



TRAUMA ANNUAL REPORT 2023

Community Regional Medical Center

Community Regional Medical Center is located in downtown Fresno, California, and is home to a **Level I Trauma Center**, which is the highest distinction verified by the American College of Surgeons. The trauma center serves a 15,000-square-mile service area as the only Level I Trauma Center between Los Angeles and Sacramento.

The trauma center has 24 hours, 7 days a week coverage by 12 surgeons board certified in surgery and critical care. Patients are treated through a multi-disciplinary approach involving advanced practice personnel, nurses, respiratory, physical, speech, and occupational therapists, social workers, dietitians, and pharmacists.

In addition to caring for patients, trauma center personnel strive to educate healthcare professionals throughout the Central Valley in the care of trauma patients. This includes education for nurses, physicians, and overall education for rural healthcare facilities that might be the first to receive and stabilize injured patients.

One major component of being a trauma center is educating the public on preventing injuries. Our institution has many outreach programs for the public, including: Matter of Balance, Impact Teen Drivers, Stop the Bleed, and Violence Intervention and Prevention program.

The treatment of trauma patients is constantly evolving in order to improve outcomes, which is made possible through research. Community Regional Medical Center has a robust trauma research program with many different areas of study. This research is published in peer-reviewed medical journals and presented at national and international conferences to share results with other trauma practitioners and advance the knowledge of caring for trauma patients.

TRAUMA SURGEONS



Lawrence Sue, MD, FACS
Trauma Medical Director



David Jeffcoach, MD
Assistant Trauma Medical Director



James Davis, MD, FACS
Chief of Surgery



John Bilello, MD, FACS



Jordan Lilienstein, MD, FACS



Andrea Long, MD, FACS



Krista Kaups, MD, MSc,
FACS, FCS



Shana Ballow, DO, FACS



Nancy Parks, MD, FACS



Amy Kwok, MD, MPH, FACS

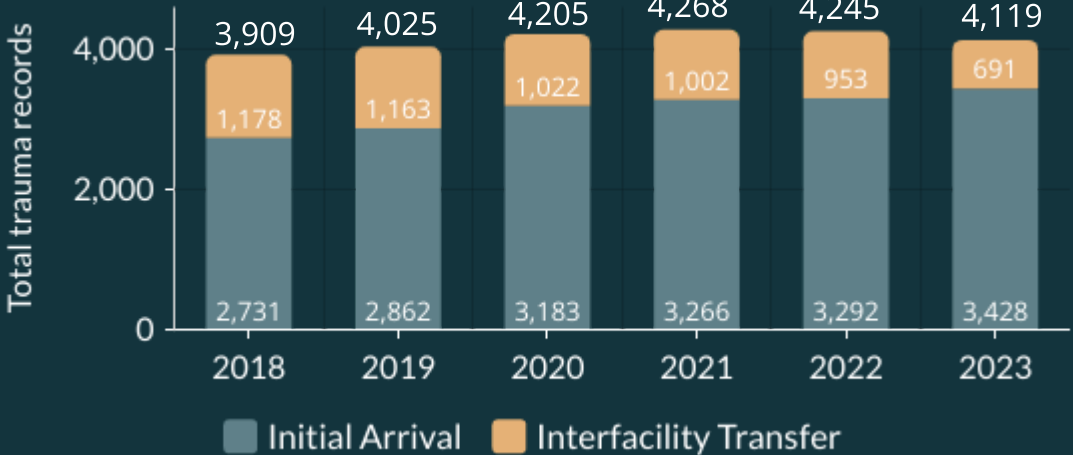


Elliot Williams, MD



William Dominic, MD, FACS

Patient Volume, 2018- 2023

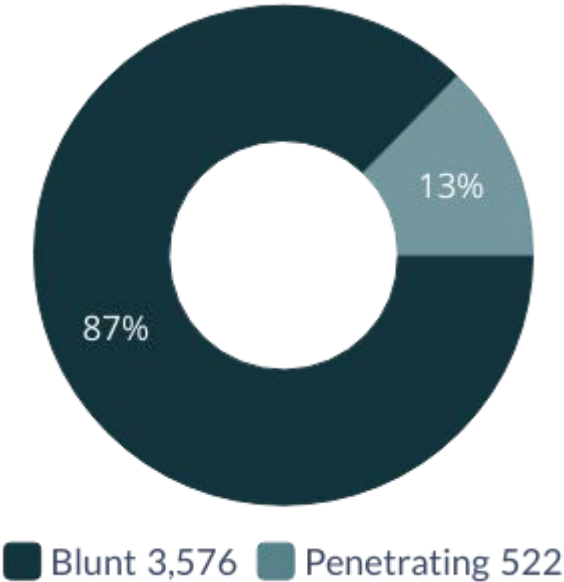


Race/ Ethnicity

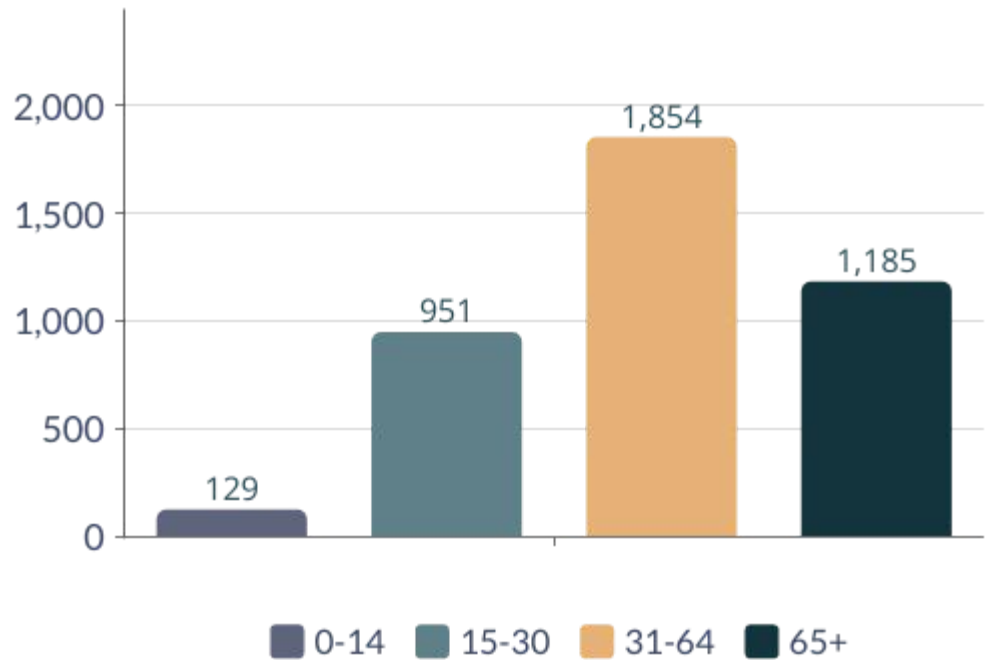
Hispanic	2022
Caucasian	1487
African American	268
Other	183
Asian	139
Unknown	20

65% MALE
35% FEMALE

Injury Type



Age Group

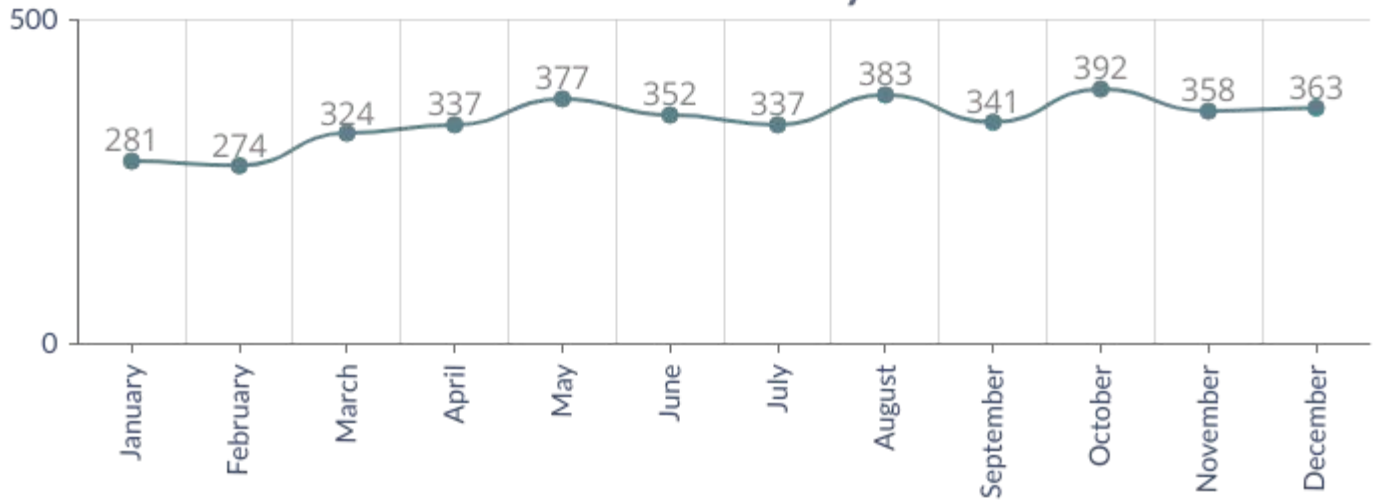


17% OF TRAUMA PATIENTS WERE TRANSFERRED FROM ANOTHER HOSPITAL

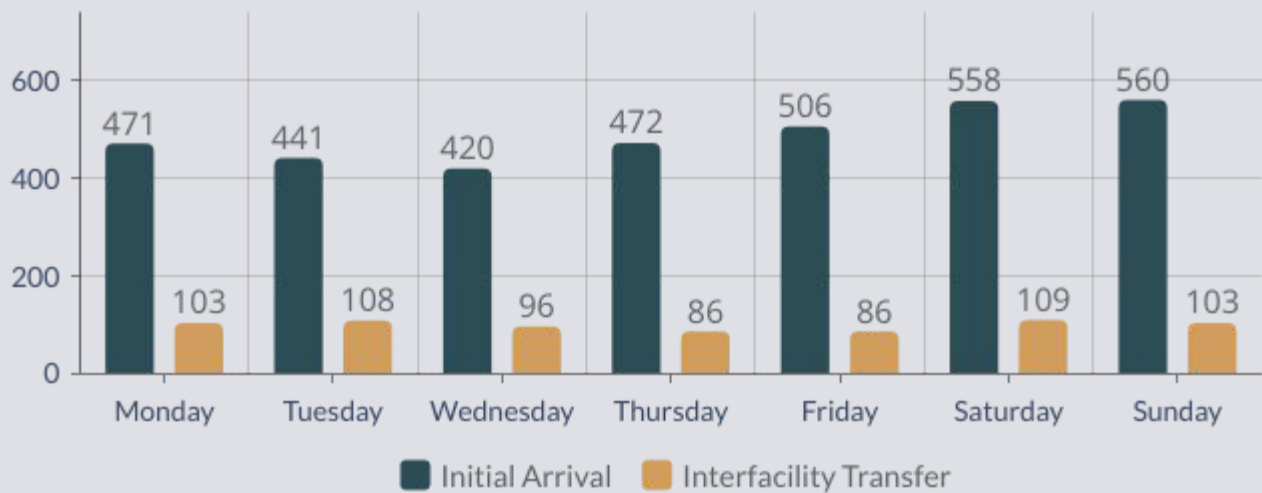
Major Procedures

Exploratory Laparotomy	149
Craniotomy	88
Thoracotomy	31
REBOA*	19

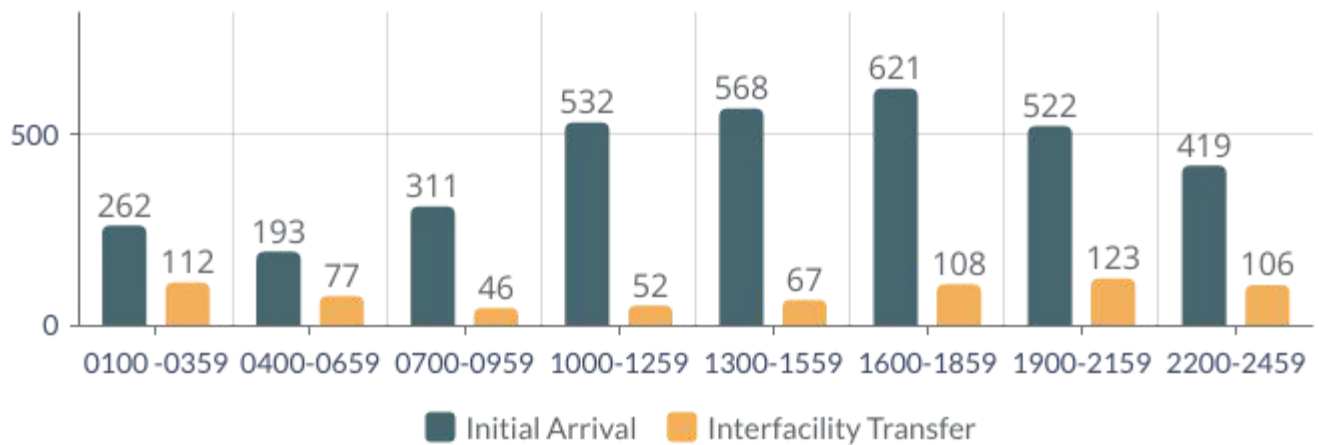
Trauma Admissions by Month



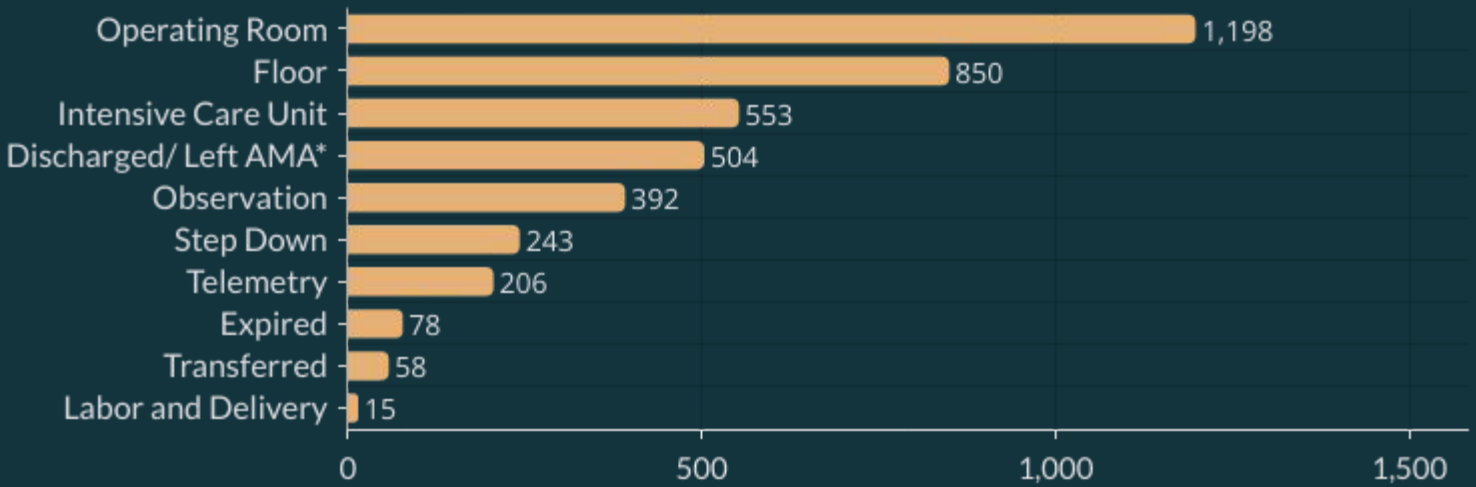
Trauma Admissions by Day of the Week



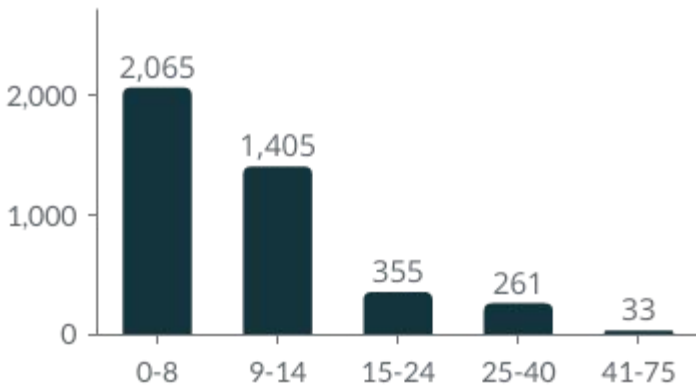
Trauma Admissions by Time of Arrival



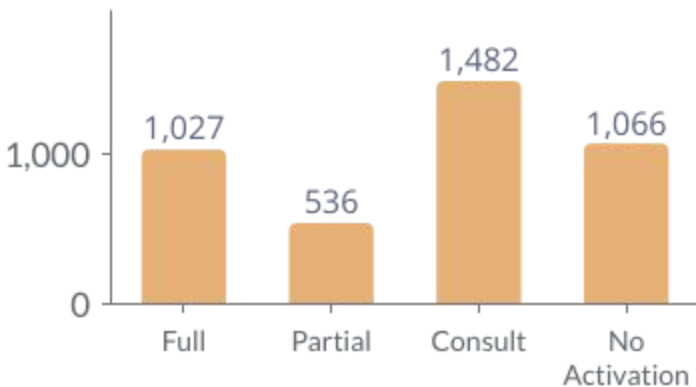
Emergency Department Disposition



Injury Severity Score (ISS)



Trauma Activation Level

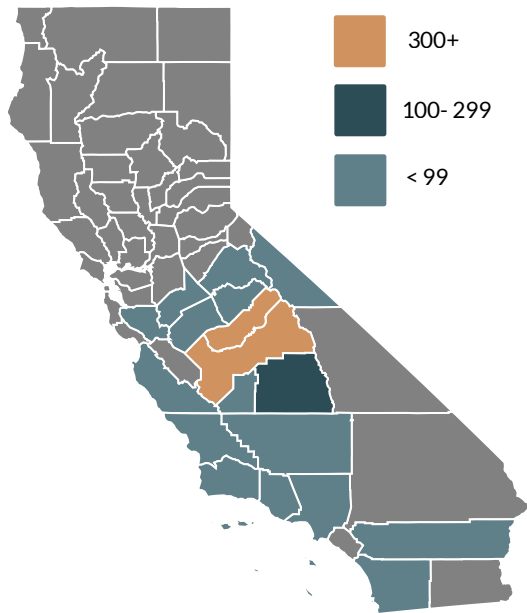


AVERAGE LENGTH OF STAY
6 days

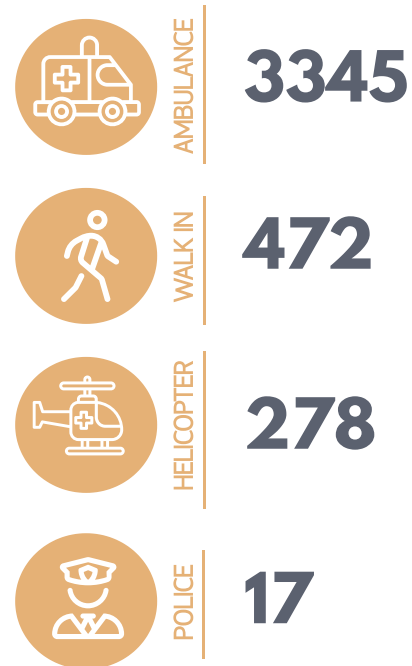
AVERAGE ICU LENGTH OF STAY
7 days



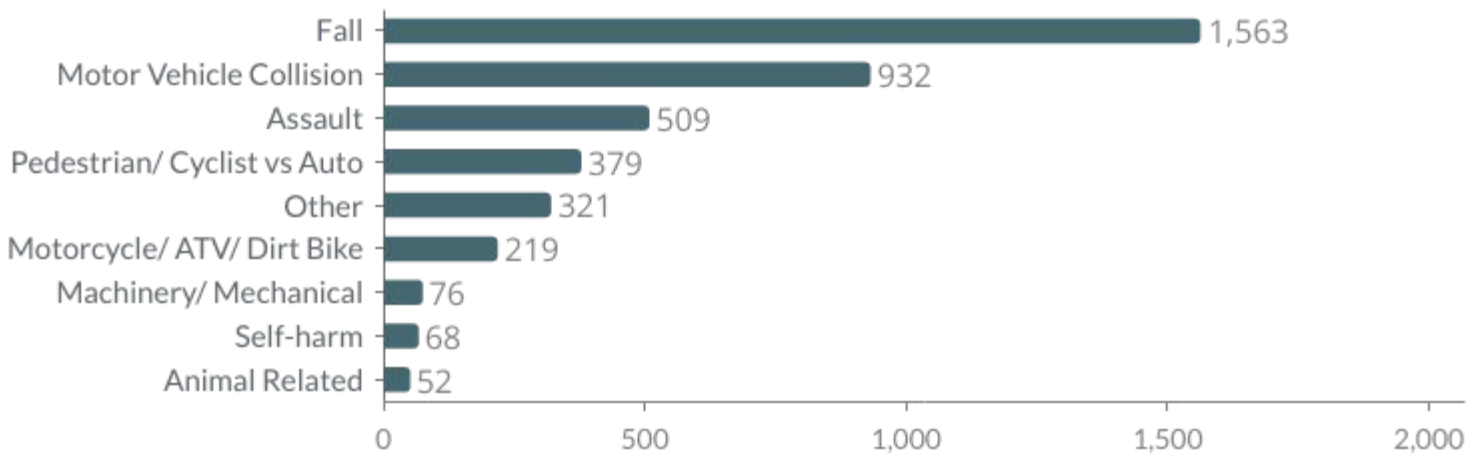
Distribution of Patients by County



Mode of Transportation



Mechanism of Injury





214

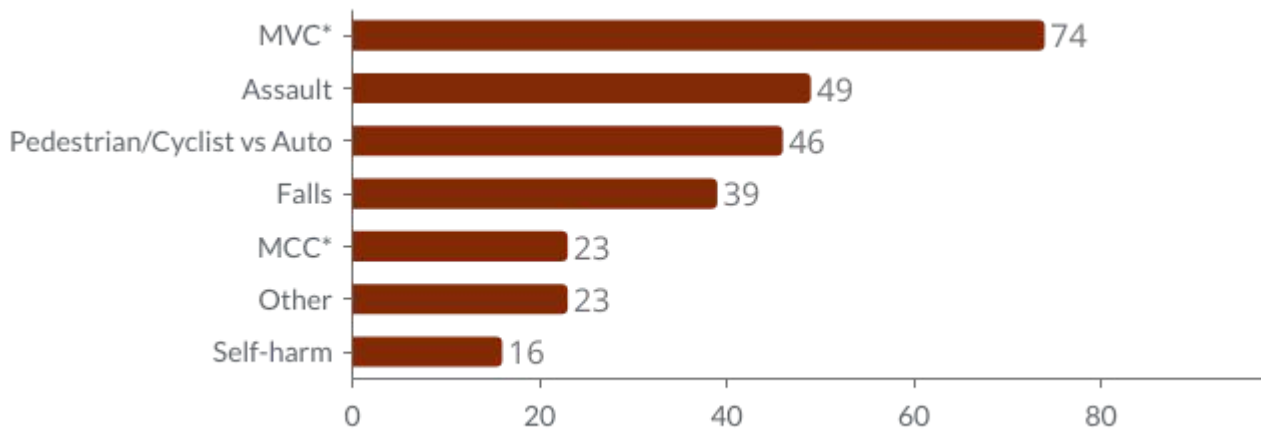
TOTAL MTP*

122 (57%) WERE TRAUMA PATIENTS

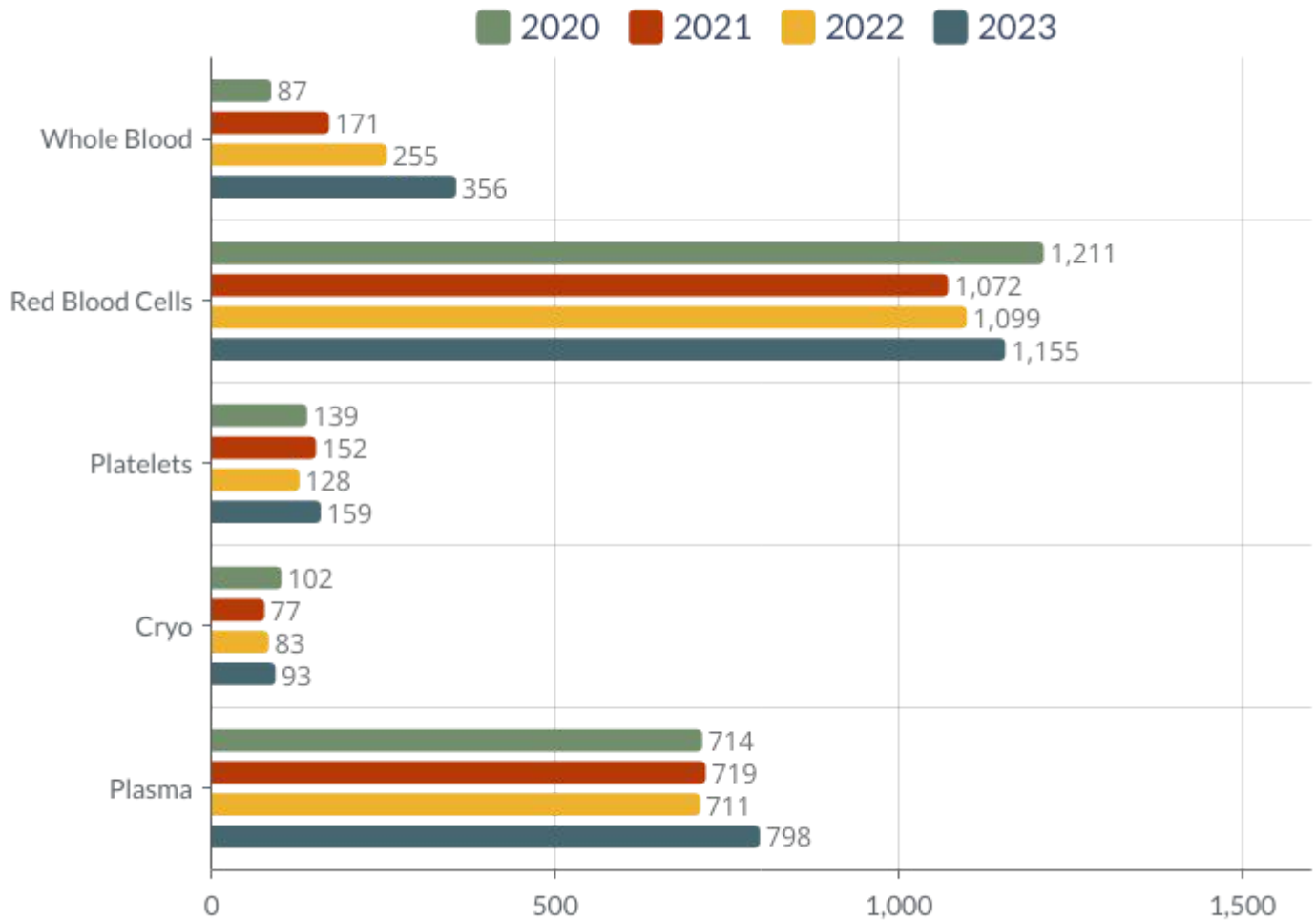
270

TRAUMA PATIENTS RECEIVED
BLOOD PRODUCTS WITHIN 4
HOURS OF ARRIVAL

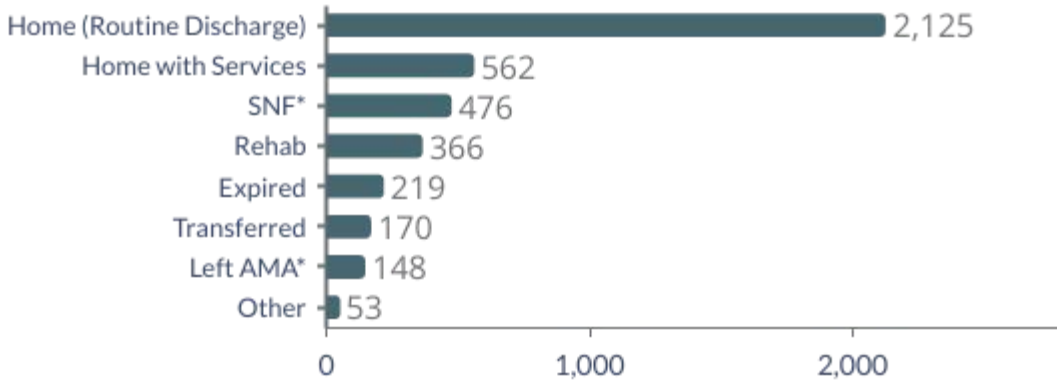
INJURY MECHANISM: BLOOD GIVEN WITHIN 4 HOURS



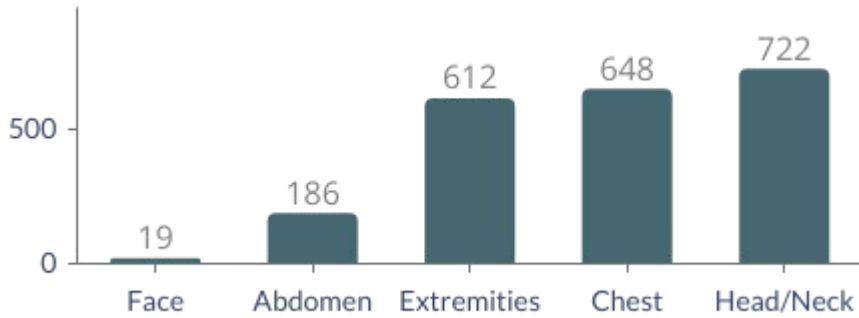
TOTAL BLOOD PRODUCTS (UNITS) GIVEN WITHIN 4 HOURS OF ARRIVAL: 2020-2023



Hospital Discharge Disposition



Max AIS by Body Region



95%

OF PATIENTS SURVIVED
TRAUMATIC EVENT



Trauma Education

As the leader in trauma care for the Central Valley, Community Regional Medical Center provides education for healthcare professionals, including both nurses and physicians.



Courses include:

- **Advanced Trauma Care for Nurses (ATCN)**
 - Provides the registered nurse with increased knowledge in managing the trauma patient and includes a hands-on, scenario-based approach
- **Trauma Nurse Core Course (TNCC)**
 - Delivers the knowledge, critical thinking skills, and hands-on training needed to keep trauma patients safe
- **Advance Trauma Life Support (ATLS)**
 - Provides a safe and reliable method for immediate management of injured patients including resuscitation, stabilization, and determining if the needs of the patient exceed those of the facility
- **Advanced Surgical Skills for Exposure in Trauma (ASSET)**
 - Uses human cadavers to teach surgical exposure of anatomic structures that, when injured, may pose a threat to life or limb
- **Rural Trauma Team Development Course (RTTDC)**
 - Emphasizes the initial evaluation and resuscitation of the trauma patient at a rural facility to assist healthcare professionals with determining the need to transfer the patient to a higher level of care
- **Central California Trauma Symposium**
 - Educates healthcare providers on current trends in trauma and critical care management in the prehospital, emergency, and ICU settings
- **Pediatric Trauma Across the Care Continuum (PTACC)**
 - Provides education to nurses who care for admitted pediatric trauma patients. The content was designed to close the identified educational gap for this group

Injury Prevention

Because traumatic injuries are frequently preventable, injury prevention is aimed at educating the public and reducing the number of injuries within the community.

Injury prevention activities and courses include:

- **Matter of Balance**
Teaches strategies to help older adults reduce their fear of falling and increase activity levels
- **Pediatric Injury Prevention**
Child passenger safety education, pedestrian, and water safety
- **Impact Teen Drivers**
Raises awareness among teens to reduce auto collisions due to reckless and distracted driving
- **Stop the Bleed**
Teaches the public how to quickly stop blood loss in an emergency
- **Violence Intervention and Prevention**
Outreach to victims of gang violence to prevent recurrence

In addition to these activities, Community Regional Medical Center hosts an annual Trauma Survivors Reunion.

In 2023, Community Regional and
its partners trained

3,865

people in STOP THE BLEED



Research

The trauma surgeons have a variety of research interests and develop their own studies, as well as participate in multi-institutional studies with other organizations from around the country. Our residents, fellows, and faculty frequently present research at national and international conferences, including the American Association for the Surgery of Trauma, Southwestern Surgical Congress, Western Trauma Association, Society for Critical Care Medicine, and the American College of Surgeons. Below are several publications for 2023:

- Magee, Dubose, J. J., Inaba, K., Lucero, L., Dirks, R. C., & O'Banion, L. A. (2023). Outcomes of vascular trauma associated with an evolution in the use of endovascular management. *Journal of Vascular Surgery*, 78(2), 405–410.e1. <https://doi.org/10.1016/j.jvs.2023.02.025>
- Anderson, K. M., Lucero, L., Scheidt, J., Lee, C. S., Ramos, C. R., O'Banion, L. A., ... & Kauvar, D. S. (2023). The Characteristics and Results of Endovascular Devices in Trauma (CREDiT) study: Multi-institutional results. *Injury*, 54(6), 1577-1581.
- Albert, R. K., Jurkovich, G. J., Connett, J., Helgeson, E. S., Keniston, A., Voelker, H., ... & Kao, L. (2023). Sigh ventilation in patients with trauma: the SiVent randomized clinical trial. *JAMA*, 330(20), 1982-1990.
- Ratnasekera, A. M., Kim, D., Seng, S. S., Jacovides, C., Kaufman, E. J., Sadek, H. M., ... & Ferrada, P. (2023). Early VTE prophylaxis in severe traumatic brain injury: A propensity score weighted EAST multicenter study. *Journal of Trauma and Acute Care Surgery*, 95(1), 94-104.
- Rozycki, G. F., Sakran, J. V., Manukyan, M. C., Feliciano, D. V., Radisic, A., You, B., ... & Haut, E. R. (2023). Angioembolization May Improve Survival in Patients With Severe Hepatic Injuries. *The American Surgeon*, 00031348231157416.
- Zeineddin, A., Tominaga, G. T., Crandall, M., Almeida, M., Schuster, K. M., Jawad, G., ... & Kozar, R. A. (2023). Contemporary management and outcomes of penetrating colon injuries: Validation of the 2020 AAST Colon Organ Injury Scale. *Journal of Trauma and Acute Care Surgery*, 95(2), 213-219.



21 ACTIVE IRB STUDIES RELATING TO TRAUMA

MEET OUR TRAUMA TEAM



RACHEL VAN NOY
Trauma Director



JENNIFER FREEMAN
Administrative Assistant



LIZ SCARFONE
PI Nurse



JANNA MARTINEZ
PI Nurse



EMILY VA
PI Nurse



SARAH ELLIS
Nurse Educator



JESSICA GALLEGOS
Clinical Research
Coordinator



ELIANA TRONCALE
Injury Prevention
Specialist



SHELLI CONLEY
Lead Registrar



AMANDA NAKAYAMA
Registrar



ARSEN STEPANYAN
Registrar



LINDA THAO
Registrar



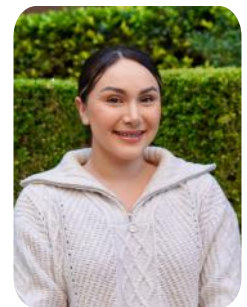
VERONICA VIDAL
Registrar



DAWN BOSS
Registrar



TATIANA HOLLAND
Registrar



MARIANA ALDANA
Trauma Intern

TERMINOLOGY

- MTP: Massive Transfusion Protocol
- ISS: Injury Severity Index
- ICU: Intensive Care Unit
- MVC: Motor Vehicle Collision
- AIS: Abbreviated Injury Scale
- SNF: Skilled Nursing Facility
- AMA: Against Medical Advice
- REBOA: Resuscitative Endovascular Balloon Occlusion of the Aorta
- MCC: Motorcycle Collision



CONTACT

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