

Table of Contents

- Trauma Leadership Letter
- Trauma Service and Accomplishments
- Community Served
- Mechanism of Injury Summary for 2023
- Injury Prevention
- Patient Outcome Focus **30**
- Trauma Team Model
- Mission, Vision, Values and Promise



A Letter from Our Leadership

As we move on to 2024, and reflect on the past year, it makes us proud to be a part of the Providence Mission Hospital trauma team. The 2023 year was the busiest in our history, yet we never closed our doors to incoming patients. This was made possible with a combination of a dedicated trauma team, and a hospital administration that is devoted to serving our community with the highest quality and safety standards. With every trauma activation, several interdisciplinary departments come together as a well-oiled machine to instantly mobilize resources, giving the trauma victim the best chance of survival and recovery within that first golden hour. The immediate access to multiple surgical and non-surgical specialties working harmoniously as a part of the trauma team allows us to take care of all manner of injuries for patients of every age.

While the clinical trauma team, including trauma surgeons, advance practice providers, and trauma nurses attend to trauma victims in various units throughout the hospital, the process improvement team is hard at work continuously monitoring the patients' progress and identifying any opportunities for improved care. Through this rigorous process of review, we hold our practice to the highest standard of evidence-based medicine. We take away knowledge from every patient encounter to best serve our community and elevate the quality of care throughout the hospital and the county. Collaboration with other hospitals within our ministry and Orange County, along with Orange County Emergency Medical Services, allows us to share our expertise in promoting excellent care to an expansive population.

Caring for a large volume of patients gives us the opportunity to monitor and identify new mechanism of injury trends. Our robust community outreach program has deep roots within the South County community, providing up-to-date education and increased awareness to help prevent avoidable accidental trauma. A contemporary example is the rise of traumatic injuries related to the increased use of electric bikes. Shortly after we recognized a trend in this mechanism of injury, we focused our community outreach on this issue and collaborated with community leaders and law enforcement to provide public education utilizing various formats from town-halls and media interviews to social media posts. In collaboration with our generous Mission Hospital Foundation, we created a helmet giveaway program, which provides free helmets to South Orange County youths under the age of 18 years. As a result, we observed a plateau in this rapidly rising mechanism of injury.

As leaders of the trauma team, we hope to continue to serve this community stronger than ever, and would like to extend our sincere appreciation to the Mission Hospital Family for their unconditional support of our trauma team.



Trauma Services and Accomplishments

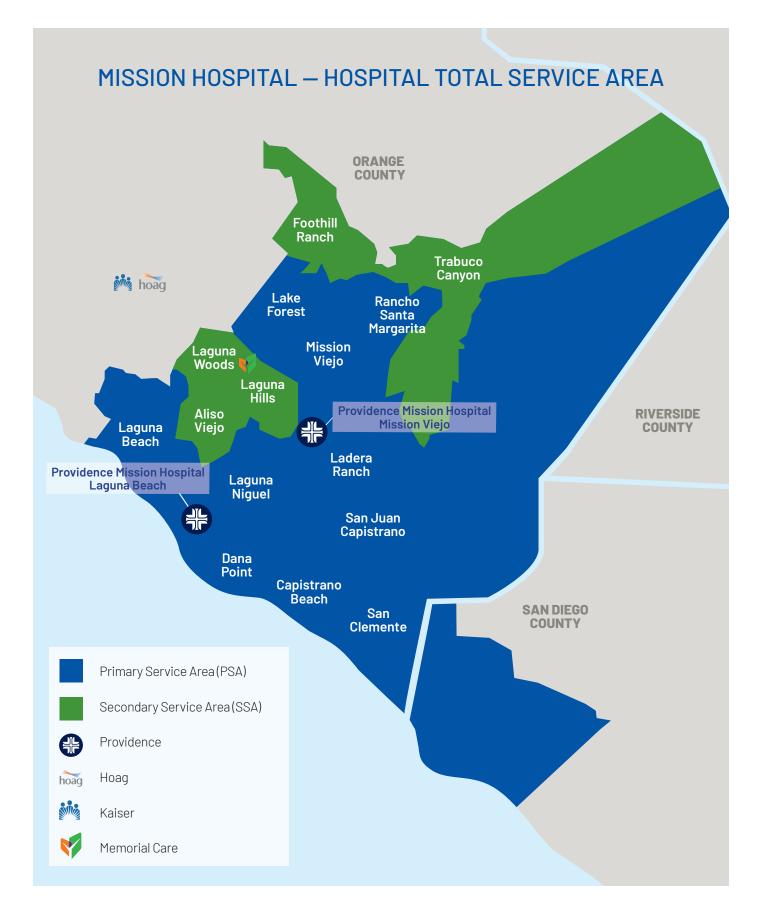
Providence Mission Hospital employs expertly trained trauma and surgical-critical care surgeons who are available in-house 24 hours a day, seven days a week, with continuous backup surgeon and general surgery coverage to ensure access to the highest level of care for even the most severe injuries. In addition, the trauma provider model utilizes the expertise of advanced practice providers who assist with inpatient care throughout the hospital seven days a week. Inpatient needs are assessed twice daily at sign out rounds in collaboration with the performance improvement nurse team, and daily during ICU Multidisciplinary rounds. Our model of trauma care consists of a multi-layered approach to quality, safety, and performance improvement and a focus on caring for our patients from the moment of their injury until after discharge and their return to daily function. Everyone who cares for our patients, from nurses to surgeons, receives specialized and extensive training in best-practice trauma care.



TRAUMA SERVICES FOCUS & ACCOMPLISHMENTS 2023

The Trauma Team, in partnership with our multidisciplinary colleagues, experienced an impactful year filled with quality improvement, education, process changes, and professional development. While the following list is not all-inclusive, it gives a snapshot of the important work that the entire hospital is doing through South Orange County's only American College of Surgeons designated Level II Adult and Level II Pediatric Trauma Center.

- Zero trauma diversion two years in a row with a 2-4% increase in trauma volume year over year.
- Development of a surgical disaster response plan with successful implementation demonstrated during a Mass Casualty shooting incident.
- Development and growth of the Geriatric Trauma Program and multidisciplinary collaboration with the assembly of a Geriatric Trauma Subcommittee team.
- Expansion of adult and pediatric mental health and wellness programs with house-wide education.
- Health system-wide development and implementation of Non-Accidental Trauma Screening Tool with Epic optimization and education.
- Development and implementation of Interventional Radiology stat response alert in collaboration with our Interventional Radiology, House Clinical Coordinators, PBX and physician colleagues.
- County wide collaboration to streamline remote image sharing between transferring centers.
- Distribution of free helmets through our "Save the Brain Helmet Campaign" to over 1,416 children through our participation in community events and our Mission Hospital gift shop.
- Collaboration with Orange County Fire Authority colleagues to provide trauma related paramedic education through their video lecture series.
- Interaction in our community through festivals, city council meetings, PTSA education sessions and law enforcement events with 110 events and roughly 10,000 community contacts made.



The map represents Hospital Total Service Area (HTSA). The Primary Service Area (PSA) comprises 70% of total discharges (excluding normal newborns). The Secondary Service Area (SSA) comprises 71–85% of total discharges (excluding normal newborns). The HTSA combines the PSA and SSA. Cities are placed in either PSA or SSA, but not both.

Community Served

Providence Mission Hospital is one of Orange County's four designated trauma centers serving the community of Southern Orange County from Sand Canyon to the San Diego County border and extending eastward to the Riverside County Line. Our catchment area includes coastline, remote canyons, parts of a military base, and suburban communities that make up most of the area. Providence Mission Hospital is also proud to serve patients from out of area or when specialty trauma services are needed.

Providence Mission Hospital has been accredited by the American College of Surgeons as a Level II Trauma Center since 1980. In 2017 Providence Mission Hospital attained its Level II Pediatric verification. As one of the first trauma receiving centers in the county, the objective was, and still is, to provide organized, systematic, emergency trauma care, and to be open and ready to serve our community with a population of almost 3.2 million. Orange County Emergency Medical Services provides the pre-hospital phase of care and works with the trauma centers to assure optimal care of the injured patients throughout the care phases.

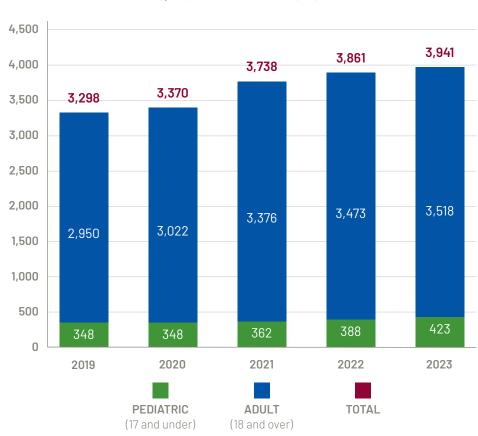






Patient Population Trending (2019-2023)

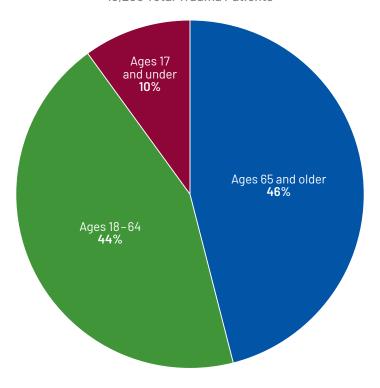
18,208 Total Trauma Patients



YEAR	TOTAL TRAUMA POPULATION	% CHA fror previous	n	TOTAL ADULTS 18 and older	% CHA fror previous	n	TOTAL PEDIATRIC 17 and under	% CHA froi previou	m
2019	3298	15.36%	A	2950	15.60%	A	348	5.78%	A
2020	3370	2.18%	A	3022	2.44%	A	348	0.00%	_
2021	3738	10.92%	A	3376	11.71%	A	362	4.02%	A
2022	3861	3.29%	A	3473	2.87%	A	388	7.18%	A
2023	3941	2.07%	A	3518	1.30%	A	423	9.02%	A

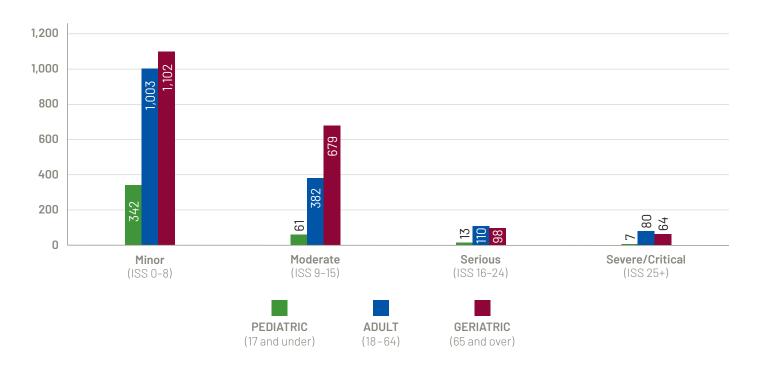
Trauma Population by Age for 5 Years (2019 - 2023)

18,208 Total Trauma Patients

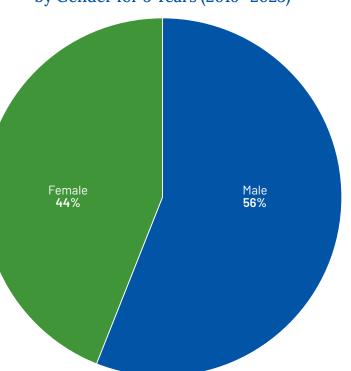


2023 Injury Severity Score Breakdown by Age

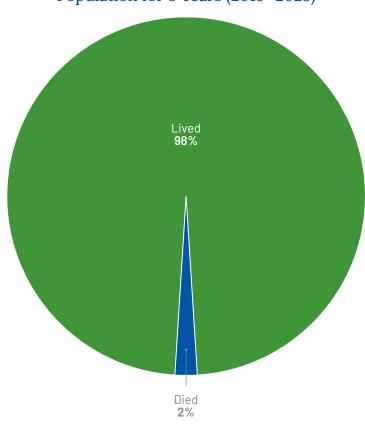
3,941 Total Trauma Patients



Trauma Population by Gender for 5 Years (2019-2023)



Life and Death of Trauma Population for 5 Years (2019-2023)



YEAR	FEMALE	MALE
2019	1,467	1,831
2020	1,501	1,869
2021	1,647	2,091
2022	1,706	2,155
2023	1,781	2,160
TOTAL	8,102	10,106

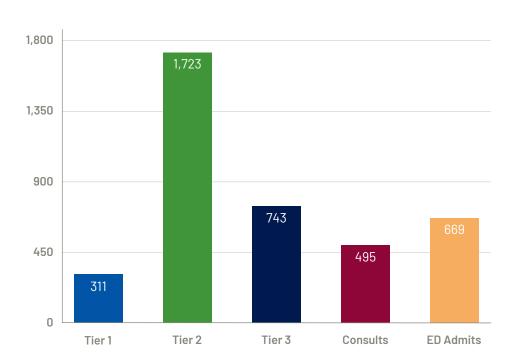
18,208 Total Trauma Patients

YEAR	LIVED	DIED
2019	3,211	87
2020	3,293	77
2021	3,651	87
2022	3,771	90
2023	3,859	82
TOTAL	17,785	423

18,208 Total Trauma Patients

2023 Trauma Population by Tier (January – December 2023)

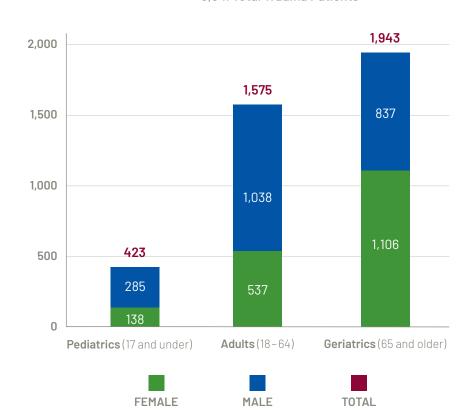
3,941 Total Trauma Patients



TIER	2023	2022
1	311	240
2	1,723	1,875
3	743	660
Consult	495	444
ED Admit	669	642
TOTAL	3,941	3,861

2023 Trauma Population by Gender and Age (January - December 2023)

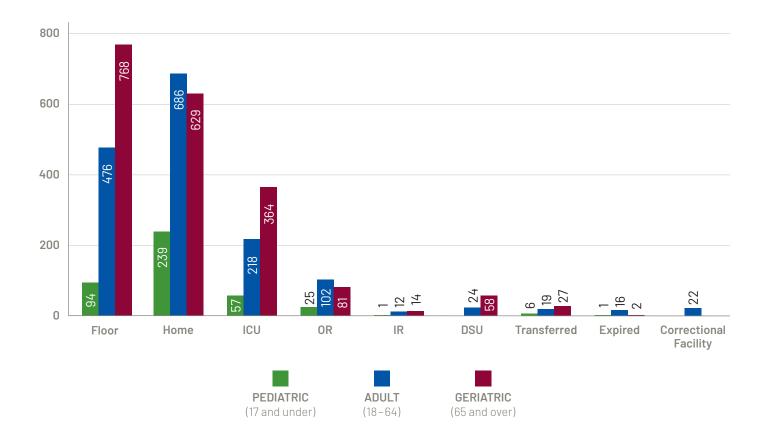
3,941 Total Trauma Patients



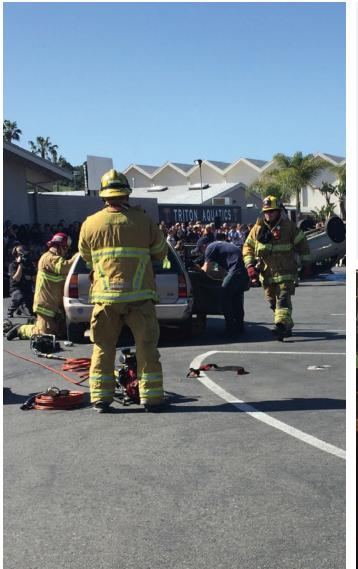
GENDER	2023	2022
Female	1,781	1,706
Male	2,160	2,155
TOTAL	3,941	3,861

2023 Trauma Population by ED Disposition (January - December 2023)

3,941 Total Trauma Patients



ED DISPOSITION	2023	2022
Floor	1,338	1,400
Home	1,554	1,490
ICU	639	611
OR	208	172
IR	27	16
DSU	82	74
Transferred	52	51
Expired	19	19
Correctional Facility	22	28
TOTAL	3,941	3,861





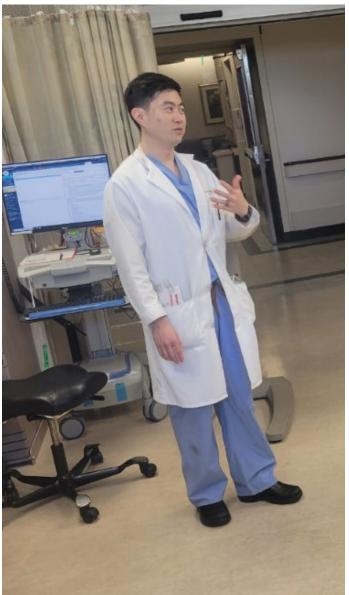




TRAUMA DIVERSION

To assure the highest available level of care in the most expedient manner and to prevent overloading of any one facility, allowance is made for rerouting of designated trauma patients to another trauma facility at times (bypass/diversion status) when this hospital is temporarily unable to accept trauma patient admissions, in accordance with Orange County policy. This can be due to the depletion of staff and/or equipment, such as operating room saturation or internal disruption.

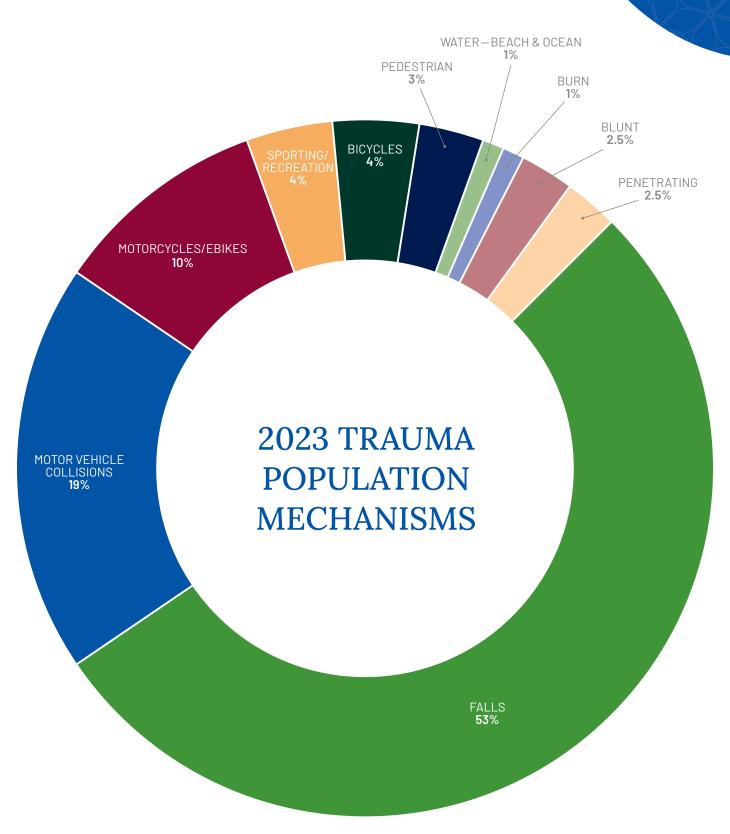
Providence Mission Hospital serves a large catchment area and as a commitment to serving our community has put practices in place to minimize and avoid trauma diversion. We are very proud to have two years in a row of zero trauma diversion and remain committed to ensuring availability to our community, "When Seconds Count."







Mechanism of Injury Summary for 2023



TRAUMA SERVICES MECHANISM & INJURY PREVENTION FOCUS

TRAUMA POPULATI	2022	% CH	ANGE		
Falls	53%	2,092	1,902	4%	A
Motor Vehicle Collision	19%	755	789	1%	•
Motorcycle/Ebikes	10%	376	398	0%	_
Sporting/Recreation	4%	161	182	1%	•
Bicycles	4%	174	221	2%	•
Pedestrian	3%	102	102	0%	•
Water-Beach/Ocean	1%	44	42	0%	•
Burn	1%	16	47	0%	_
Blunt	2.5%	111	51	0%	_
Penetrating	2.5%	107	24	0%	_
TOTALS	100%	3,938	3,861	2%	A

FOCUSED OUTCOMES

Falls

There were 2,092 trauma patients from falls in 2023(190 - 9% more than last year)

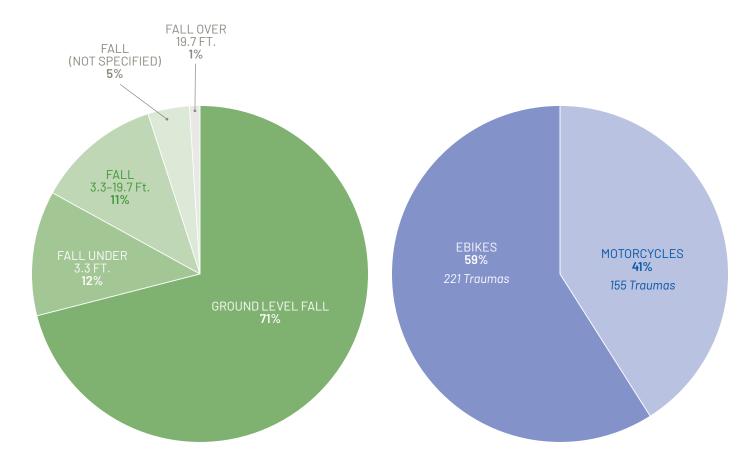
- 2,052 survived
- Forty of these patients expired age range 22 to 100 years in age
- 548 of those who lived were discharged to skilled facility for ongoing care

Ebike & Motorcycle

There were 375 motorcycle and e-bike traumas. A decrease of 22 patients in this mechanism from last year.

Motorcycle: 155 E-Bike: 220

- All ebike patients survived 8 of these required inpatient rehab or long term care upon discharge from the trauma center.
- Ebiker's 121 wore helmets, 90 did not have helmets and 9 unknown age range from 8 months to 91 years in age
- Motorcycle Six trauma patients expired ages: 23x2, 35, 37, 45 and 55 five wore helmets and 1 unknown



COMMUNITY FOCUS ON FALLS, which continues to the largest trauma mechanism. In 2023 there was a 9% increase in this trauma injury. The majority age range of these patients are age 65 years and up, with ground level falls being the primary cause.

The outreach for adult fall prevention is an ongoing focus. We provide "Matter of Balance" sessions locally for the past five years. However, in an effort to reach more of this population we expanded with an annual Fall Prevention conference. The speakers are medical professionals and address geriatric issues associated with falls and prevention

Falls are kept in the forefront of all outreach to ensure awareness. Education and discussion is given in regards to environment, safety, lighting, footwear, medications, substance use, stable structures, physical ability and resources.

COMMUNITY FOCUS ON EBIKE safety was initiated in late 2019 when this increasing in trauma injury trend was identified. This effort has been ongoing. The ebike percentage has increased 3% since last year (2022), and motorcycle involved injuries are down 3%. Overall the good news is we are down 6% in the combined motorcycle/ebike mechanism.

Efforts are ongoing into 2024 to bring awareness, education, and share our statistical data with the community. Partnering with law enforcement, school districts, and media has been very effective. Additionally our "Save the Brain" free helmet campaign has helped heighten the awareness of this serious mechanism.

In 2022 ebike trauma injures accounted for the highest volume in our pediatric population and again for 2023 is the highest volume. Overall our data is showing as we are starting 2024 this mechanism is showing signs of stabilizing. We will continue to partner in prevention outreach and awareness.

Injury Prevention

The American College of Surgeons describes trauma injury as one of the most challenging aspects and burden, as injury is largely preventable. They propose each trauma center injury prevention program should identify the three most common causes of injury or traumatic death utilizing the trauma registry and available epidemiologic data. Programs and intervention strategies should then be selected based on this data. Trauma personnel have a unique perspective on trauma injury and a unique opportunity to assist with effective prevention programs in the community. They encourage partnerships with injury prevention experts and resources in the community to analyze and bring about effective solutions.

Mission hospital trauma services has been very visionary with our injury prevention outreach. As early as 1989 we began to establish intervention efforts within the communities. Our partnerships and programs we have developed, maintained and had ongoing success for over two decades. New programs and approaches are developed as the trends or data indicates in adult and pediatric outreach.

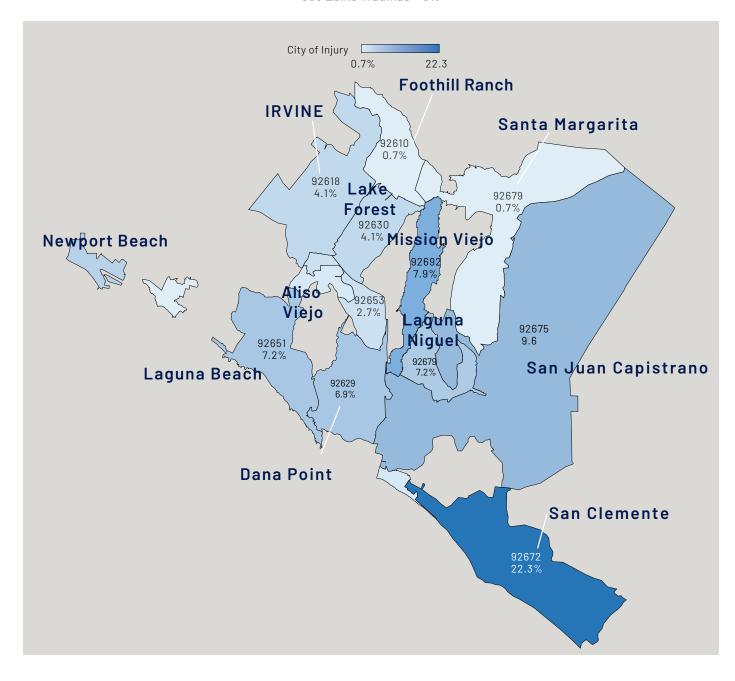
We address upstream issues through trending, health disparities, and our mission goes beyond our hospital doors into the community to those most vulnerable and in need. We strive to provide our expertise as level II trauma center by partnering strategically with agencies, businesses, companies, facilities, organizations, and the public. This is a small snapshot of our outreach that honor the words of our founding trauma medical director, Thomas E. Shaver, "A trauma center is a mirror of what is wrong in the community, and prevention is the most cost-effective care."

Ebike Trauma Volume by Year and Age (2020 – 2023)



Trauma Patients Involved in Ebike Mechanism of Injury (January 2022 – August 2023)

353 Ebike Traumas = 6%



This heat map identifies the area/city of patient event involving ebike injuries by zip code. The darkest blue as the highest volume areas to lighter shades as the percentages decrease.

During this time period there were 56 trauma patients with unknown event location, and 4 out of area — accounting for 353 Ebike Traumas.

EDUCATING ABOUT EBIKES



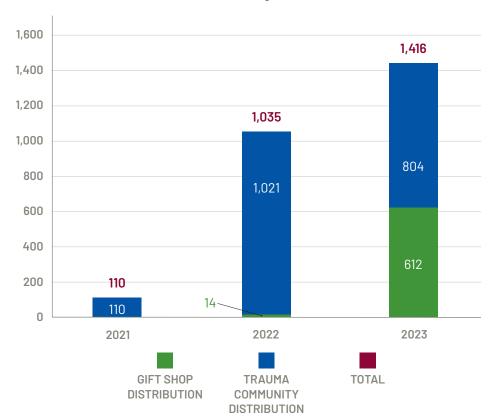




20 | Providence Mission Hospital

Save the Brain Helmet Distribution By Year and Outreach (2021-2023)

Free to Youth Ages 2 to 17 Years







































TRAUMA STATISTICS ON FALLS

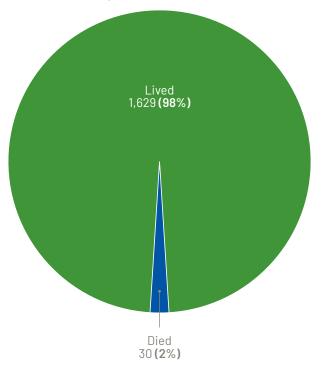
Falls vs. Total Traumas 5 Year Review (2019-2023)

Fall Mechanism & Percentage by Trauma Volume & Year



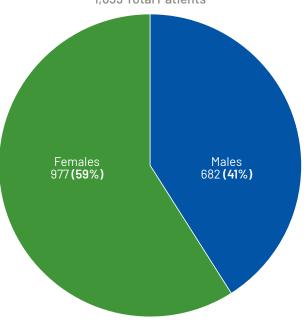
2023 Trauma Falls Ages 65 and Over — Lived/Died

1,659 Total Patients

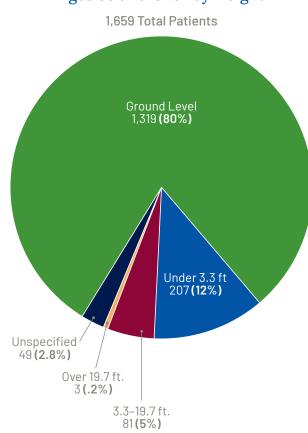


2023 Trauma Falls Ages 65 and Over by Gender

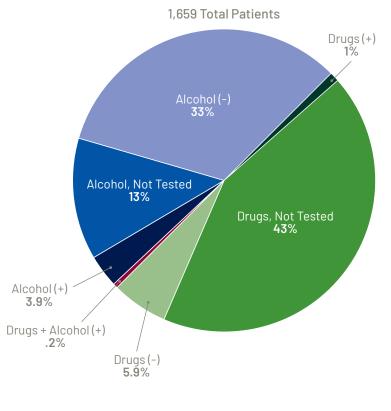
1,659 Total Patients



2023 Trauma Falls Ages 65 and Over by Height

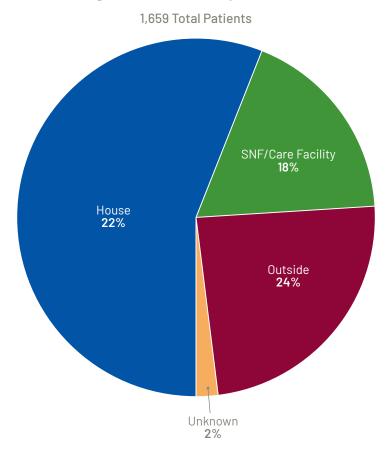


2023 Trauma Falls Ages 65 and Over by Substances



EDUCATING ABOUT FALLS

2023 Trauma Falls Ages 65 and Over by Location



LOCATION	ACTUAL	PERCENTAGE
House	933	56%
Bathroom	127	8%
Bedroom	140	8%
Kitchen	80	5%
Unspecified	586	35%
SNF/Care Facility	298	18%
Bathroom	49	3%
Bedroom	85	5%
Dining Room	6	.4%
Garden Yard	3	.2%
Kitchen	6	.4%
Unspecified	149	9%
Outside	393	24%
Driveway/Garage	45	3%
Outside Public Area	13	1%
Public Building/Business	92	5.5%
Sidewalk/Parking Lot	116	7%
Street	59	3.5%
Yard/Garden	68	4%
Unknown	35	2%
TOTAL	1,659	100%











STOP THE BLEED

Stop the Bleed Sessions were provided at:

• 3 Public Schools (x7)

• Mission Hospital Conference Center

• Community Center

• Ocean Institute

The Stop the Bleed sessions at the schools included the school districts nursing staff in "train the trainers" sessions to enable Stop the Bleed classes to have additional outreach in the schools with the lead instructors being the school nurses with assistance from school administration.

Stop the Bleed classes are taught by a trauma nurse with the assistance of other trauma nursing staff and Orange County Fire Authority.

Stop the Bleed 2023 Sessions and Contacts













Patient Outcome Focus

SBAR-GERIATRIC PROGRAM

SITUATION:

In June 2021, it was identified during our 2021 ACS Trauma Survey that we would need to address and develop a Geriatric specific plan, prior to the next reporting year (Feb. 2023 – Jan. 2024).

BACKGROUND:

June 2021, Providence Mission Hospital received Reverification as a Level II Trauma Center. Opportunities identified at that time:

- 1. Geriatric specific trauma activation is lacking
- 2. Geriatric patients are not seen and evaluated by Geriatric specialist throughout their phase of care. The American College of Surgeons also updated The Resources for Optimal Care of the Injured Patient which was released March 2022. Standard 4.5 requires Level II trauma centers to have a Geriatric Provider Liaison which Providence Mission Hospital did not have at that time. ACS released Geriatric Trauma Best Practice Guidelines November 2023.

ASSESSMENT:

Traumatic injury in the geriatric population is increasing in prevalence and is associated with higher mortality and complication rates compared to younger patients. Providence Mission Hospital saw 3941 trauma patients in 2023 with 1943 (49%) of those being greater than 65 years of age. Due to elderly patient's high rate of comorbidities and diminished physiologic reserve, result in an at-risk population that is highly vulnerable to complications, including clinical decompensation. Appropriate trauma activations of this high-risk group, having early geriatric specific consultations, and geriatric specific protocols, will assist in mitigating higher morbidity and mortality complication rates in this population.

RECOMMENDATION/ACTION PLAN:

Opportunities Identified and Corrective Actions Implemented with a focus on loop closure.

1. Trauma Activation Criteria updated:

- September 2021 Geriatric specific criteria and policy became active to optimize resuscitation and intervention.
- December 2023 Geriatric specific criteria updated with new county triage criteria.

2. Geriatric Policy updated:

- August 2022 Trauma Geriatric Policy updated with the input from Geriatric/Palliative Care Team
- September 2022 New policy approved in Trauma M&M
- November 2023 ACS released Geriatric Trauma Best Practice Guidelines
- December 2023 Revision of Geriatric PPMG started with gap analysis by PI RN
- **December 15, 2024** Meeting to review gaps with TPMs
- **January 2024** Gap analysis of policy reviewed with TMD, TPM, PTPM and Geriatric liaison, and further input received
- January 18, 2024 Meeting to review gap analysis with Pharmacy Manager
- February 2024 Updated Geriatric Policy pending approval

3. Geriatric Program/Liaison established:

- March 2021 Meeting with ELT and key stakeholders to begin conversations
- August 2021 The first Geriatric program meeting was implemented: In attendance were the TMD, TPMs, Dr. Dehkordi and Dr. Ahluwalia. The agenda items included the need to develop specific geriatric trauma activation criteria, to optimize resuscitation, intervention, and development of a specific geriatric specialty group to focus on the unique care of this at-risk patient population. An initial action plan was the identification of a Geriatric Liaison.
- March 2022 Geriatric Taskforce Meeting: TMD addressed intent and goal(s) for this formal taskforce meeting, as the start of geriatric program.

Goal: Develop a specific geriatric specialty group, focusing on the unique care of this at-risk geriatric patient population. Our recent ACS Survey results and the new ACS requirements were explained

Action Plan: There was consensus among the collaborative group to create and establish geriatric patient care protocols

Next Steps: The creation of Sub-committees, review TQIP data and TQIP Guidelines for Geriatric Patients.

- November 2022 New Geriatric Liaison identified: Dr. M. Monge and back up Dr. Ahluwalia.
- **January 2023** Monthly Trauma/Geriatric Subcommittee Meetings established to occur the first Thursday of every month.

4. Geriatric Specific Pl indicators:

- **January 2023** Geriatric Trauma Not Activated per Criteria added to PI definition list for consistent capture of adherence and outcomes.
- **January 2023** Geriatric Compliance: Rib Fracture Algorithm and Compliance: Trauma Admission Guidelines added to PI definition list for consistent capture of adherence and outcomes.

5. Geriatric Specific Education:

- March 2023 Geriatric specific education to Trauma Team.
- April 2023 Geriatric specific education assigned to PACU.
- **June 2023** OCFA education done by Dr. Takeuchi which was filmed by OCFA media department for widespread dissemination to EMS personnel with education hours provided.
- October 2023 Geriatric specific education to Trauma Team.
- October 2023 Trauma Symposium Mission Hospital with specific Geriatric Trauma Care Lecture (Trauma Team, PACU/OR Team, Trauma PI Staff, and Trauma NPs in attendance as well as open to outside education).
- March 2024 Geriatric Trauma Grand Rounds by Dr. Monge and Dr. Takeuchi geared towards hospitalists and Geriatric Trauma specific education

6. Geriatric Pain Management:

- December 2021 Anesthesia pain service gap and action items brought to M&M for review.
- March 2022 Blunt Force Chest Wall Injuries Management Guidelines updated to include early Anesthesia intervention.
- June 2022 Blunt Force Chest Wall Injuries Management Guidelines updated to include Interventional Radiology intervention.
- **July 2023** Acute Pain Management Program developed and implemented. Consultation resource made available to Trauma Program as of September 2023.
- Revision of Blunt Chest Wall Injuries Management to incorporate Geriatric Rib fx management and Chest Wall Injury Program development with Thoracic and Trauma Leadership.

7. Geriatric Chest Wall Injury Program::

June 2023 — Geriatric Specific Rib Fracture Management guideline developed and added to the Blunt Force Chest Wall Injuries PPMG with input from Thoracic and Geriatric Care Team.

8. Geriatric Palliative Care Consultation Guidelines:

June 2023 — Palliative Consult Criteria developed in collaboration with from Geriatric/Palliative Care Team.

COMPLIANCE TRACKING: (January - December 2023)

All patients will be reviewed with a minimum level II review for compliance with guideline recommendations. Fallouts are captured with corresponding PI filter and/or compliance tracking and will go to Committee for review.

1. Geriatric Specific PI indicators:

January 2023 — Compliance tracking started with multi-level review after education done in 2022. Review levels include TPMs, PI/Registrars, and Data Analyst. (See PI dashboard)

3. Consultations:

Specific geriatric consultations (Palliative, Hospitalist, and/or Intensivist) to focus on unique care of this at-risk patient population.

4. Geriatric Reports:

Generated in V5 and reviewed by PI RN. Reviewed monthly with TPM and PTPM. Data analysis presented at monthly Subcommittee meetings started January 2024.

5. Geriatric Reports:

Generated in V5 and reviewed by PI RN. Reviewed monthly with TPM and PTPM. Data analysis presented at monthly Subcommittee meetings started January 2024.

August 2023 — Review of pain management/Intervention (VATS/ORIF, nerve block, Pain Management consult) for Geriatric patients with 3+ rib fractures.

6. Geriatric compliance tracking::

Generated in V5 and reviewed by PI RN. Reviewed monthly with TPM and PTPM. Data analysis presented at monthly Subcommittee meetings started January 2024.

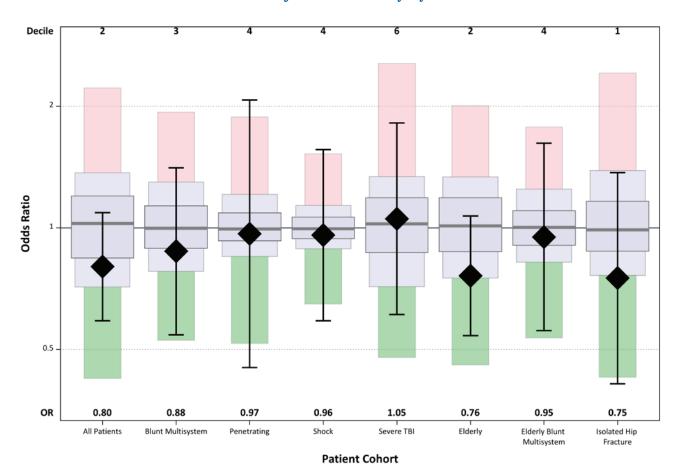
November 2023 — Trauma Admission guidelines. Data presented at monthly Subcommittee meetings.

December 2023 — Palliative care (restructured) and Geri Rib fracture management. Data presented at monthly subcommittee meetings.

OUTCOMES:

CONSULTING SERVICE patients: AGE ≥ 65; exclude ED Admits	2021	2022	2023
Palliative Care	27	50	75
Critical Care	71	76	80
Hospitalists	97	74	98
TOTALS	195	200	253

Risk-Adjusted Mortality by Cohort



Fall 2023 TQIP Benchmark Report: Shows favorable outcomes for our elderly population

KEY STAKEHOLDERS:

Trauma Department, Geriatric/Palliative Team, Hospitalists

Patient Outcome Focus

NON-ACCIDENTAL TRAUMA SCREENING

SITUATION:

The 2019 ACS/TQIP Best Practice Guidelines for Trauma Center Recognition of Child Abuse, Elder Abuse and Intimate Partner Violence recommends the use of a child abuse standardized screening tool and providing ongoing education to providers about recognition of abuse. The 2022 Resources for the Optimal Care of the Injured Patient also requires that all trauma centers demonstrate a process to assess children for nonaccidental trauma (Standard 5.7) as well as having a designated Child Abuse Physician (Standard 4.26).

While Providence Mission Hospital does have a child abuse guideline for assessing and reporting child abuse, we currently do not employ a standardized child abuse screening tool upon patient intake.

BACKGROUND:

Providence Mission Hospital is a Level 2 pediatric trauma center as well as a designated Children's Emergency Receiving Center. We see approximately 14,000 pediatric patients through the Emergency Department and approximately 350 through the trauma department per year and are considered a moderate to high volume pediatric center. Currently, Mission Hospital does not have a standardized child abuse screening tool built in the EHR.

- Non-Accidental Trauma Workgroup: Started in 2020 to assess existing policies and utilize current recommendations to update processes.
- Emergency Medicine Services Department Committee: Presented by Dr. Kwon February 2021 Approved

ASSESSMENT:

Providence MH switched our EHR platform from Meditech to Epic in May 2021. The current EPIC program does not have a specific pediatric abuse screen for the Emergency Department. The "abuse screen" currently available is designed for the adult patient, relies on the patient's ability to verbally answer a series of questions that are not specific or relevant to the pediatric population.

- 2021 Non-Accidental Trauma Screening year-end report revealed seven missed social work/CPS consults for patients with red flag indicators.
- 2022 Non-Accidental Trauma Screening year-end report revealed two missed social work/CPS consults for patients with red flag indicators.

RECOMMENDATION/ACTION PLAN:

Opportunities Identified and Corrective Action Implemented focusing on clear loop closure.

The recommendation is to add the Child Abuse Clinical Decision Support tool to the pediatric triage assessment for all patients less than 10 years old that present to the trauma bay and Emergency Department. This is a five question, nurse administered screening tool used to identify red flag triggers warranting additional diagnostics and/or consultation by case management, the child abuse physician and/or Child Protective Services.

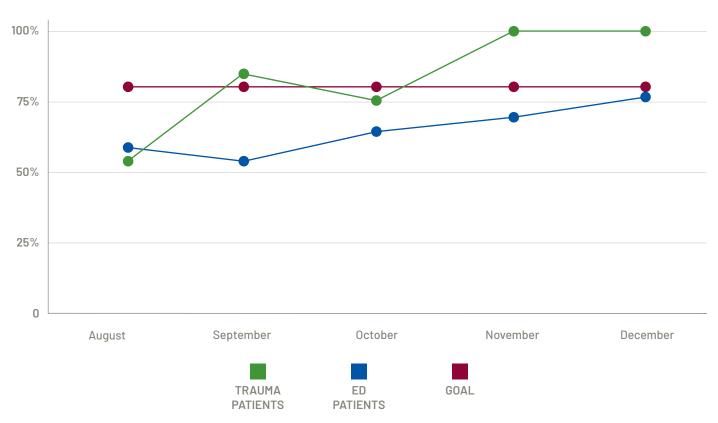
- May 2021 ECO Request: Approved (CI-2212602 Pediatric Non-Accidental Trauma Screening Tool)
- **February 2022** Presented at Pediatric CDT Approved
- February 2022 Acute Care Pediatric Focus Group —Voted by all members and approved
- July 2022 Presented at ED CDT Approved
- March 2023 Presented to Executive Leadership Team at Trauma Operations meeting
- March 2023 "Fast-track" build approved
- April 2023 Project build initiated with weekly meetings including all stakeholders
- **July 2023** Epic Go-Live
- December 2023 Skeletal Survey Visual Aide, Compliance Tracking, Education
- **January 2024** Skeletal Survey PI Indicator added to 2024 Performance Improvement Definitions and Trauma Surgeon OPPE

COMPLIANCE TRACKING: (January - December 2023)

All patients will be reviewed with a minimum level II review for compliance with guideline recommendations. Fallouts are captured with corresponding PI filter and/or compliance tracking and will go to Committee for review.

- August 55% Trauma Department; 58% Emergency Department
- September 83% Trauma Department; 54% Emergency Department
- October 75% Trauma Department; 64% Emergency Department
- November 100% Trauma Department; 69% Emergency Department
- **December** 100% Trauma Department; 76% Emergency Department

Non-Accidental Trauma Screening Compliance Tracking



Skeletal Survey Required



ANY PATIENT ≤6 MONTHS WITH A SKULL FRACTURE OR ICH

- <24 months with ICH or skull fracture
- <12 months: ALL fractures
- 12-23 months with rib fracture(s), metaphyseal fracture, humeral fracture epiphyseal separation in fall <3 feet, femur diaphyseal fractures from fall of any height
- ALL patients with witnessed or confessed abuse
- ALL patients with injury r/t domestic violence
- ALL patients with fractures from impact of an object
- ALL patients with additional injuries on exam unrelated to fracture, no explanation for fracture, or delay in presentation >24 hours

EXCEPTIONS (Does NOT need Skeletal Survey):

- Distal radial/ulna buckle fracture with history of fall onto outstretched hand
- Distal spiral fracture of tib/fib
- Linear, unilateral skull fracture in child >6 months from fall >3 feet

KEY STAKEHOLDERS:

Trauma Department, Emergency Department, CHOC MH, Providence Pediatric Trauma Program Managers at Covenant Children's Hospital and Providence Alaska Children's Hospital.

Patient Outcome Focus

SBAR-POST-TRAUMATIC STRESS DISORDER

BACKGROUND:

The American College of Surgeons (ACS) Committee on Trauma (COT)(2018) recognizes Post-Traumatic Stress Disorder (PTSD) symptoms occur in 20% to 40% of injured trauma survivors. Symptoms include extreme fear, anxiety, insomnia, helplessness, and recurring memories o the traumatic event. Such symptoms are normal reactions to abnormal circumstances. Assisting individuals to recognize post-traumatic stress symptoms, while having an awareness of healthy approaches to coping with them through educational materials and/or home health follow-up will improve long-term outcomes (Grier, et al. 2018). In accordance with trauma best practice and the recommendations of the ACS, a comprehensive approach to PTSD screening with brief intervention including a referral to home health if applicable was developed.

CALL TO ACTION:

Much work has been done over the past 24 months to develop and implement a Mental Health program that ensures that our trauma patient population is screened and offered resources for PTSD. Here at Mission Hospital, both adult and pediatric patients are assessed for signs and symptoms of PTSD prior to discharge and provided with the tools to make both a physical and psychological recovery from their traumatic injuries.

PROVIDENCE MISSION HOSPITAL AND CHOC AT MISSION PROGRAMS:

The adult trauma patient admitted for five days or greater is assessed for PTSD using the PC-PTSD-5 screening tool. Those deemed to be "high risk" based on the screen results will receive education and a brief intervention.

- 1. Education materials, "Exposure to a Traumatic Event Common Stress Reactions & Coping Strategies" will be provided.
- 2. A brief intervention or short counseling session will be provided by a trained clinician (Trauma Nurse, Social Service Practitioner, Behavioral Health Provider, Physician or Advanced Practice Trauma Professional), to discuss PTSD including incidence after trauma, common post-traumatic stress symptoms and healthy coping strategies.



3. Those patients screening "high-risk" will receive additional "Out-Patient Adult Mental Health Resources." Additionally, a Home Health Social Services PTSD follow-up evaluation will be ordered by the Trauma Clinical Practitioners at 30 to 45 days post traumatic event.

In the past month, have you ...

	Total score is sum of "YES" responses in items 1-5.	TOTAL SCORE	
5.	felt guilty or unable to stop blaming yourself of others for the event(s) or any problems the events may have caused?	YES	NO
4.	felt numb or detached from people, activities, or your surroundings?	YES	NO
3.	been constantly on guard, watchful, or easily startled?	YES	NO
2.	tried hard not to think about the event(s) or went out of your way to avoid situations that reminded you of the event(s)?	YES	NO
1.	had nightmares about the event(s) or thought about the event(s) when you did not want to?	YES	NO

The pediatric trauma patient (less than 18 years of age) admitted to the hospital for greater than 24 hours is assessed for PTSD using the CPSS screening tool. Those deemed to be "high risk" based on the screen results will receive education and a brief intervention:

- 1. Education materials, "Pediatric Post-Traumatic Stress Disorder" brochure will be provided.
- 2. A brief intervention or short counselling session will be provided by a trained clinician (Bedside Rn, Social Service Practitioner, Behavioral Health Provider, Physician or Advanced Practice Trauma Professional), to discuss PTSD including incidence after trauma, common post-traumatic stress symptoms and healthy coping strategies.
- **3.** Those patients screening "high-risk" will receive additional outpatient mental health resources with referral to outpatient follow-up with their primary care provider.

at Mission Hospital					
Child PTSD Symptom Scale for DS	M	٠ '	V		
(CPSS-V SR)					
iometimes scary or upsetting things happen to kids. It might be something like a cate etiting beaten up, living through an earthquake, being robbed, being touched in a wi lidn't like, having a parent get hurt or killed, or some other very upsetting event. Instructions: Please answer the following questions by checking the number that best di- frent the following problems apply to you about the event you experienced. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4	ny yo escrib	u			
Never A Little Somewhat A Lot Almost alwa	ys				
. Having upsetting thoughts orpictures about it that came into your head when you lidn't want them to	0	1	2	3	4
. Having bad dreams or nightmares . Acting or feeling as if it was happening again (seeing or hearing something and	0	1	2	3	4
feeling as if you are there again)	0	1	2	3	4
. Feeling upset when you remember what happened (for example, feeling scared, Having feelings in your body when you remember what happened (for example,	0	1	2	3	4
 Having feelings in your body when you remember what happened (for example, weating, heart beating fast, stomach or head hurting) 	0	1	2	3	4
i. Trying not to think about it or have feelings about it	0	1	2	3	4
Trying to stay away from anything that reminds you of what happened (for example, people, places, or conversations about it)	0	1	2	3	4
Not being able to remember an important part of what happened	0	1	2	3	4
 Having bad thoughts about yourself, other people, or the world (for example, "I can't do anything right", "All people are bad", "The world is a scary place") 	0	1	2	3	4
0. Thinking that what happened is your fault (for example, "I should have	0	1	2	3	4
known better". "I shouldn't have done that". "I deserved it") 1. Having strong bad feelings (like fear, anger, guilt, or shame)	0	1	2	3	4
2. Having much less interest in doing things you used to do	0	1	2	3	4
3. Not feeling close to your friends or family or not wanting to be around them	0	1	2	3	4
 Trouble having good feelings (like happiness or love) or trouble having any feelings at all 	0	1	2	3	4
5. Getting angry easily (for example, yelling, hitting others, throwing things)	0	1	2	3	4
Doing things that might hurt yourself (for example, taking drugs, drinking alcohol, running away, cutting yourself)	0	1	2	3	4
 Being very careful or on the lookout for danger (for example, checking to see who is around you and what is around you) 	0	1	2	3	4
Being jumpy or easily scared (for example, when someone walks up behind you, when you hear a loud noise)	0	1	2	3	4
 Having trouble paying attention (for example, losing track of a story on TV, forgetting what you read, unable to pay attention in class) 	0	1	2	3	4
0. Having trouble falling or staying asleep	0	1	2	3	4



Trauma Services

Implementing Post Traumatic Stress Disorder (PTSD) Screening and Brief Intervention at a Level II Trauma Center

Jennifer Schollenberger MSN, CCRN, TCRN, CPHQ Anabella Anderson MSN, CCRN, TCRN & Nicole Miller BRN, CCRN, TCRN

ABSTRACT

the US are hospitalized annually, related to accidental trauma. Subsequently, 20% - 50% of those patients suffer from symptoms of PTSD, thirty to ninety days after injury. Further, patients that struggle to cope with acute stress and PTSD symptom recognition and management, report diminished functioning, increased hospital length functioning, increased hospital leng of stay, and poor quality of life and

PTSD predictability screening and a brief intervention, including symptom recognition and review of effective coping strategies has been term outcomes and patient perceived quality of life.

include assuring trauma patients receive comprehensive Mental Health screening. With the aim to honor this recommendation and improve patient long-term outcomes, Mission Hospital Providence a Level II Adult/Pediatric Trauma Center integrated a PTSD Screening and Brief Intervention process. As of November 2022, all trauma patients cognitively capable of participating and a length of stay \geq 5 day are screened for symptoms of PTSD. Further, a 20–30-minute discussion introducing PTSD symptom recognition, incidence, and management strategies is provided. In an era of staffing shortages and juggling health care priorities, this Level II Trauma Center is pioneering Best Practice and paving the way to setting the Standard of Care for Mental Health & PTSD Screening.



INTRODUCTION

intervention, including symptom recognition and review of effective coping strategies has been proven to positively impact long-term outcomes and patient perceived quality of life.

Mission Hospital Providence is a Level II Adult and Pediatric Trauma Center who treats over 3,800 trauma patients annually. Priorities in care include integration of acute care best practice and a rigorous Performance Improvement Patient Safety (PIPS) process, which has been praised by the ACS verification teams. In 2022 the Trauma Charge Nurse Team collaborated to implement a PTSD Screening and Brief Intervention (SBIRT), in effort to enhance our mental health inpatient support and optimize the long-term outcomes and patient reported quality

Resources: A multidisciplinary team, including Psychiatry, Care Management, Administration (CEO & CNO), Trauma Leadership (TPM Adult/Pediatric & TMD). Trauma Nurse Practitioner Team. Specialty CNIV Trauma Nurse, and Trauma Charge Nurses collaborated to develop a streamline and reliable process for identifying, screening, and educating trauma patients about symptoms patients commface after experiencing accidental trauma.

Focus on resource management, consistency in process, best practice strategies, and addressing the vulnerable patient population lay at the foundation of our program development. Cognizant of the increased workload and determined to capture the trauma patients most in need, the screening targeted patients with a length of stay \geq 5 days. This approach also allowed for more opportunity to identify and capture patients.

PROCESS AND MATERIALS

Determine the volume of patients the Trauma Charge Nurse Team could reliably screen and perform an intervention.

- Develop algorithm highlighting patients most appropriate for screening.
- Choose PTSD Screen: PC-PTSD-5 Educate Trauma Charge Nurse Team: PTSD Incidence, symptom recognition, coping strategies, inhouse resource availability, and program goals
- Determine documentation goals Create a Physician Practice Managemen
- Guideline (PPMG)
- Create PIPS process for identifying screening and "high-risk" intervention compliance.

Human Resources:

- ✓ Team education & program development ✓ Screen time averages 30 minutes per screen ✓ Ongoing Trauma Charge Nurse education
- pages (black and white copy)

RESULTS

Overview: PTSD predictability screening and a brief November Screening Compliance 46%

- · December Screening Compliance 56%
- January Screening Compliance 60% Call Back Follow-Up:
- Limited resources to perform callbacks and minimal patient engagement (no answer).
- ✓ New process introduced: "Twistle"







DISCUSSION

When developing the PTSD SBIRT, the multidisciplinary team uniformly determined the Social Worker (SW) Team would be best qualified to perform the PTSD SBIRT. After multiple unsuccessful PDSA attempts to integrate the PTSD SBIRT intervention through the Case Management Social Worker Team, the PTSD work group turned to the Trauma Charge Nurse Team, identifying them as an ideal alternative. This team was engaged and committed to providing essential care to our trauma

- Screen and Brief Intervention took longer than expected (20 - 45 minutes)
- CN Team is too small (3 FT, 2 Relief) screens are getting missed due to conflicting duties.
- Follow up Challenges:

 ✓ Patient population: Large percent live out of
- ✓ Callbacks ineffective, leading to poor capture PTSD Coach App - Great tool that already exists
- Social Work or Psychiatric consults are ordered on select inhouse patients determined by Trauma NP and Trauma Charge Nurse.

- Broaden PTSD SBIRT Team: Educate and increase this specialized group of Trauma Informed Team
- Develop and integrate Twistle interactive text/email follow-up - in process
- Continue to increase our screening compliance

CONCLUSIONS

The Charge Nurse team unanimously report an overwhelming appreciation from patients for their effort to recognize and prepare them for the psychological impact of their traumatic accident Often tearful, patients comment reflecting their gratitude to our team for offering this wholistic approach to their health care and overall mental health and well being.

The Trauma Nurse Practitioner and Charge Nurse Teams collaborate to offer inpatient and outpatient resources necessary to support the trauma populations mental health after discharge.

Ongoing collaboration amongst inpatient Case nent. Trauma Nurse Practitioners. Trauma Leadership, Regional Trauma Centers in the Health System, and Home Health have supported the ongoing success of the program.

REFERENCES

Patient Outcome Focus

SBAR-INTERVENTIONAL RADIOLOGY

SITUATION:

The American College of Surgeons updated The Resources for Optimal Care of the Injured Patient which was released March 2022. Standard 4.15 requires Level II trauma centers to 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. December 2022 an increase in fallouts of IR Urgent Consult to groin stick of 60 minutes was identified.

BACKGROUND:

December 2022, in reviewing all the IR cases it was identified that there was an increase in delays. 69% of cases fell out for urgent call to groin stick greater than 60 minutes in 2022.

- 1. After review in IR subcommittee on 12/16/23, two cases were r/o for delays
- 2. 9 out of 13 (69%) of cases fell out for urgent call to groin stick greater than 60 minutes:
 - 5 out of 9 (56%) of the fallouts were presumably due to IR Team Delay
 - 3 out of 9 (33%) due to procedures in trauma bay
 - 1 delay was unknown reason

ASSESSMENT: (See 2022 IR Case Summary)

- 1. Discrepancies in documentation identified. No consistent time between Trauma Nurse, IR physician, anesthesia and IR sedation documentation. Not always clear which time was accurate.
- 2. IR Team Response Delay in IR team getting called due to process not streamlined Delay to call in IR staff due to HCC having to call each person individually was identified as an opportunity.
- 3. Non-emergent procedures prior to patient going to IR in trauma bay were noted to be one of the reasons for delay.

RECOMMENDATION/ACTION PLAN:

Opportunities Identified and Corrective Action Implemented focusing on clear loop closure.

- 1. New Algorithm and Policy Updated New updated policy and algorithm went live 3/1/23
 - December 16, 2022 Met with IR/Trauma Subcommittee Meeting to review cases and update policy.
 - January 25, 2023 Updated policy and new algorithm to Trauma M&M for approval
 - **February 1, 2023** Education started with Trauma Team, IR team, OR team, Anesthesia and HCC for go live plan of March 1, 2023 with new process.
 - Ongoing 1:1 feedback with Trauma Team

2. New Page: Code-Trauma IR STAT

- **Trauma IR STAT** that would initiate pages to interventional radiologist, IR Nurse, IR Tech, OR Charge (notify Anesthesia) and HCC.
- Worked with nursing admin to create new Code-New code developed January 31, 2023:
 - Test page done February 14, 2023 with gaps identified.
 - Page retested February 22, 2023 and ready to go live.

3. New IR STAT Procedure:

- January 15, 2023 Met with IR/Trauma Nursing Leadership to identify gaps.
- New Procedure Workflow Drafted and approved by all key stakeholders
- **February 1, 2023** Education started with Trauma Team, IR team, OR team, Anesthesia and HCC for go-live plan of March 1, 2023 with new process.
- March 1, 2023 Prompt review of IR STAT case and feedback requested from IR and Trauma Teams for any gaps. Email sent to IR and Trauma Leadership outlining wins and any opportunities identified for that case. IR STAT progress reported out at Trauma Nurse Meetings and ongoing education done.
- Changes made after opportunities from cases: IR STAT page will be done 24/7 even if team is in-house.
- Ongoing real-time review of all IR STAT cases for delays and/or opportunities by TPM with collaboration and feedback from IR leadership.

COMPLIANCE TRACKING: Ongoing

All patients going to IR will be reviewed with a minimum level II review for compliance with guideline recommendations. Fallouts are captured with corresponding PI filter and will go to IR Leadership for review and feedback. Compliance increased from 31% for 2022 for Emergent IR procedures to 93% for 2023 after action plan initiated and changes made.

• March — IR STAT not called due to IR Physician and team in house which caused confusion amongst some team members. Reminder sent to Trauma and IR Team to use IR STAT page regardless of time of day. (No delay with patient-metric was met)

- April IR STAT reviewed. No opportunities identified by Trauma or IR Team
- May IR STAT reviewed. Opportunity to notify Trauma Nurse when IR Team arrives to expedite transport. IR Leadership sent out education and Trauma Team phone number placed in IR phones. (No delay with patient-metric was met)
- June IR STAT reviewed. No opportunities identified.
- July IR STAT reviewed. No opportunities identified.
- August IR STAT reviewed. No opportunities identified.
- September IR STAT reviewed. No opportunities identified.
- October IR STAT reviewed. No opportunities identified.
- **November** IR STAT reviewed. IR leadership identified opportunity where IR STAT paged prematurely, and team activated, but not needed. Clarified protocol with pertinent staff.
- **December** IR STAT reviewed. Policy not followed by Trauma Team calling HCC to page IR STAT instead of Operator. Education provided and added to Trauma Huddle. (No delay with patient-metric was met)

OUTCOMES:

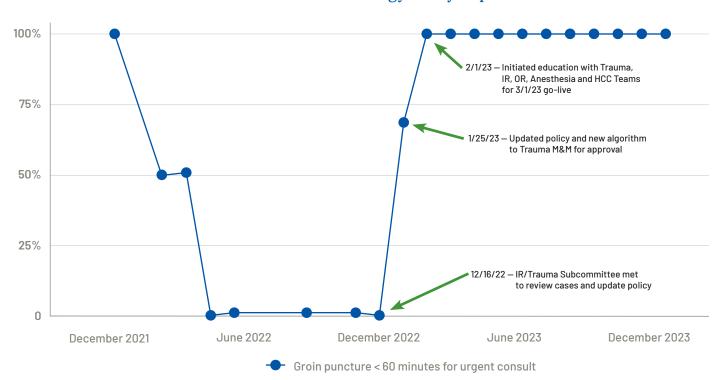
There were 14 patients meeting IR STAT criteria with only 1 fall out (93% compliance). There were also 12 patients that met the criteria of IR SOON with zero fallouts (100% compliance). A total of 26 patients went to IR emergently/urgently in 2023 with only one patient not meeting the criteria. The fallout for IR STAT occurred prior to the initiation of the IR STAT changes in procedure. Average Consult to Needle to IR STAT was 43 minutes. Average Consult to Needle for IR SOON was 60 minutes.

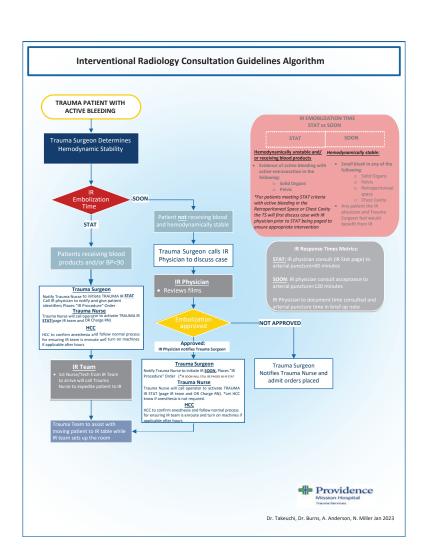
IR EMERGENT CONSULTS	2022	2023
Met 60 minute metric	13	14
Fallouts	9	1
Compliance rates	31%	93%

KEY STAKEHOLDERS:

Trauma Department, Interventional Radiology Team, House Supervisor, OR Charge Nurse/Anesthesia

2023 Stat Interventional Radiology Policy Implementation





Trauma Team Model

Trauma services have dedicated primary trauma nurse clinicians that manage the patients throughout all aspects of the initial trauma phase of care which has been recognized as a "Best Practice Model." From the individual patient with extensive injuries, to a high influx of trauma patients over a short period of time — including a massive casualty incident — the trauma team is required to quickly triage patients and deliver care in a fast-paced unpredictable environment, while recognizing acute concerns and resolving or stabilizing life-threatening conditions. In 2015, the administrative team and trauma department recognized the need to reconstruct the foundation of the trauma staffing model. This new visionary approach comprised a team of critical care nurses from the Emergency and Intensive Care departments. This staffing compliment has provided depth of staff with trauma surges, and the crucial blended skills necessary to manage the most intense and critical situations. With approximately 4,000 trauma patients annually and continued year over year growth in our trauma population treated, the trauma team has been able to maintain their doors open to their community while assuring optimal care to each individual treated.

Primary trauma nurse clinicians have at least two years of critical care experience, with the average being 16 years. All trauma nurses must complete an extensive trauma program orientation and have a valid registered nursing license and certifications in ACLS, BLS, PALS, PCAR, and Advance Trauma Care for Nurses (ATCN). They all must meet the annual continuing education requirements for the trauma program as well as a Traumatic Brain Injury class every other year.







Our Mission

As expressions of God's healing love, witnessed through the ministry of Jesus, we are steadfast in serving all, especially those who are poor and vulnerable.

Our Vision

Health for a Better World

Our Values



COMPASSION

Jesus taught and healed with compassion for all.

- Matthew 4:24



DIGNITY

All people have been created in the image of God.

- Genesis 1:27



JUSTICE

Act with justice, love with kindness and walk humbly with your God.

- Micah 6:8



EXCELLENCE

Whatever you do, work at it with all your heart.

- Colossians 3:23



INTEGRITY

Let us love not merely with words or speech but with actions in truth.

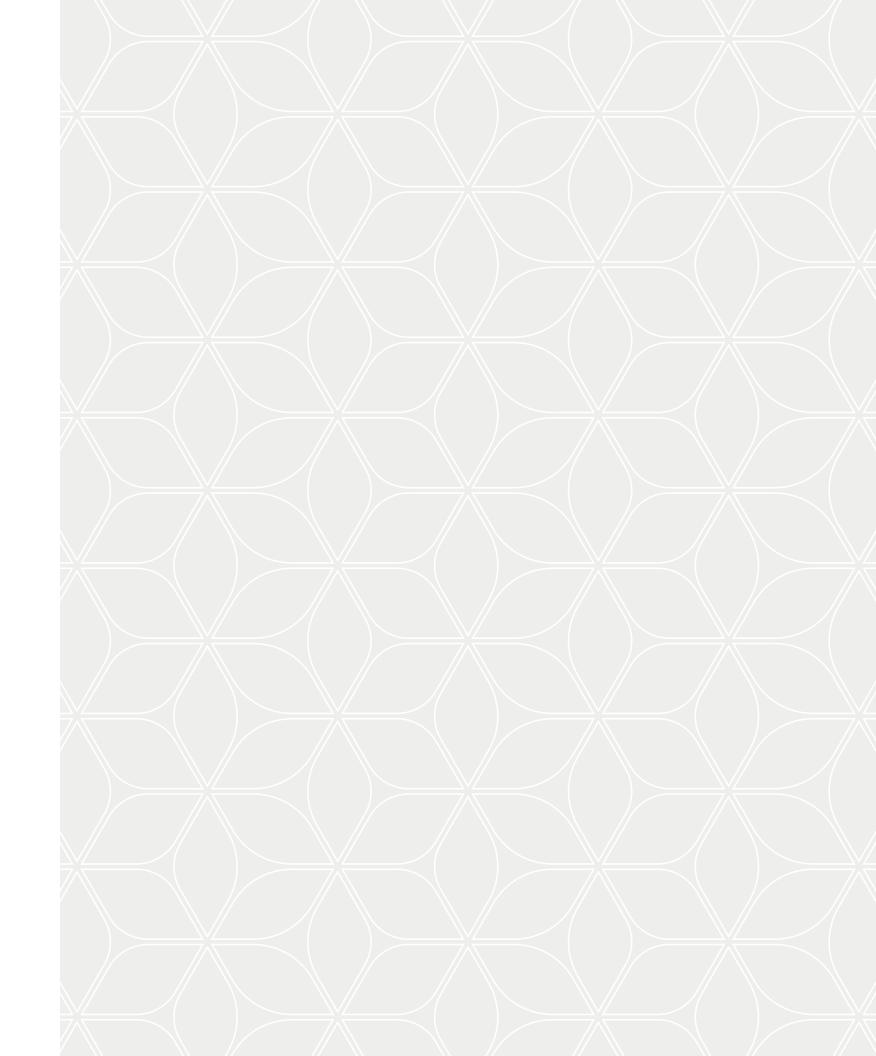
-1 John 3:18"

Our Promise

"Know me, care for me, ease my way."

Our Nursing Vision

To be recognized as a leader in providing patient and family-centered nursing care by supporting a professional, values-based culture that demonstrates clinical excellence, fosters respect and delivers holistic care in a fiscally-responsible environment.





LAGUNA BEACH 31872 Coast Highway Laguna Beach, CA 92651 949-499-1311

MISSION VIEJO 27700 Medical Center Road Mission Viejo, CA 92691 949-364-1400

Providence.org/Mission