ED physician
Trauma chief resident	Trauma chief resident
Emergency medicine resident	Emergency medicine resident
Respiratory care practitioner	Respiratory care practitioner
Primary trauma nurse	Primary trauma nurse
Trauma recording nurse	
Procedure nurse	Procedure nurse
Transportation aide	

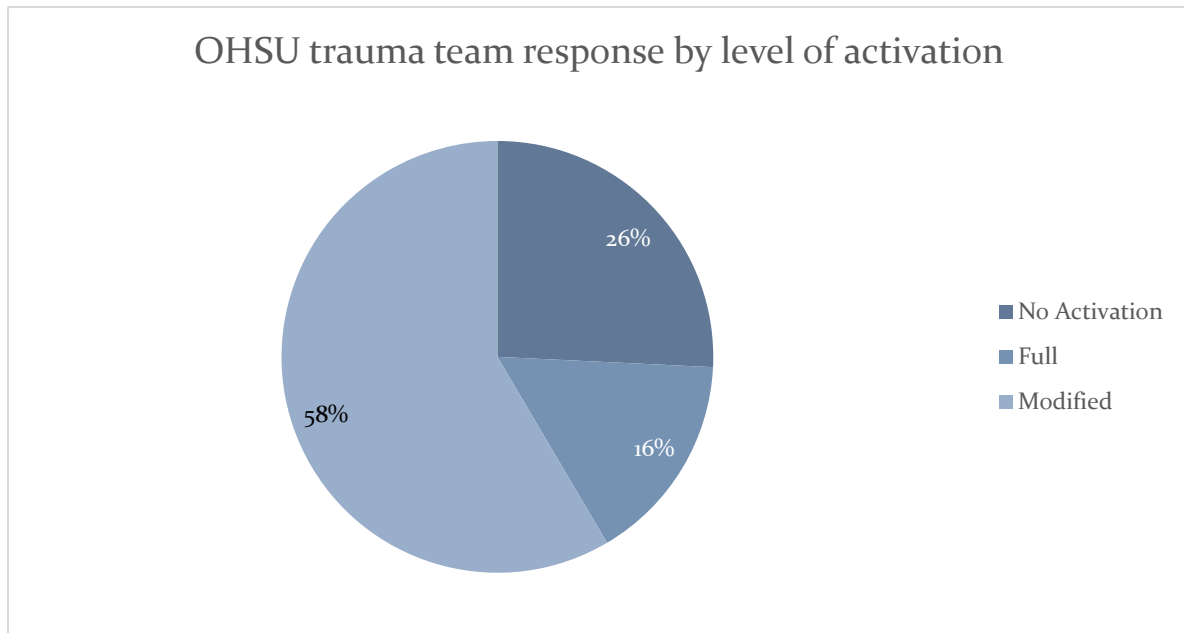
ED = Emergency department



Photo by Aaron Bieleck, EdComm

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Figure 11. OHSU trauma team response by level of activation

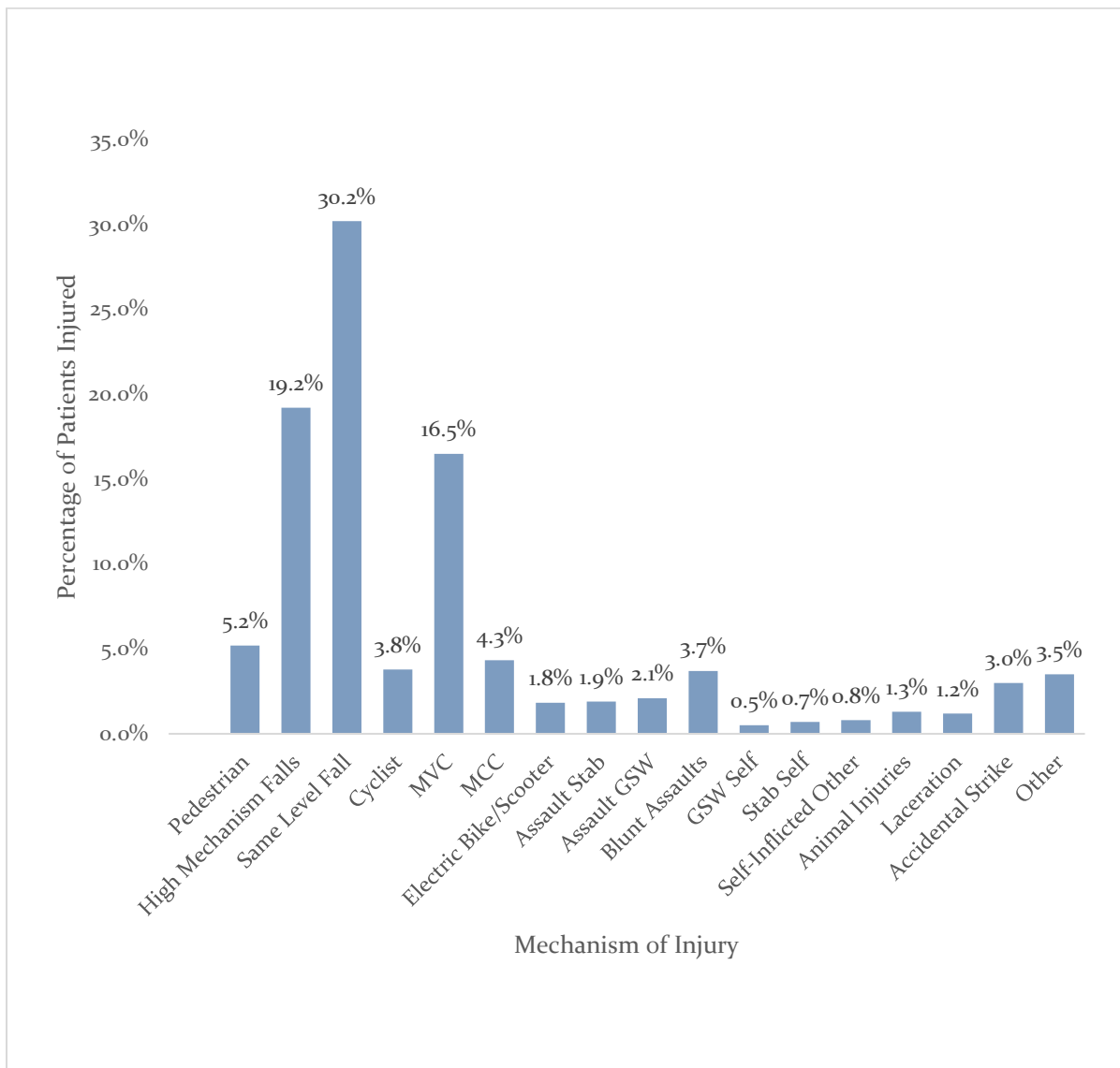


Non-activated trauma patients meet registry inclusion criteria based on the Oregon Health Authority definition and do not require immediate care or resuscitation; these patients may receive a trauma consult or be seen by other surgical services.

Mechanism of injury

In 2024, same-level falls remain our leading cause of injury. High mechanism falls and motor vehicle collisions are the second and third leading mechanisms of injury, aligning with national data. However, motor vehicle collisions remain the leading cause of injury for patients ages 15-44.

Figure 12. Causes of injury for patients seen by the OHSU Trauma Program



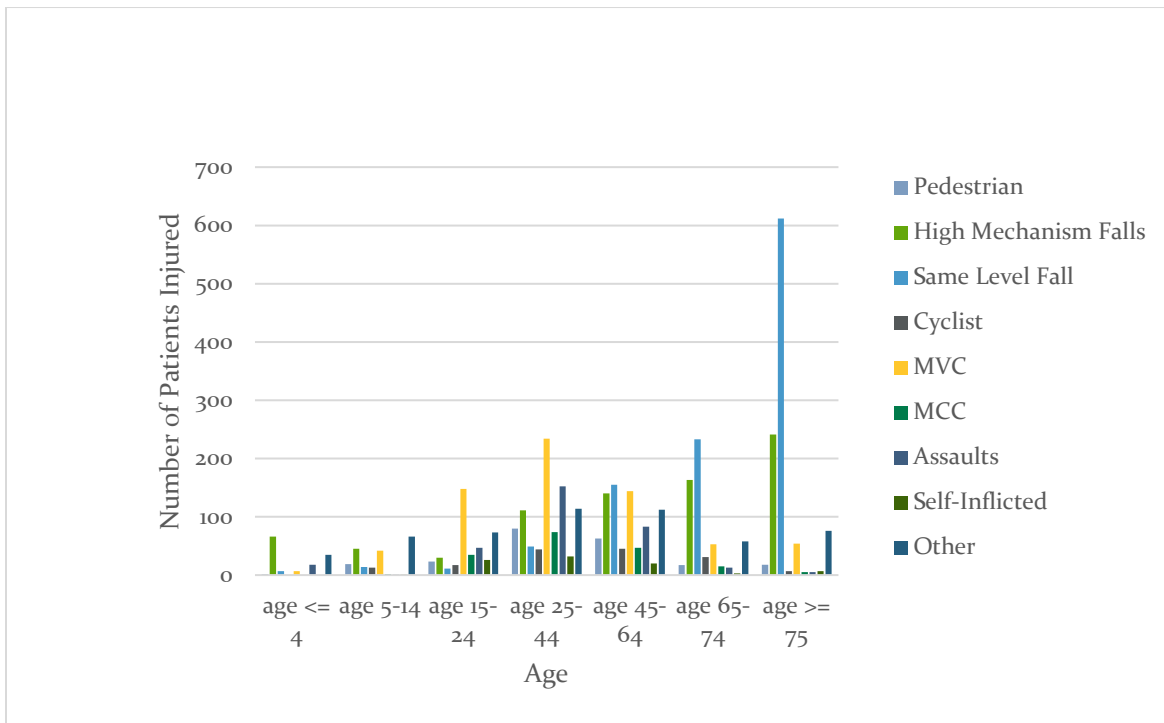
Same level falls include slips and trips or walking on ice and snow. High Mechanism falls include falls from height, ladders, and down stairs. Animal injuries include bites and being struck by an animal. Laceration injuries are punctures, scrapes, contact with a

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sharp object, and abrasion injuries. Accidental strike injuries included contact with a blunt object, unintentional contact with an object.

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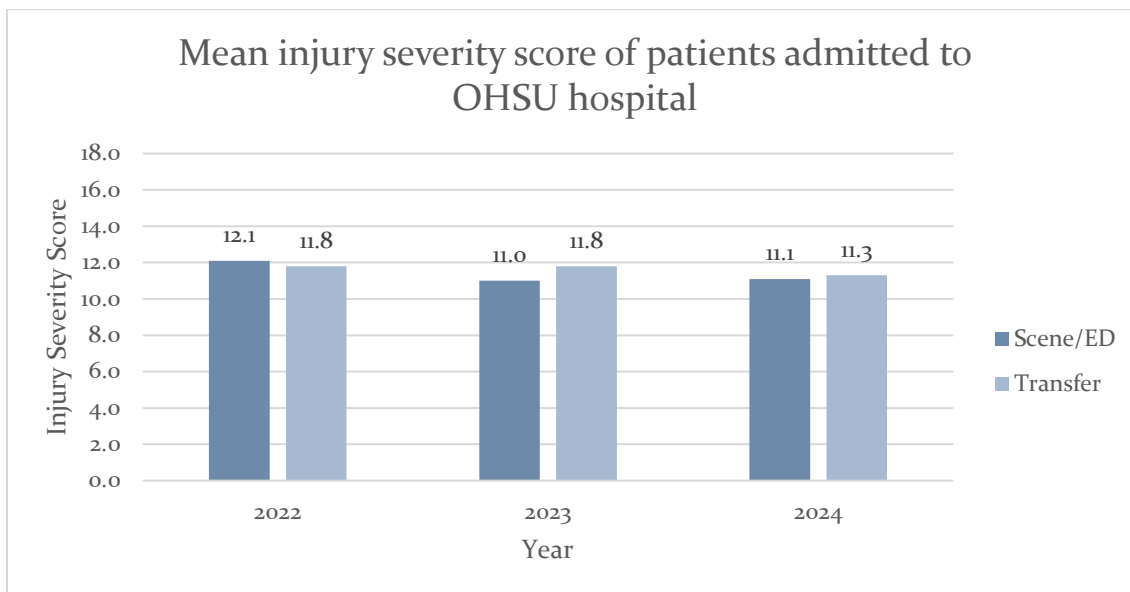
Figure 13: Incidents by injury type and age group



Team debrief after in-situ simulation training - Photo by Aaron Bieleck, EdComm

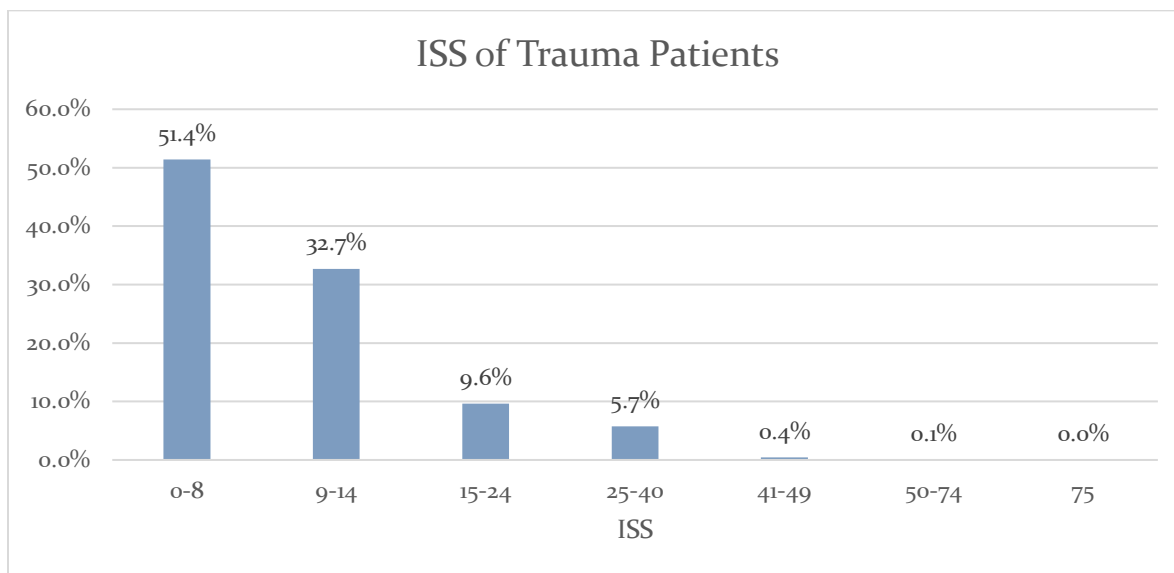
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Figure 14 Mean injury severity score (ISS) of patients admitted to OHSU Hospital



On average, patients transferred from other hospitals were slightly more injured than those admitted from the scene. Data review shows a decrease in the mean ISS for patients indicating they were less injured overall than in previous years.

Figure 15 Rate of ISS of Trauma Patients

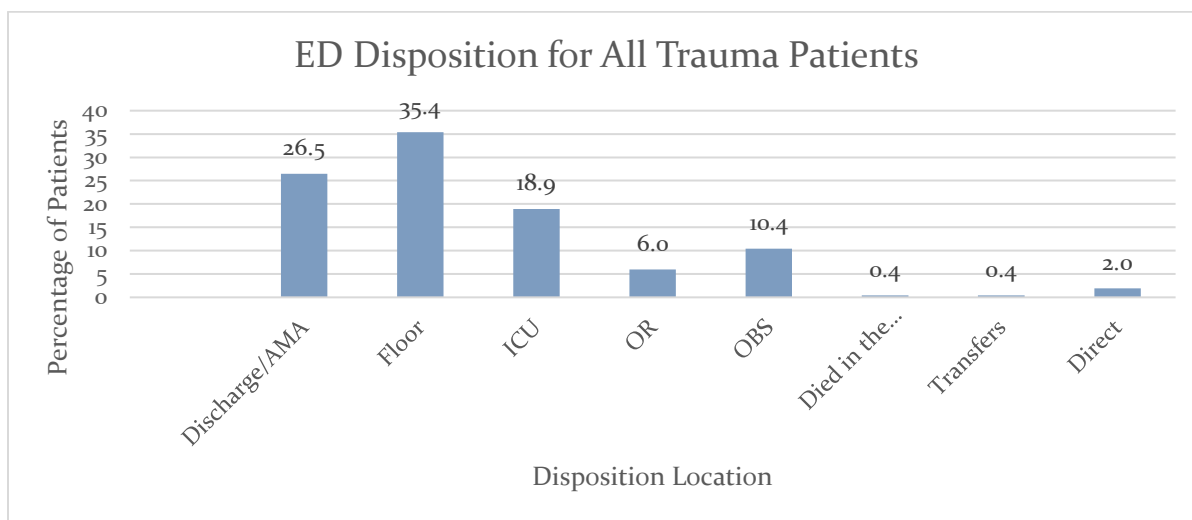


In 2024, 658 patients (17.2 percent) had an ISS greater than 15, representing moderate to severe injury. In 2024, 2127 patients (51.4 percent) were treated at OHSU with ISS less than 9 these patients have isolated injuries and meet Oregon Health Authority and National Trauma Data Bank trauma registry inclusion criteria.

Hospital admissions via OHSU Trauma Program

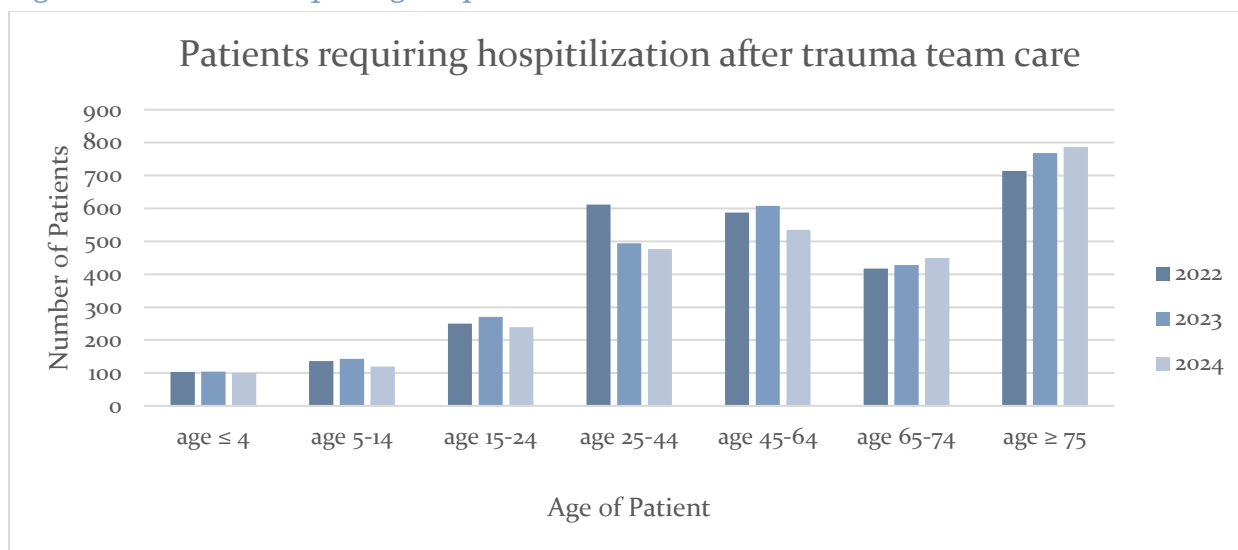
In 2024, OHSU admitted 3042 patients (73.5 percent) to OHSU, an increase of 311 patients, elderly patients were more likely to require hospital admission.

Figure 16. ED Disposition



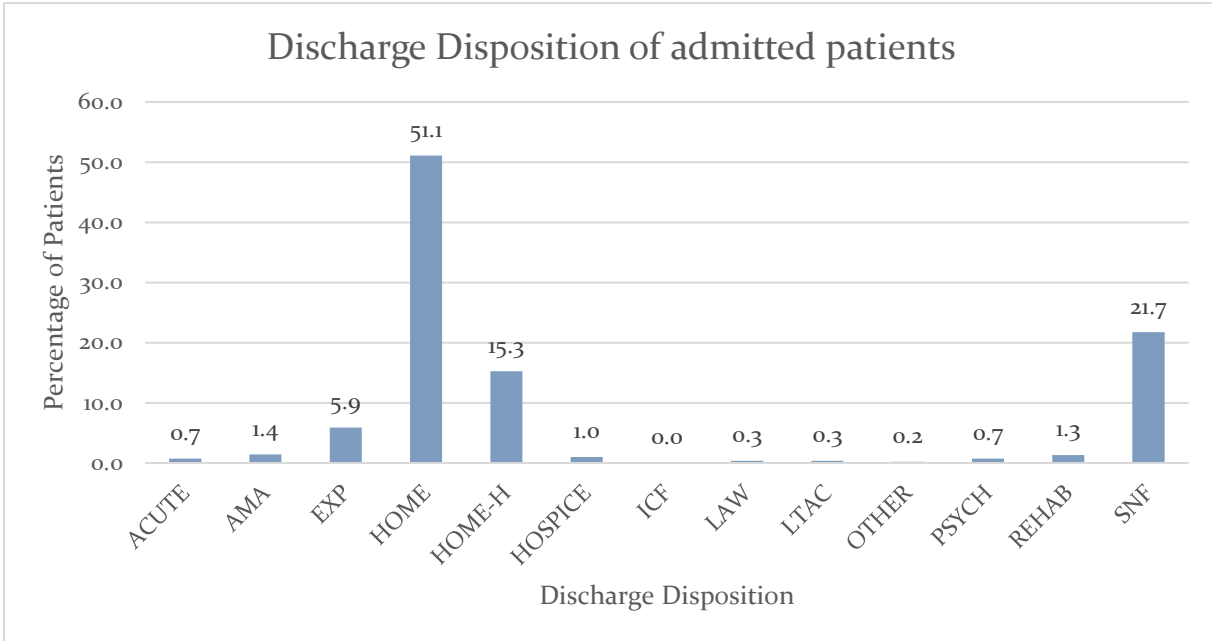
The majority of patients required admission to the ward (35.4 percent) followed by the Intensive Care Unit (ICU) (18.9 percent), with over 26.5 percent of patients leaving from the ED.

Figure 17. Patients requiring hospitalization after trauma team resuscitation



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Figure 18. Disposition of admitted patients after hospital discharge



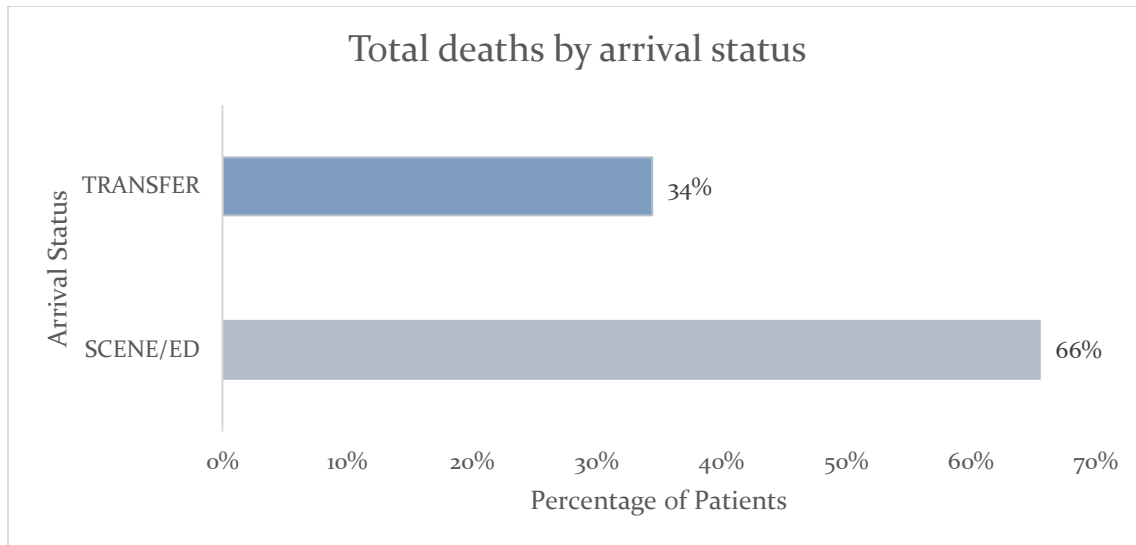
Most trauma patients (51.1 percent) are discharged home following their hospitalization, or to a skilled nursing facility and home with home health support being the other most common discharge dispositions.



TSICU Clinical Rounds - Photo by Aaron Bieleck, EdComm

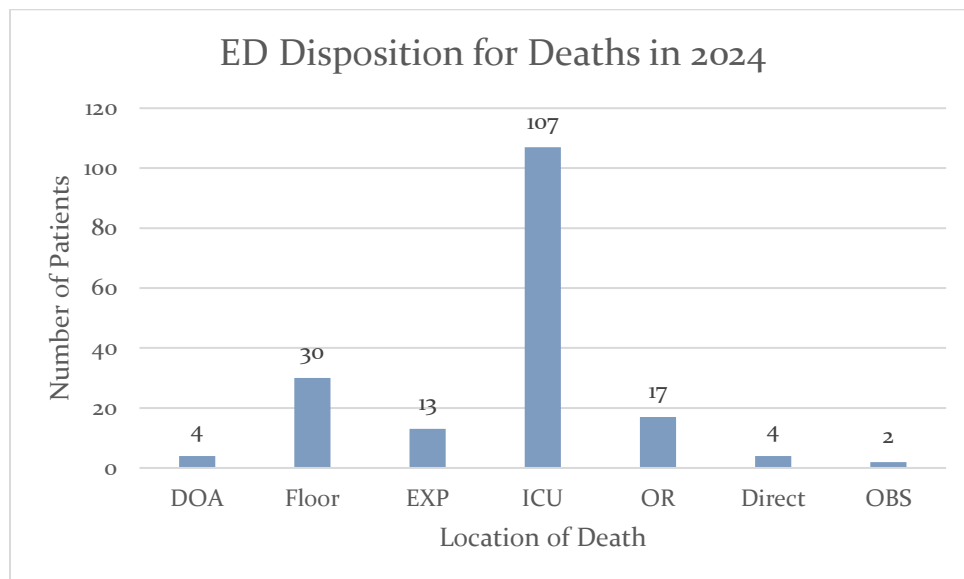
Mortality

Figure 19. Total deaths by arrival status



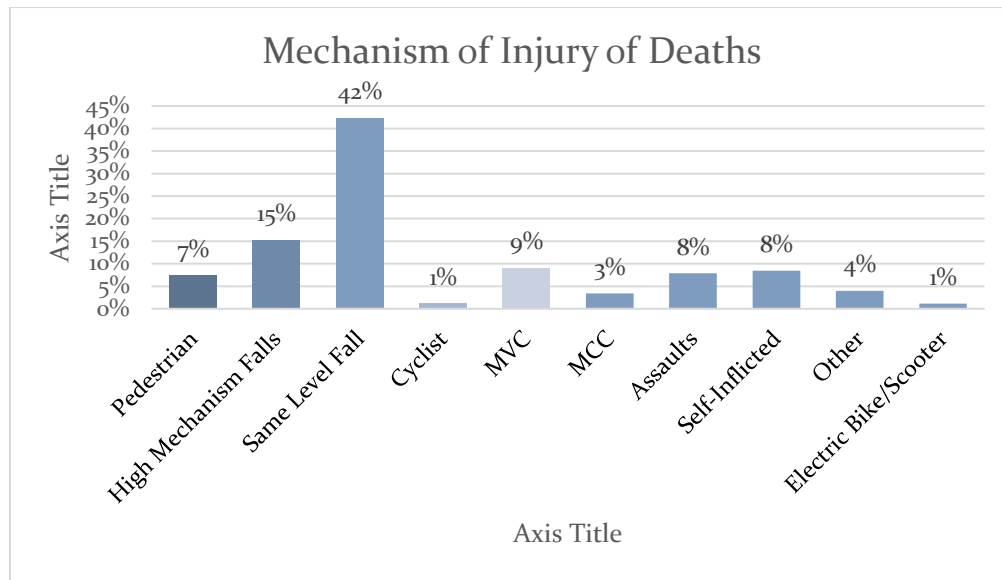
In 2024, 177 patients (5.6 percent) died: four patients died on arrival to OHSU, 13 died in the ED, and 17 in the OR.

Figure 20. ED Disposition for Deaths in 2024



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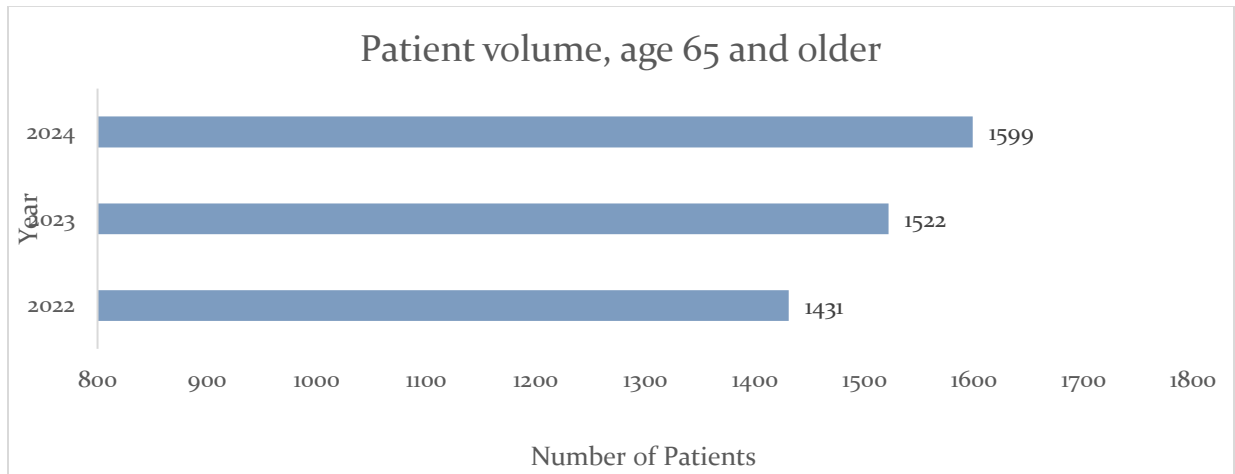
Figure 21. Cause of death



Same level falls are the leading cause of death, accounting for thirty-nine percent of all deaths in 2024.

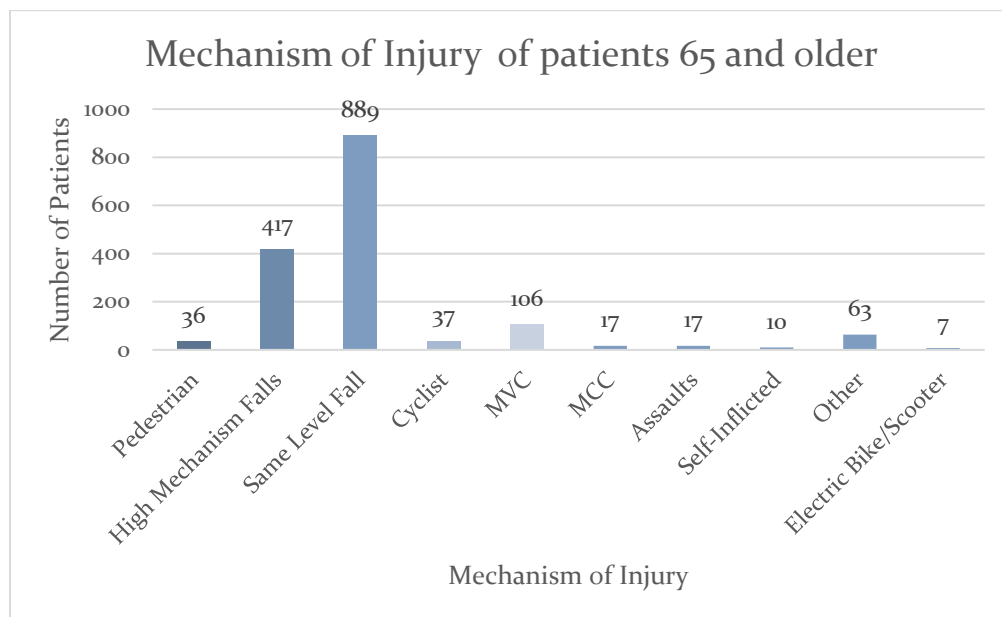
Care for patients aged 65 and older

Figure 22. Patient volume, age 65 and older



In 2024, OHSU Trauma treated 1599 patients (38.6 percent) aged 65 and older. Of these, 613 (38.3 percent) were transferred to OHSU from another hospital or clinic. Most of the patients were injured in same level falls (840 patients or 52.5 percent). Of the 1599 injured patients treated at OHSU, 1386 (86.7 percent) required hospital admission.

Figure 23. Mechanism of injury, patients 65 and older



Falls represent the leading cause of injury for patients age 65 and older: same level falls are the leading mechanism of injury at 52.5 percent, followed by high mechanism falls (falls from height, ladder falls, and other) representing 24.9 percent.

Army Military Civilian Trauma Training Team (AMCT³)

In 2016, the National Academy of Science, Engineering and Medicine produced a report titled “A National Trauma Care System: Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths After Injury”. A critical part of this national movement is the integration of active-duty personnel in busy civilian trauma centers with the goal of maintaining combat readiness especially during times of low operational tempo. Most of the healthcare delivered in military medical treatment facilities is related to maintenance of health in relatively healthy warfighters and delivery of care to beneficiaries. Few facilities have active trauma programs. Therefore, during periods of low operational tempo, it is necessary for active military health providers to work in civilian trauma centers. The program is titled Army Military Civilian Trauma Training Team or AMCT³. OHSU was chosen due its rich history of collaboration with the military and the strong presence of military career personnel. Our second cohort of AMCT³ soldiers was assigned to OHSU in 2022 which included a portion of a Forward Resuscitation Surgical Detachment (FRSD) was assigned to OHSU.

Legislation to fund civilian trauma centers that house these programs, known as Mission Zero was signed into law and OHSU received grant funding supporting our Military Civilian Administrative Coordinator along with funding to support high fidelity specialized training. Currently, OHSU supports 7 embedded full time active-duty Army MD's, RNs, and a CRNA with the AMCT³ program, along with trauma specialized rotational trainings for enlisted Army medics, LPNs and OR techs. The SMART (Strategic Medical Asset Readiness Training) program is a two-week clinical experience and skills sustainment program. Participants rotate through the ED, ICUs, and other units, along with didactic case study and high-fidelity skills practice experiences. In 2024, OHSU hosted 2 SMART rotations, training 17 participants.



Photo of Mike and SMART participant: MAJ Michael Menges, OHSU AMCT³ RN precepts visiting US Army medic SPC Carlos Sobarzo during SMART rotation.

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Photo of trauma man skills: Dr. Phil Van, OHSU Military Civilian Program Director, and Dr. Pete Lampman US Army surgical resident instructing participants on trauma skills during SMART rotation. - Photo by Rebecca Brown



Photo of SMART group: US Army enlisted soldiers participating in an OHSU SMART rotation Photo by Rebecca Brown

Surgical Critical Care Fellowship

The Surgical Critical Care fellowship was founded over 20 years ago and remains the only fellowship committed to training trauma surgeons in Oregon. Since its inception, the fellowship has grown to accept four fellows each year. Fellows are selected during a competitive application cycle, for academic year, OHSU received 142 candidate applications, accepting 4 fellows.

The fellowship is composed of a one-year training program housed at the only University-based quaternary medical center in Oregon. Fellowship rotations are designed to provide exposure to a broad range of critically injured and critically ill patients.

Fellows spend six months rotating on the Trauma Surgical Intensive Care Unit (TSICU) where they work with teams of Advanced Practice Providers, residents and attending trauma surgeons. Fellows also work closely with a multi-professional team of nurses, respiratory therapists, pharmacists, therapists, chaplains, and social workers. Fellows are responsible for leading continuity and management of critically ill patients in the TSICU. These patients include trauma patients as well as surgical services such as emergency general surgery, oncology, hepatobiliary, minimally invasive, colorectal, transplant, OB/GYN, and bariatric surgery. In addition to their clinical duties, they have well as medical student and resident education.

Fellows complete a 6-week rotation in the Portland VA Medical Center Surgical ICU. Fellows lead the management of critically ill cardiothoracic and surgical patients at PVAMC. During their remaining time, fellows have the opportunity to select electives in critical care units including pediatrics, medicine, cardiothoracic surgery, burns, and neurosurgery. Additional opportunities are available in radiology and echocardiography and more.

Administrative responsibilities include formulating and implementing new ICU policies and guidelines, choosing up-to-date and relevant articles for the journal club, participating in the ICU quality committee, leading ICU curriculum lectures to the residents, and presenting grand rounds during the fellowship.



Trauma Education

The OHSU Trauma Center continued their Trauma Outreach Education Initiatives in 2024.

Fall Trauma Nursing Conference

- 263 participants
- Participants from 10 states and 1 province, 1 international registration
- Virtual format results in an archive of record presentations for ongoing review

35th Annual Northwest States Trauma Conference

- 156 participants, including: 9 physicians, 6 advanced practice providers, 135 registered nurses, 3 EMT/EMT-P, and 3 undefined registrations
- Participants from 8 states and 1 province
- Virtual format results in an archive of recorded presentations for ongoing review

Weekly Trauma Conference

The Trauma and Acute Care Surgery Service hosts weekly Trauma Conference. Chief residents present trauma and emergency general surgery (EGS) cases to a multi-disciplinary participant group. Trauma Conference is open to all trauma centers across Oregon to increase state-wide engagement and education. Collaborative multi-center trauma case presentations highlight care across the continuum from rural to referring to definitive Level 1 trauma care.

Trauma Education Courses

Advanced Trauma Life Support® (ATLS®)

- 6 ATLS provider/refreshers courses were held
 - 80 participants completed the training



ATLS skill station training. Photos courtesy of Elizabeth Herber

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Rural Trauma Team Development Course (RTTDC)

- RTTDC courses restarted in 2022, no course requests were received in 2024
- We actively meet with trauma centers monthly and let them know we are available for RTTDC upon request

Definitive Surgical Trauma Care Course (DSTC)

- OSHU remains the only site hosting DSTC
- This year's course was paired with the ACS Advanced Surgical Skills for Exposure in Trauma Course
- We were able to offer 17 CME for the combined course
- 12 surgeon and 6 perioperative/surgical tech participants

Injury Prevention

OHSU Trauma Injury Prevention Program continued to offer biannual Fall Risk Assessment Events. These public events use Center for Disease Control's (CDC) Stopping Elderly Accidents, Deaths, and Injuries (STEADI) materials for assessment and fall prevention planning. Objective was to increase public awareness of STEADI and how to use this tool to prevent falls. A secondary objective was to collaborate with other fall prevention allies and establish working relationships with them.



Participants at the Fall Risk Screening Event, photo courtesy of Sarah Gold

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Healing Hurt People

The OHSU Injury Prevention Program continues to partner with Healing Hurt People (HHP), our hospital-linked violence interruption program. This partnership has seen incredible growth over the last 2 years, going from 47 referrals in 2023 to 91 referrals in 2024. They have increased the number of intensive case managers to account for this volume increase as well as made great strides in professionalizing the role of Intensive Case Manager.

2024 HHP Referrals for patients at OHSU

103 referrals, 80 patients received services.

Short Term services: 52

Long Term services - 18 months: 27

Enrolled in Trauma Therapy: 3

Recidivism Rate: 0%

Unable to Contact: 9 - Due to AMA, Discharging, or invalid contact info

Declined Services: 8

Deceased/Family Support: 1

Taken Into Custody before Consult: 5



HHP Program Director Roy Moore with the OHSU Trauma and Gun Violence Prevention Teams

Injury Prevention Activity Report	# Participants
<p>Stop the Bleed</p> <p>Program Objectives: Program objectives: increase number of instructors available to teach courses, establish regular course opportunities, reach out to increase amount of ad hoc courses we teach. Increase amount of bleeding control kits in the community in the hands of people who know how to use them effectively.</p> <ul style="list-style-type: none"> 8 new instructors added to program. List of 34 interested instructors collected with contact information, includes the 8 from this year. Bleeding Control Kits Sold - 269 	519
<p>Community Outreach Summary</p> <p>Program Objectives: Partner with communities for a better world and enhance health and healthcare in every community. Increase access to safe firearm storage devices and educate the public on safe storage, suicide prevention, and fall prevention. To become a known community partner and advocate in the field of injury prevention.</p>	358
<p>Motor Vehicle Safety Summary</p> <p>Program Objectives: Increase the influence of injury prevention principles in local, regional and state level policies and practices. Give nursing at OHSU a voice at the table where policies are being made. Show a positive image of nursing impact in the community.</p> <ul style="list-style-type: none"> Joined one state level committee and attended one conference focused on traffic safety. 	Partnerships gained: GAC DUII members and liaison organizations, ODOT connection
<p>Fall Prevention Summary</p> <p>Program Objectives: Increased awareness and implementation of injury prevention practices amongst providers, patients and families at OHSU. Increase enrollment in STEADI in the Community study. Partnering with communities for a better world. Decrease % of trauma system entries with a fall as the mechanism of injury by 2030.</p> <ul style="list-style-type: none"> 51 Fall Risk Assessments Completed, 51 Educational Handouts Provided, 23 Study Participants Enrolled. 3416 trauma charts reviewed, 854 fall prevention education additions to AVS by IPC, 48 by other providers, and 98 automatic additions of education to 	1000 fall prevention education additions to AVS

AVS.	
<p>Violence Prevention Summary</p> <p>Program Objectives: Decrease the % of mortalities related to violence in our community by 2030. Partnering with communities for a better world. Ensuring a sustainable foundational infrastructure for this essential work.</p> <ul style="list-style-type: none"> 103 referrals from OHSU, 80 received services (52 short term, 27 long term). 0% recidivism rate. There remain gaps in how many intakes were completed vs how many were referred. Raised over \$500,000 for POIC the parent organization for HHP. Spoke to 40 potential funders for our programs. Facilitated about 80 medical students learning about firearm injury and steps they can take to make a difference. 	103
<p>Healthcare Professional Education Summary</p> <p>Program Objectives: Increased awareness and implementation of injury prevention practices amongst providers, patients and families at OHSU. Increase span of influence beyond my institution. Be a resource to the injury prevention community throughout Oregon.</p> <ul style="list-style-type: none"> Partnerships gained: 29 Combined data: 41 students taught, 26 members added to Oregon Injury Prevention group, 5 issues of injury prevention newsletter distributed, asked to chair a state committee for Oregon ENA. 	41
<p>Mental Health</p> <p>Program Objectives: Deliver safe, consistent and high-quality care to ensure optimal outcomes for patients. Decrease the burden of substance abuse and mental health disorders in our community.</p> <ul style="list-style-type: none"> Partnerships gained: 2 Combined data: 149 letters mailed, SBIRT rates above 80%, 50 NTSD placards distributed, 4 patients referred to OSCI. 	

Dr. Donald D. Trunkey Center for Civilian and Combat Casualty Care

Launched in April 2020 in honor of the late emeritus OHSU chair of surgery Dr. Donald D. Trunkey, the **Donald D. Trunkey Center for Civilian and Combat Casualty Care** is on a mission to synergize and advance trauma research, innovation, and patient care across OHSU and the Pacific Northwest. To date, the Center, led by Martin Schreiber, M.D., has created a research consortium that spans across 18 different departments and 3 schools at OHSU, regional research hubs like the Veterans Administration and Pacific Northwest National Laboratory, and numerous industry partners.

The **Trunkey Center Seminar Series** has served as a centerpiece of activity and helped catalyze the Center's growth. Each month the Seminar Series brings together around 100 researchers working across trauma-related disciplines, highlights cutting edge research in the field, and serves as a focal point for new collaborations. Speakers include basic scientists, clinicians, engineers, epidemiologists, and public health experts, many of whom were brought together for the first time by the Trunkey Center. The series has a central role to play as the Center continues to grow and amplify research in trauma by fostering interdisciplinary collaboration, increasing research funding, and accelerating bench to bedside discoveries.

Join the [Trunkey Center mailing list](#) to receive news updates and invitations to the Trunkey Center monthly seminar series.



Photo courtesy of the Donald D. Trunkey Center

Trunkey Center - Trauma & Acute Care Surgery Research

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In 2024, the Trunkey Center Research Laboratory received \$7.5M in research funding from the Department of Defense, Department of Health and Human Services, National Institutes of Health, and industry. The center also continues to partner with consortiums such as CNTR, LITES, and WTA on trauma research projects.

The Trunkey Center's 2024 studies involving both human subjects and animal research include:

- Brain Oxygen Optimization in Severe Traumatic Brain Injury – Phase 3 (BOOST-3)
- Implementing Best-Practice, Patient-Centered Venous Thromboembolism (VTE) Prevention in Trauma Center
- Non-Invasive Monitoring of Traumatic Brain Injury Progression Using the Infrascanner-1
- Prehospital Kcentra for Hemorrhagic Shock
- In-patient Kcentra use for Trauma Patients
- Prehospital Airway Control Trial (PACT)
- Use of Whole Blood vs. Components for Massive Transfusions
- Strategy to Avoid Excessive Oxygen using Autonomous Oxygen Titration Intervention (SAVE-O2 AI)
- Blood Volume Analysis in Trauma Patients
- Morel-Lavallee Lesions Diagnostic and Treatment – A Multicenter, Prospective Observational Study
- Gamma Prime Fibrinogen as a Biomarker for Inflammatory Disease Progression
- Developing a Novel Therapy for Rhabdomyolysis (swine study)
- Freeze Dried Platelet Extracellular Vesicles as a Hemostatic Adjunct to Resuscitation for Prolonged Field Care (rat study)
- Exhaled Breath: A novel technique for rapid diagnosis of respiratory diseases and infections
- Massive Transfusion in Children (MATIC-2)
- Trauma and PCC (TAP)
- Trauma Video Review

In addition to enrolling in prospective studies, our research team also conducts retrospective analyses on a range of clinical topics including TXA, transfusion and coagulopathy, blunt thoracic aortic injury, and minimally invasive surgical techniques

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such as the use of REBOA. This dual approach enables the Trunkey Center to consistently pose novel research questions aimed at improving patient outcomes, while simultaneously leveraging an expanded cohort of data to answer these questions with increasing precision and depth.

Publications in 2024

1. Choron RL, Piplani C, Kuzinar J, Teichman AL, Bargoud C, Sciarretta JD, Smith RN, Hanos D, Afif IN, Beard JH, Dhillon NK, Zhang A, Ghneim M, Devasahayam R, Gunter O, Smith AA, Sun B, Cao CS, Reynolds JK, Hilt LA, Holena DN, Chang G, Jonikas M, Echeverria-Rosario K, Fung NS, Anderson A, Fitzgerald CA, Dumas RP, Levin JH, Trankiem CT, Yoon J, Blank J, Hazelton JP, McLaughlin CJ, Al-Aref R, Kirsch JM, Howard DS, Scantling DR, Dellonte K, Vella MA, Hopkins B, Shell C, Udekwu P, Wong EG, Joseph B, Lieberman H, Ramsey WA, Stewart CH, Alvarez C, Berne JD, Nahmias J, Puente I, Patton J, Rakitin I, Perea L, Pulido O, Ahmed H, Keating J, Kodadek LM, Wade J, Reynold H, **Schreiber M**, Benjamin A, Khan A, Mann LK, Mentzer C, Mousafeiris V, Mulita F, Reid-Gruner S, Sais E, Foote CW, Palacio CH, Argandykov D, Kaafarani H, Bover Manderski MT, Moko L, Narayan M, Seamon M. Pancreaticoduodenectomy in trauma patients with grade IV-V duodenal or pancreatic injuries: a post hoc analysis of an EAST multicenter trial. *Trauma Surg Acute Care Open*. 2024 Dec 20;9(1):e001438. doi: 10.1136/tsaco-2024-001438. PMID: 39717488; PMCID: PMC11664373.
2. Walker PW, Luther JF, Wisniewski SR, Brown JB, Moore EE, **Schreiber M**, Joseph B, Wilson CT, Harbrecht BG, Ostermayer DG, Cotton B, Miller R, Patel M, Martin-Gill C, Sperry JL, Guyette FX. Prehospital Delta Shock Index Predicts Mortality and Need for Life Saving Interventions in Trauma Patients. *Prehosp Emerg Care*. 2024 Nov 4:1-7. doi: 10.1080/10903127.2024.2412841. Epub ahead of print. PMID: 39361267.
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4. Mazzei M, Donohue JK, **Schreiber M**, **Rowell S**, Guyette FX, Cotton B, Eastridge BJ, Nirula R, Vercruysse GA, O'Keeffe T, Joseph B, Brown JB, Neal MD, Sperry JL. Prehospital tranexamic acid is associated with a survival benefit without an increase in complications: Results of two harmonized randomized clinical trials. *J Trauma Acute Care Surg*. 2024 Nov 1;97(5):697-702. doi: 10.1097/TA.0000000000004315. Epub 2024 Mar 25. PMID: 38523128; PMCID: PMC11422517.
5. Hinson HE, Radabaugh HL, Li N, Fukuda T, Pollock J, **Schreiber M**, **Rowell S**, Ferguson AR. Predicting Progression of Intracranial Hemorrhage in the Prehospital TXA for TBI Trial. *J Neurotrauma*. 2024 Oct;41(19-20):2349-2361. doi: 10.1089/neu.2023.0626. Epub 2024 May 8. PMID: 38618713; PMCID: PMC11564838.
6. Dilday J, Martin MJ, Tadlock M, Yelon J, Gautschi S, Livingston DH, Bulger E, **Schreiber M**, Holcomb J, Gurney J. The only winner in war is medicine: Safeguarding military trauma lessons learned through a military surgery partnership with the American Association for the Surgery of Trauma. *J Trauma Acute Care Surg*. 2024 Aug 1;97(2S Suppl 1):S3-S7. doi: 10.1097/TA.0000000000004422. Epub 2024 Jul 12. PMID: 39049141.
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 12. **Buzzard L, Schreiber M**. Trauma-induced coagulopathy: What you need to know. *J Trauma Acute Care Surg*. 2024 Feb 1;96(2):179-185. doi: 10.1097/TA.0000000000004170. Epub 2023 Oct 13. PMID: 37828662.
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 46. **Brito AAMP, Pati S, Schreiber M.** The effects of the COVID-19 pandemic blood shortage on trauma patients. *Transfusion*. 2024 Jul;64(7):1323-1330. doi: 10.1111/trf.17925. Epub 2024 Jun 20. PMID: 38899841.

Trauma and Acute Care Surgery Faculty



Martin Schreiber, M.D., Chief of Trauma

Speaking topics: Transfusion; Resuscitation; What you need to know about DVTs; Lessons learned in the War on Terror; Modern methods of hemorrhage control; Blast injury; Novel blood products; Modulation of coagulation; Thromboelastometry and trauma



Karen Brasel, M.D., M.P.H.

Speaking topics: Post traumatic stress disorder; Ethics in trauma



Albert Chi, M.D.

Speaking topics: Targeted muscle re-innervation and advanced prosthetics



Mackenzie Cook, M.D.

Speaking topics: Long-term outcomes after injury; Curriculum development in surgical education and optimizing autonomy for trainees



Heather Hoops, M.D.

Speaking topics: Necrotizing soft tissue infections, Faculty development in surgical education: letters of recommendations, how to help the struggling learner, and team dynamics and leadership.



Tatiana Hoyos Gomez, M.D.



Laszlo Kiraly, M.D.

Speaking topics: Surgical nutrition; Education of medical students and residents

Transforming Trauma Care

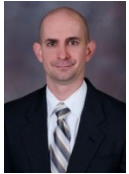


Darren Malinoski, M.D.

Speaking topics: General trauma; Organ donation

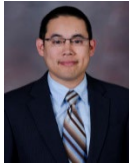


Jacinta Robenstein, M.D.



Mitch Sally, M.D.

Speaking topics: Inflammation and response to injury; Organ donation;
Mechanical ventilation



Phil Van, M.D.

Speaking topics: Military trauma care; General trauma



David Zonies, M.D.

Speaking topics: ECMO; Military trauma care; Advanced ventilator management

Trauma Nursing Faculty



Heather Wong, MHS, BSN, RN, TCRN
Trauma Program Director



Jody Berryhill, MNE, BSN, RN
Trauma Coordinator



Rebecca Brown, MNE, BSN, RN
Trauma Coordinator



Sarah Gold, BSN, RN
Injury Prevention Coordinator

Trauma Program Administration (Adult)



Elizabeth Herber
Conference and Education Coordinator
Trauma Program Administrative Coordinator



Nicole Laheney, BS
Military Civilian and Administrative Program Coordinator

Trauma Advanced Practice Providers



Kristy Aghayan
Trauma Physician Assistant



Amy Biedenbach
Trauma Physician Assistant



Joshua Bowley
Trauma Physician Assistant



Alexis Croucher
Trauma Nurse Practitioner



Laura Dillon
Trauma Physician Assistant



Kristen Haynes
Trauma Nurse Practitioner



Anna Hoenig
Trauma Nurse Practitioner

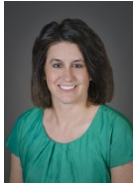
Transforming Trauma Care



Kyle Hoyer
Trauma Physician Assistant



Jessica Jurkovich
Trauma Nurse Practitioner



Nicole Kirker
Trauma Nurse Practitioner



Micheale Kolesnikov
Trauma Nurse Practitioner



Ryan McMahon
Trauma Physician Assistant



Stacey Mermigos
Trauma Physician Assistant



Erica Olson
Trauma Nurse Practitioner



Adrian Ramos
Trauma Nurse Practitioner

Transforming Trauma Care



Lauren Ramsperger
Trauma Physician Assistant



Emma Schaus
Trauma Physician Assistant



Brandon Sheets
Trauma Nurse Practitioner



Hayley Shugart
Trauma Nurse Practitioner



Amanda Staudt
Trauma Nurse Practitioner



Sally Wright
Trauma Physician Assistant