

INSPIRING THE FUTURE

2010 Trauma Services Annual Report



**It's not the events of our lives that shape us,
but our beliefs as to what those events mean.**

– Anthony Robbins





Dear Central Texas Community,

We cared for 1, 310 injured children in 2010. Each one is unique and, in those critical moments following an injury, each one needs the services only a Level I Pediatric Trauma center can provide. We are honored to answer their call.

Since Dell Children's Medical Center of Central Texas opened its doors in 2007, we have been dedicated to building one of the strongest Pediatric Trauma Services in the country. Our Level I Pediatric Trauma Center is one of only 33 in the US, and we strive to achieve excellence in every aspect of trauma care. For that reason, we have recruited some of the nation's top specialists in pediatric neurosurgery, emergency medicine, rehabilitation, orthopedics and general surgery, and provide these specialists with the tools and training necessary to serve our patients.

Our primary goal is to provide state-of-the-art clinical care to the injured children we serve, but we also recognize the importance of both preventing injury through evidence-based prevention strategies and advancing the discipline of trauma care through scientific research. Our prevention and research programs are essential pieces of our comprehensive trauma service.

Many community resources contribute to the care of injured children, including our Emergency Medical Services, outlying hospitals and the entire staff of Dell Children's Medical Center. We are so thankful for the support of these agencies and the individuals within them. We look forward to many more years of working together to serve our most precious citizens.

With sincere appreciation,

A handwritten signature in black ink, appearing to read 'Nilda Garcia'. The signature is fluid and cursive.

Nilda Garcia, MD, FACS
Trauma Medical Director
Dell Children's Medical Center of Central Texas

This report highlights the data collected by the Trauma Service from January 1, 2010, to December 31, 2010, and describes progress of the programs within the Trauma Service: Clinical Care, Research, Injury Prevention and Advocacy.



- THE TRAUMA SERVICE TEAM -

Trauma Services Leadership

Nilda Garcia, MD, FACS

Trauma Medical Director

Clinical Associate Professor of Pediatric Surgery, University of Texas Southwestern Medical School, Austin

Debra Brown, RN, BSN, MHA

Trauma Service Line Director

Research

Karla Lawson, PhD, MPH

Research Scientist III, Research Manager
Adjunct Assistant Professor, University of Texas Southwestern Medical School, Austin; Adjunct Assistant Professor, University of Texas School of Public Health, Austin Regional Campus

Sarah Duzinski, MPH

Research Coordinator

Karen Piper, BS

Research Coordinator

William Rice

Research Grants Administrator

Injury Prevention

Juliette Brown, MHS, CHES, CPST-I

Injury Prevention Coordinator

Diolanda Lovings, CPST

Senior Department Assistant

Tareka Wheeler, CPST-I

Injury Prevention Coordinator

Paula Yuma, MPH, CHES, CPST-I

Injury Prevention Coordinator

Clinical Care

David Golder, RN, BS, CPEN

Trauma Clinical Manager

Elsa Alejandro, RN

Trauma Coordinator

Theresa Christian, LCSW

Trauma Social Worker

Josie Day

Senior Department Assistant

Nelda Garcia, RN

Trauma Coordinator

Kelly Gettig, RN, CPNP-AC/PC

Trauma Nurse Practitioner

Alexis Schmid, RN, CPNP-AC/PC

Trauma Nurse Practitioner

Jami Williams

Trauma Registrar

Brandi Wright

Trauma Registrar



- FROM INJURY TO INSPIRATION: SARAH'S STORY -

Sarah Bilby is a smart, outgoing recent graduate of Anderson High School, about to embark on her college journey at the University of Virginia. If you met her at the grocery store, she would probably tell you about her college plans, her love of horseback riding, her sweet family — you might never know that this delightful young woman almost did not make it to graduation.

On September 26, 2009, Sarah was in Fort Worth with her best friend, Claire, to compete in a horseback riding competition. Sarah and Claire were riding in the back seat of her coach's car, stopped in traffic, when they were rear-ended by an SUV traveling 50 to 60 miles per hour.

Sarah remembers very little about that day, but knows that rescue workers had to use special tools to pull her from the wreckage. Sarah was transported by ambulance to the nearest trauma center in Fort Worth. She spent nearly a week in the intensive care unit there, receiving care for substantial damage to her lungs, diaphragm, nerves, jaw and leg. Upon learning that Sarah could be in the hospital for several weeks, her parents began asking when she could be transferred to Dell Children's Medical Center, where they knew she could receive child-focused care and be closer to friends and family.

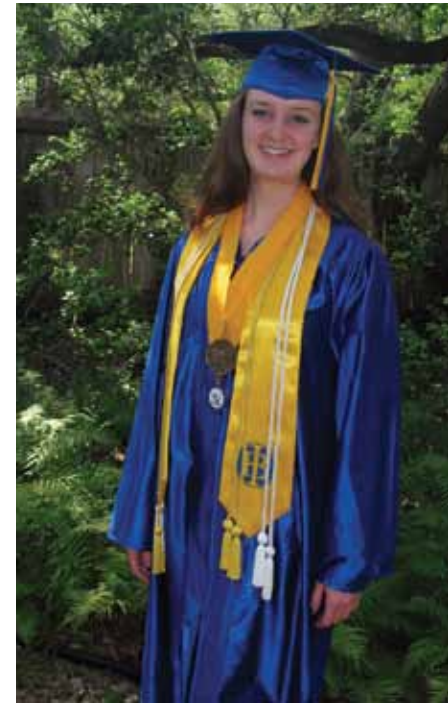
Upon arrival at Dell Children's via air ambulance, the trauma team immediately began to direct Sarah's care. There was an emergent need to drain fluid from her lungs and ensure she was receiving enough oxygen. Sarah's shattered jaw complicated nearly all of her medical procedures, as her mouth had to be wired shut for several weeks. As she recovered from her injuries, Sarah also had to retrain her body to walk and eat again, through extensive physical and speech therapies. Sarah was a patient on the intermediate care unit at Dell Children's for nearly five weeks.

While the trauma and clinical care services worked to heal Sarah's wounds, they also attended to her mental and emotional needs. Sarah developed a special relationship with three trauma nurse practitioners — Kelly Gettig, Jodi Roth and Emily Hopper. The nurse practitioners spent time with her on a daily basis, attending to her medical care while also taking time to sit on the end of Sarah's bed and get to know her. Sarah describes them as "so honest and hopeful," even when delivering news that was hard to hear.

After months of continued physical and speech therapy as an outpatient, Sarah was able to reclaim her life. She returned to school and to competitive horseback riding, where she continues to excel. Sarah's experience at Dell Children's has stayed with her. More than that, it has helped to shape her future. In fall 2011, Sarah will begin attending the School of Nursing at the University of Virginia. In her application essay, Sarah describes her inspiration for pursuing an education in nursing:

"During those five weeks, I encountered some of the most amazing people I have ever met — my nurse practitioners. Kelly Gettig, Jodie Roth and Emily Hopper were the life

and soul behind my case, constantly in my room encouraging me and my family. When I became apathetic and depressed, they were there to fight for me — even when I had given up on myself, they had not... These nurses made a huge, positive impact on me, and I was just one patient out of the thousands they have treated! Imagine how many children and adults they have impacted over the course of their careers. I strive to emulate these wonderful people and inspire others the way they did me. It is not the car accident that influenced my decision to pursue nursing, but it was merely a pathway to experience the compassion and determination of these amazing nurses: Kelly, Jodie and Emily. They are my inspiration; they are my influence."



A NOTE OF THANKS:

The Trauma Service at Dell Children's Medical Center is grateful for every life saved, every wound healed. Knowing we have impacted a future is especially fulfilling. We extend a huge thank you to Sarah Bilby and her family for sharing her story with us.

CLINICAL CARE

- HIGHLY SPECIALIZED CARE FOR INJURED CHILDREN -



In the United States, children between the ages of 1 and 14 are at greater risk of dying from an injury than from the other nine leading causes of death combined. Injury is also the leading cause of disability for children. Because traumatic injury is both unpredictable and unexpected, Dell Children's has assembled a full team of pediatric experts to deliver high quality, safe and efficient care.

This team of highly trained medical experts serves as the foundation of the Trauma Service, carefully applying their vast knowledge of the unique needs of the injured pediatric patient to optimize both patient experiences and outcomes.

As a Level I Pediatric Trauma Center, Dell Children's provides the highest standard of trauma care through:

Comprehensive Medical Teams: The trauma team consists of pediatric specialists in emergency medicine, trauma surgery, orthopedic surgery, neurosurgical and plastic surgery, as well as anesthesia and a host of other specialists who may be needed in a moment's notice. These specialists are available 24/7 on-site to respond to an emergency.

Sophisticated Knowledge and Technology: The expertise of the skilled clinicians is augmented by the best available technology. Physicians and nurses at Dell Children's obtain specialized training in the delivery of trauma care and must maintain that competency through rigorous continuing medical education and testing.

Coordination of Care: To ensure that the highest level of care is provided, clinicians collaboratively develop and execute a comprehensive plan of care that addresses patient needs from the time they reach the emergency department through the operating room, intensive care unit, acute care unit, and into the rehabilitation phase of care and follow-up. This comprehensive, coordinated approach to care optimizes efficient patient care throughout the patient's stay. In fact, trauma programs have been shown to improve efficiency of care for all patients and to actually increase efficiency when delivering clinical care for non-emergent medical conditions.

In addition to these core functions, the clinical care team at Dell Children's contributes to the advancement of trauma care by providing the following:

Comprehensive Injury Tracking and Data Utilization: Vital information on injuries is collected and entered into a registry database. The trauma registry is a data repository essential to the evaluation and planning of quality trauma care. In addition to its applications for clinical care, the trauma registry provides a wealth of data for trauma research, both locally and in multi-site studies. Trauma registry data is further used to track injury patterns, enabling our injury prevention and advocacy programs to target their efforts to decrease the burden of injury in the community.

Clinical Education and Outreach: A key function of the Trauma Service is to promote optimal care in our region through clinical education specific to the pediatric trauma patient. This education is delivered to providers who work with trauma patients throughout the continuum of care, including emergency medical service providers and referral hospitals. This is achieved through the dissemination of pediatric trauma and injury prevention expertise by Dell Children's nationally recognized educators. In 2010, these experts contributed many educational offerings such as:

- Advanced Trauma Life Support
- Trauma Nursing Core Course
- Pediatric Trauma Grand Rounds
- Numerous local, regional, state and national speaking engagements

- ADVANCING TRAUMA CARE AND PREVENTION THROUGH SCIENTIFIC RESEARCH AND PARTNERSHIPS -

The Trauma Research Program focuses on the epidemiologic, clinical, and behavioral study of childhood injury, injury prevention and trauma clinical care, with the ultimate goal of informing and guiding improved clinical practices. Areas of interest include child abuse prevention, detection and treatment, traumatic brain injury, determinants of accidental and non-accidental injury, evaluation of interventions for injury prevention, as well as developmental and psychological outcomes of pediatric trauma. The group has more than 20 Institutional Review Board approved study protocols and has published numerous peer-reviewed publications.

The Trauma Research Program currently leads or participates in a number of research initiatives, including:

- investigation of child abuse risk factors and screening methods.
- examination of risk factors and treatments for pediatric venous thromboembolic events.
- participation in a national collaborative study of trauma triage criteria.
- exploration of new screening modalities for post traumatic stress disorder in pediatric trauma patients.
- development of new tools for studying communication between health care providers in the emergency critical care setting.

Partnerships are fundamental to the Trauma Research program. Our patients and the community benefit from scientific advances in care thanks to existing partnerships with The University of Texas at Austin School of Social Work, UT Medical Branch at Galveston, UT-Pan American, UT School of Public Health, UT Southwestern Medical School, other academic partners and internal, state and national clinical organizations. The research team looks forward to additional partnerships as the program continues to develop.

The research team is dedicated to the education and development of new clinical scholars. We provide opportunities for research education and scholarships to students at UT Medical School, physician residents at UT Southwestern Medical School, and interns from the UT School of Public Health and School of Social Work. In addition, the team provides extensive education in research practices to clinical staff at Dell Children's with the goal of improving clinical knowledge and best practice utilization.



Recent Trauma Research Publications:

Under the Influence with a Child in the Car: Implications for Child Safety and Caregiver Intervention. Lawson, K.A., Yuma-Guerrero, P., Von Sternberg, K., Duzinski, S., Garcia, N., Brown, C., Wakefield, S., Crawford, N., Velasquez, M., Maxson, R.T. Accepted for publication in *Journal of Trauma*

Teaching Safety at a Summer Camp: Evaluation of a Water Safety Curriculum in an Urban Community Setting. Lawson, K.A., Duzinski, S., Wheeler, T., Yuma-Guerrero, P.J., Johnson, K.M.K., Maxson, R.T., Schlechter, R. Accepted for publication in *Health Promotion and Practice*

Incidence and Risk Factors Associated with Venous Thrombotic Events in Pediatric ICU Patients. Higgerson, R.A., Lawson, K.A., Christie, L.M., Brown, A.M., McArthur, J.A., Totapally, B.R., Hanson, S.J. Accepted for publication in *Pediatric Critical Care Medicine*

Mortality-Adjusted Duration of Mechanical Ventilation in Critically Ill Children with Symptomatic Central Venous Line-Related Deep Venous Thrombosis. Faustino, E.V.S., Lawson, K.A., Northrup, V., Higgerson, R.A. *Critical Care Medicine* 2011; 39(5): 1151-1156

Understanding Healthcare Professionals' Views of Family Presence During Pediatric Resuscitation. Parker-Raley, J., Jones, B., Maxson, R.T. *American Journal of Critical Care* 2011; 20(3): 199-208.

Hearing Evaluation in Pediatric Patients Treated at the Hospital Following Head Injury. Gettig, K., Lawson, K.A., Roth, J., Hopper, E., Higginbotham, N., George, T.M., Mandell, E., Maxson, R.T. *Journal of Trauma Nursing* 2009; 16(3): 169-178

Screening for Risky Alcohol Use Among Caregivers of Pediatric Trauma Patient: A Pilot Study. Maxson, R.T., Yuma-Guerrero, P., Von Sternberg, K., Lawson, K.A., Johnson, K.M.K., Brown, J.M., Smith, C., Velasquez, M.M. *Journal of Trauma* 2009; 67: S37-S42

Screening for Attention Deficit Hyperactivity Disorder in a Select Sample of Injured and Non-Injured Pediatric Patients. Maxson, R.T., Lawson, K.A., Pop, R., Yuma-Guerrero, P., Johnson, K.M.K. *Journal of Pediatric Surgery* 2009; 44(4): 743-8

Pediatric Injuries in Central Texas. Johnson, K.M.K., Lawson, K.A., Yuma-Guerrero, P., Prince, M., Maxson, R.T. *Texas Medicine* 2009; 105(9): e1

- NEW FINDINGS ON RISKY DRINKING WHILE SUPERVISING CHILDREN IN A VEHICLE -

A new study led by the Dell Children's Medical Center Trauma Research Team points to the consequences of drinking and driving while transporting children in a vehicle.

Results of the study found the presence of an intoxicated caregiver in one of every 10 motor vehicle collisions involving children arriving at our facility. Intoxicated adult caregivers in these alcohol- and drug-involved crashes were more likely to be male, unrestrained at the time of the crash and ejected from the vehicle. The vulnerable child patients being transported by these caregivers were more likely to be admitted to the hospital for their injuries and more likely to be unrestrained.

This study has important implications for interventions to prevent intoxicated driving, especially with child passengers. Interventions should target male caregivers, and should stress the importance of avoiding alcohol and drugs while caring for and transporting children. In addition, interventions must stress the importance of securing children in the appropriate car seats, booster seats and seat belts.

The study was presented by Dr. Karla Lawson at the Injury Free Coalition for Kids meeting in Chicago and is soon to be published in the *Journal of Trauma, Injury, Infection and Critical Care*. Additionally, Dr. Lawson presented the study to the Austin Trauma and Critical Care Conference in June 2011.

INJURY PREVENTION

- THE BEST CURE FOR TRAUMA -

The Injury Prevention Program takes a multi-faceted approach to protecting children from injury. The program works to prevent injuries from occurring through provision of education and resources to families across Central Texas. The program is also very active within the hospital, where one-on-one safety consultations are provided to trauma patients and their families. Additionally, the Injury Prevention Team provides training to the injury prevention workforce, educates policy makers about child safety issues and, in collaboration with the research team, conducts studies that provide valuable data and information to make advances the injury prevention field.

- SAFE KIDS AUSTIN -

Dell Children's has been the lead agency for Safe Kids Austin, a grassroots community organization made up of more than 40 local agencies, since its inception 17 years ago. Safe Kids Austin provides ongoing child safety educational programs and resources throughout Central Texas, with a primary focus on five injury risk areas — child passenger safety, pedestrian safety, bicycle safety, water safety and safe sleeping. Safe Kids Austin promotes changes in attitudes, behaviors, laws and the environment to prevent accidental injury to children. This is achieved through community partnerships, advocacy, public awareness, distribution of injury prevention materials and education on the proper uses of safety equipment such as car seats and bike helmets.

In 2010, Safe Kids Austin:

- inspected 1,055 car seats.
- provided 694 car seats and booster seats.
- distributed 1,800 bicycle helmets.
- provided 900 first Graders with the opportunity to participate in the YMCA/Safe Kids Austin 1st Grade Swim Program.
- provided 5,625 injury prevention posters, brochures, and other injury prevention materials to physicians' offices, health and safety fairs, schools, and other community partners.

Each year, Safe Kids Austin works to grow and enhance its community injury prevention initiatives. Currently, the coalition is focusing on building capacity and expanding its reach in Central Texas.

- BOOSTER SEAT TOUR -



In response to the updated Texas Child Passenger Safety Law in 2009, Safe Kids Austin developed a Community Booster Seat Education Plan that focused on awareness, education and provision of booster seats to families in need. Despite the new law, many children in the Austin metropolitan area are riding unsafely in vehicles, and many families do not have the resources to purchase booster seats for their children. As a part of the education plan, Safe Kids Austin developed the Booster Seat Tour, an educational program targeted at both parents and children. Safe Kids Austin and its community partners provided booster seat education and conducted booster seat distribution events at five identified Title 1 Austin Independent School District elementary schools.

Parents at identified schools had an opportunity to sign up for the Booster Seat Tour scheduled at their child's school. At the event, each parent and child worked with a Certified Child Passenger Safety Technician who provided information about the need for booster seats, why booster seats are important and how to choose the appropriate booster seat. Each child received a free booster seat and a hands-on demonstration on how to use it properly. Through this program, Safe Kids Austin was able to provide 309 booster seats to children who were riding unsafely using adult seat belts.

IN-HOUSE CHILD SAFETY PROGRAMS

The Injury Prevention Program provides trauma patients and their families with one-on-one consultations designed to promote age-appropriate injury prevention strategies. Families and caregivers receive educational support from the Injury Prevention staff to improve safety practices and referrals to community resources if needed. The program also assists with patients who have special needs that may require more complex guidance and resources regarding safe transportation. Additionally, the Injury Prevention Program continues to build the injury prevention capacity of Dell Children's by conducting annual classes for child passenger safety technicians. In 2010, the Injury Prevention Program provided 568 consults to trauma patients' families. Within these consults, in addition to education and safety counseling, families were provided with 65 bike helmets and 257 car seats.

- HOT OFF THE PRESS FOR 2010 - The Injury Prevention Program Launches the Safety Station

The Kevin and Debra Rollins Family Resource Center at Dell Children's received a mini-renovation last June when the Safety Station was added to the array of resources housed there. Tucked into the corner, this new addition to the Injury Prevention Program is designed to get low-cost injury prevention tools into the hands of parents and caregivers. The project is supported by the Children's Trust of Central Texas and the Mitchell Foundation whose generous donations helped to launch and sustain this innovative child safety resource.

The Safety Station's operational goal is to increase the number of families that use proven injury prevention tools and reduce childhood injuries. The unique concept of having a safety store inside a hospital helps reinforce the safety messages caregivers receive from staff and encourages families to obtain any needed resources before returning to home life after a hospital stay. The Safety Station stocks helmets for multiple wheeled-type activities, four types of car seats to safely secure children of all ages and wearable blankets for babies designed to reduce the risk of accidental suffocation while sleeping. Due to generous donations, all products are sold at prices that are significantly lower than retail prices to help reduce financial barriers to use.

Since the grand opening in June 2010, the staff that operates the Safety Station has assisted an average of 33 customers per month with a selection of 291 products over nine months. Customers vary from patient families referred by Dell Children's staff, to relatives visiting a family member who is a patient, to families with children at other Seton hospitals who have a safety device need. The Safety Station serves the needs of multiple types of customers who are all on the same mission — seeking out better ways to protect our littlest community members from preventable childhood injuries.

Safety Station



- PUTTING INJURY ON THE MAP -

Through a series of partnerships between Children's Optimal Health, a local non-profit focused on mapping indicators of child health and well-being, The University of Texas at Austin School of Social Work, the City of Austin, community child safety agencies and the Research and Injury Prevention Programs at Dell Children's, a new initiative is underway to better understand and prevent child transportation injuries.

In fall 2010, the Injury Prevention Program gathered data from the trauma registry at Dell Children's, as well as from community partners. This information, combined with information from the City of Austin and the Austin Police Department, was mapped to create visual representations of child transportation injury "hotspots." These hotspots show where children are most likely to be injured in pedestrian, bicycle and motor vehicle collisions, as well as where community resources for prevention are located.

Through a unique partnership with UT, graduate students at the School of Social Work assisted the project by conducting detailed analyses of the hotspots for child pedestrian injuries. They presented their conclusions as well as recommendations for improvement to the City of Austin's Transportation Department, which is currently working on further evaluation and improvements to the built environment that will help keep children safe.

Data from the project has also been shared with the leaders of community organizations that provide safety resources, such as car seat inspections. These organizations can now locate their programs in the areas of greatest need.

The project has been presented to several audiences, including transportation professionals at the Texas Traffic Safety Conference and the Texas Institute of Transportation Engineers and public health professionals at the Society for the Advancement of Trauma and Injury Research.



- WORKING FOR POLICIES THAT PROTECT CHILDREN -

Advocacy is a key function of the Trauma Service. Most recently, the Trauma Service and partners throughout the state successfully advocated for a best-practice Child Passenger Safety law that went into effect in late 2009. The Trauma Service also advocates for improving state-level responses to trauma, including an improved injury registry and funding for the trauma system.

Members of the Trauma Service, assisted by the Seton Healthcare Family's Advocacy department, participate in collaborative local, state and national advocacy efforts through a number of organizations, including:

- The Governor's EMS and Trauma Advisory Council
- The Children's Hospital Association of Texas
- The Texas Pediatric Society
- The Capital Area Trauma Regional Advisory Council
- The Travis County Child Fatality Review Team
- The Society for the Advancement of Violence and Injury Research
- Safe States
- The American Public Health Association

- TRAUMA BY THE NUMBERS -

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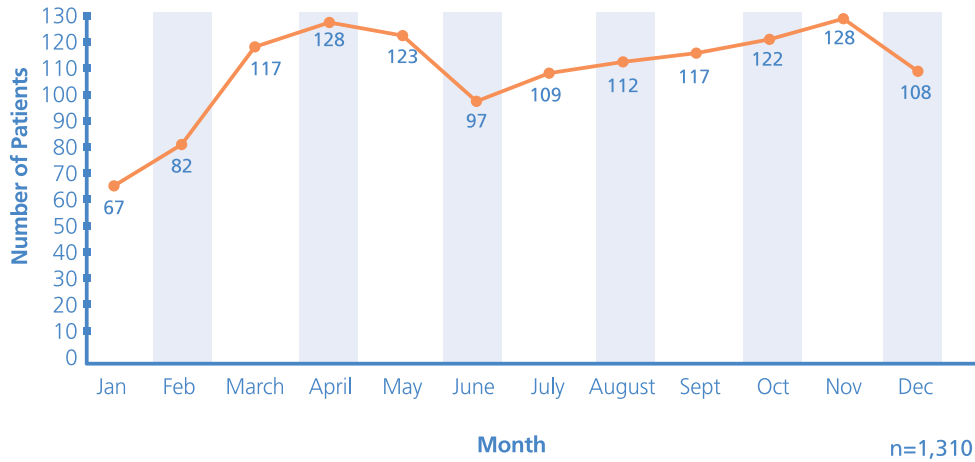
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TRAUMA PATIENT ARRIVALS

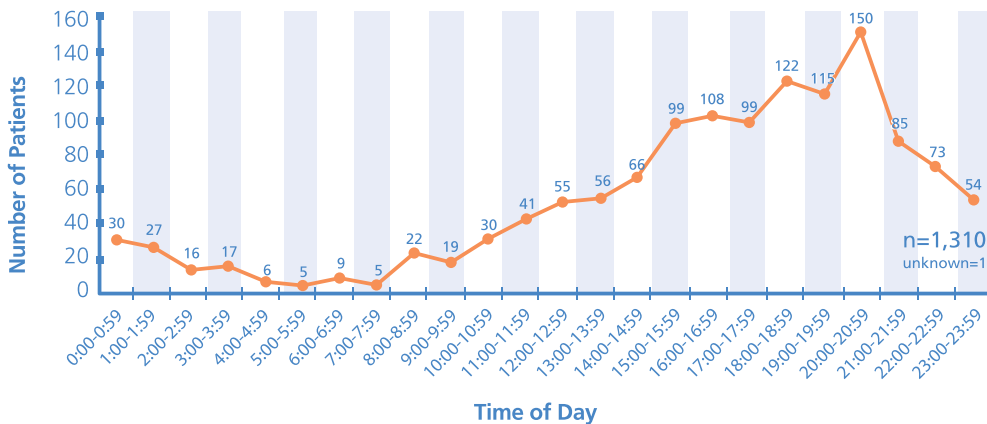
Pediatric Trauma Patients - By Month



Monthly pediatric admissions peak in the spring and fall.

April and November 2010 experienced the highest volume of patients, with 128 admissions.

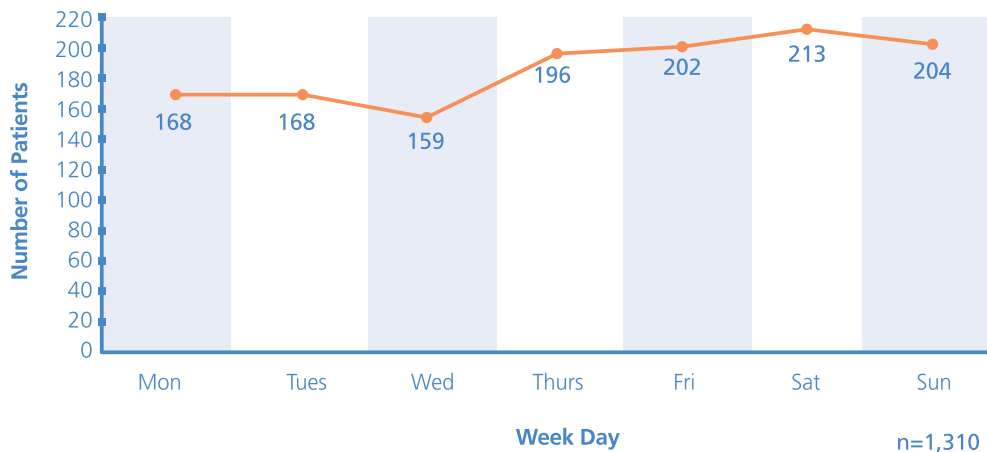
Pediatric Trauma Patients - By Time of Presentation



Peak arrival time is between 3 and 10 p.m.

Patients arriving after 10 p.m. are typically transferred to Dell Children's from other hospitals. Most of these children were injured between the peak hours of 3 and 10 p.m.

Pediatric Trauma Patients - By Day of Week



Most children needing urgent trauma care are injured on Thursdays, Fridays, Saturdays and Sundays.

TRAUMA POPULATION

Dell Children's Trauma Service treats children under the ages of 15 years.

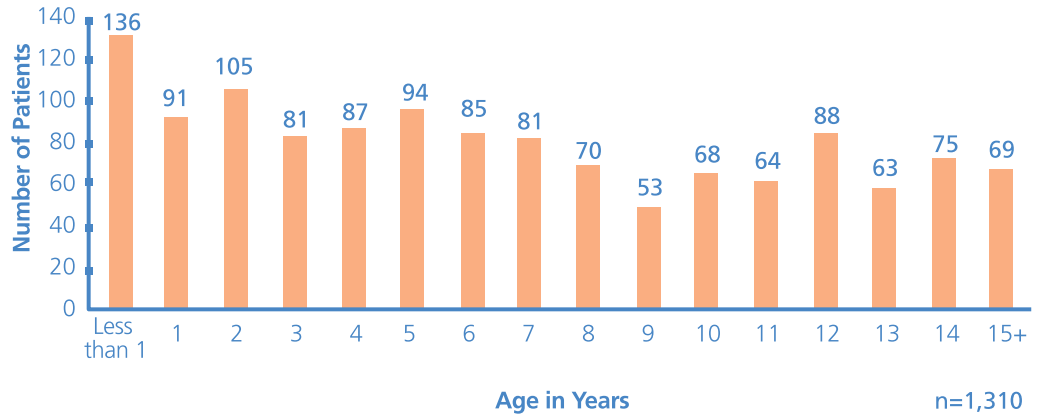
Most injured children treated at Dell Children's are between the ages of 0 and 6.

Consistent with national statistics, males are injured more frequently than females.

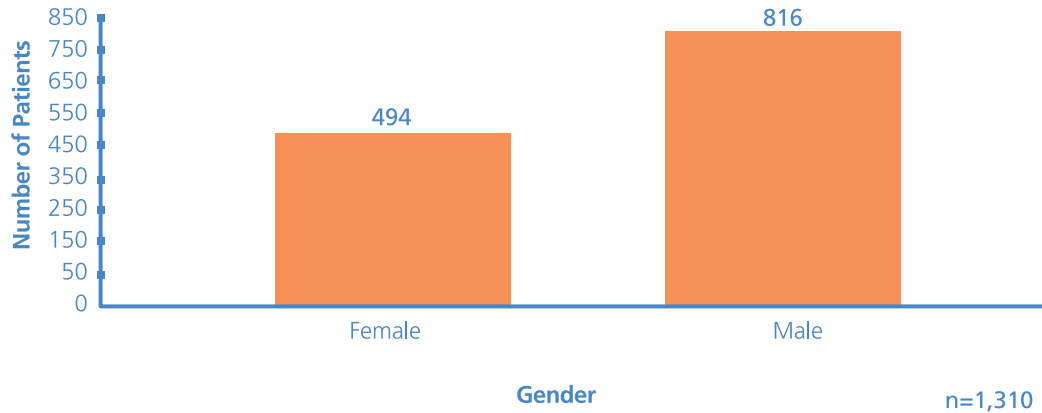
Injured children from Travis County comprise the majority (51%) of trauma patient evaluations at Dell Children's.

49% of trauma patient evaluations are from outside of Travis County, establishing Dell Children's as a major referral source for the region.

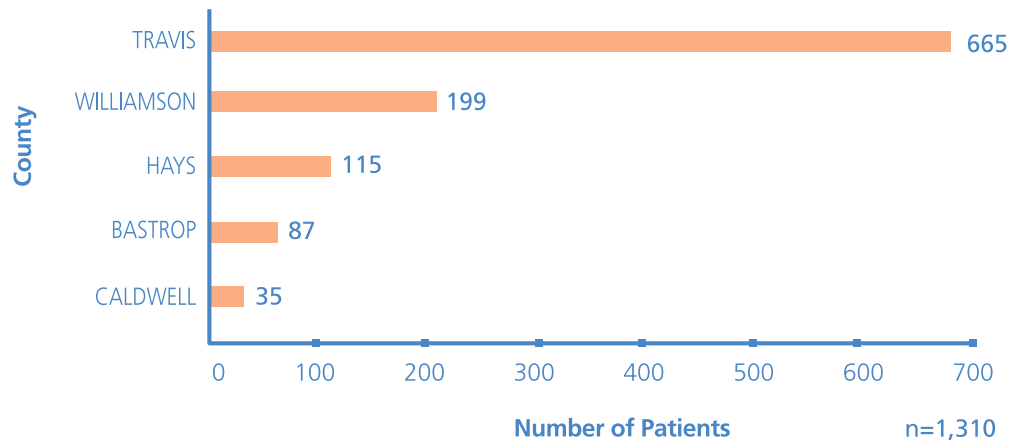
Pediatric Trauma Patients - By Age



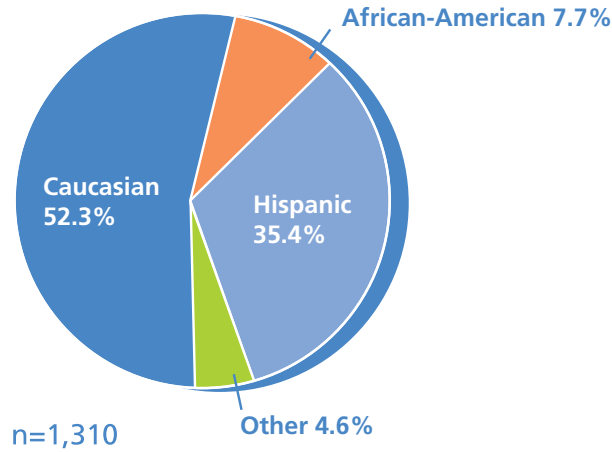
Pediatric Trauma Patients - By Gender



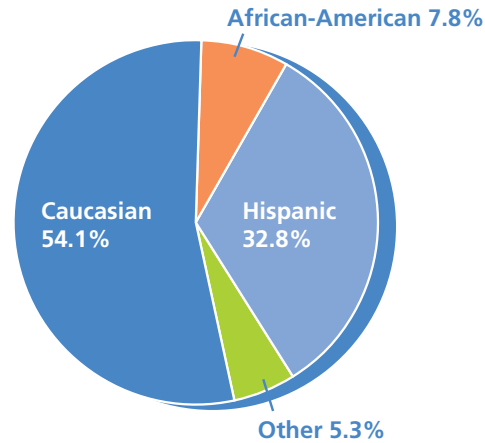
Pediatric Trauma Patients - Top Five Counties of Residence



**Pediatric Trauma Patients -
by Race/Ethnicity**

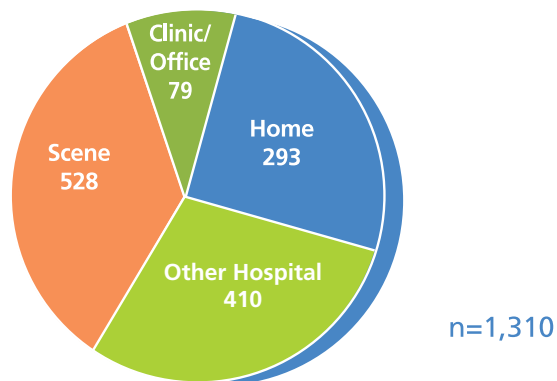


**Race/Ethnicity in
Travis/Hays/Williamson
Counties**



The race/ethnicity of Dell Children's trauma population mirrors the Austin area population's race/ethnicity.

Pediatric Trauma Patients - By Originating Location



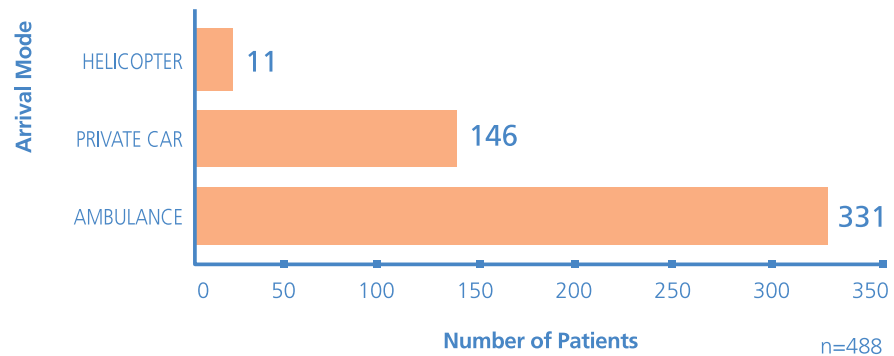
HOSPITAL ARRIVAL

The majority of patients are brought to Dell Children's directly from home or the scene of the injury.

31% of Dell Children's trauma patients were first seen at another facility, then were stabilized and transported to Dell Children's.

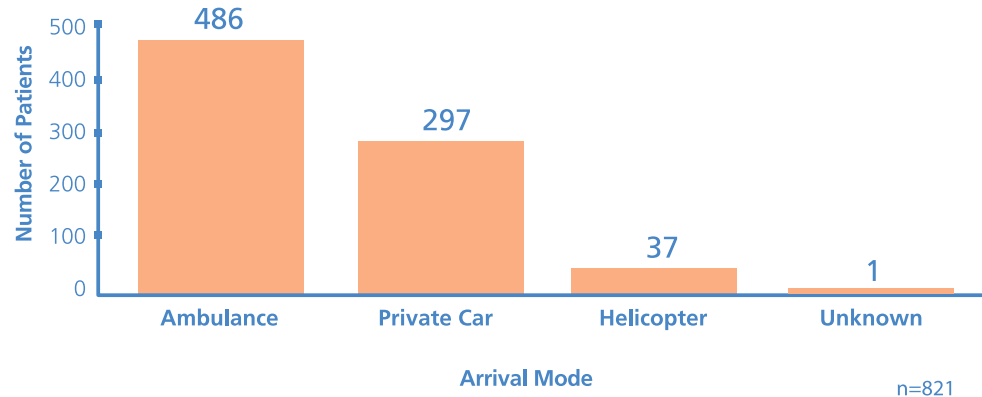
Children first treated at other hospitals and clinics are most often transported to Dell Children's by ground ambulance.

Pediatric Trauma Patients - Mode of Arrival from Clinics and Other Hospitals



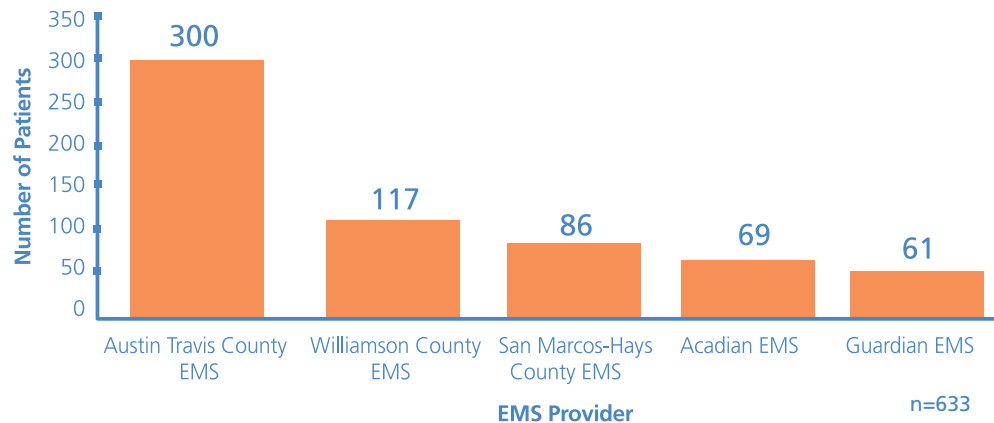
Children brought to Dell Children's from home or from the scene of injury are most often transported by ground ambulance for severe injuries and by private car for less severe injuries.

Pediatric Trauma Patients - Mode of Arrival from Scene/Home



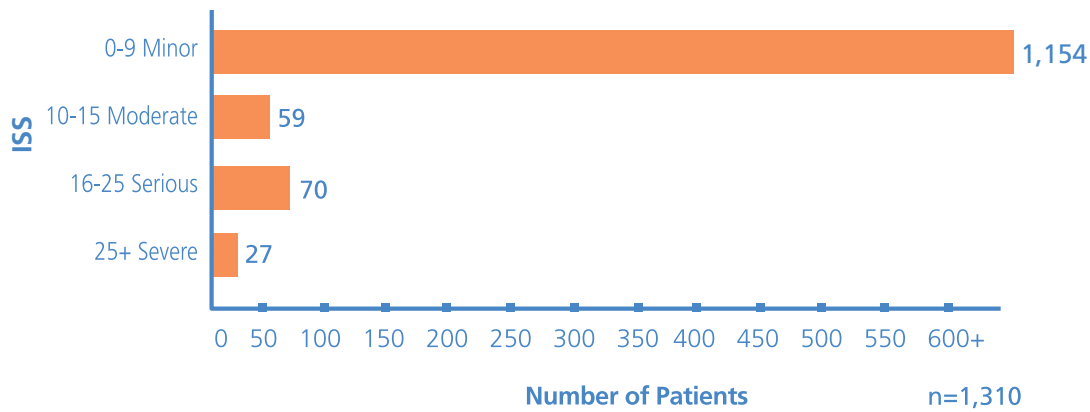
Exceptional care provided by first responders or Emergency Medical Services providers is essential for optimal patient outcomes.

Pediatric Trauma Patients - Top Five EMS Providers



The Austin-Travis County, Williamson County, San Marcos-Hays County, Acadian and Guardian EMS agencies transport most of the patients treated by Dell Children's Trauma Service.

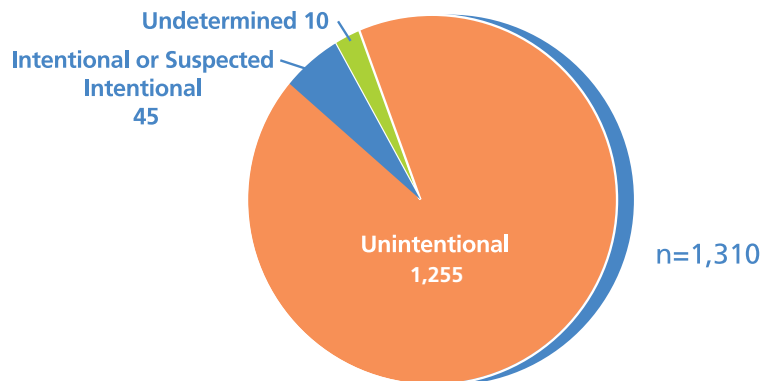
Pediatric Trauma Patients - By Injury Severity Score



The Injury Severity Score (ISS) is an index of anatomic injury that utilizes values from 1 to 75. Higher scores indicate more severe injuries and higher mortality. Most trauma patients treated at Dell Children’s fall into the minor category.

Patients with an ISS of 10 or greater typically have longer lengths of stay.

Pediatric Trauma Patients - By Injury Intent



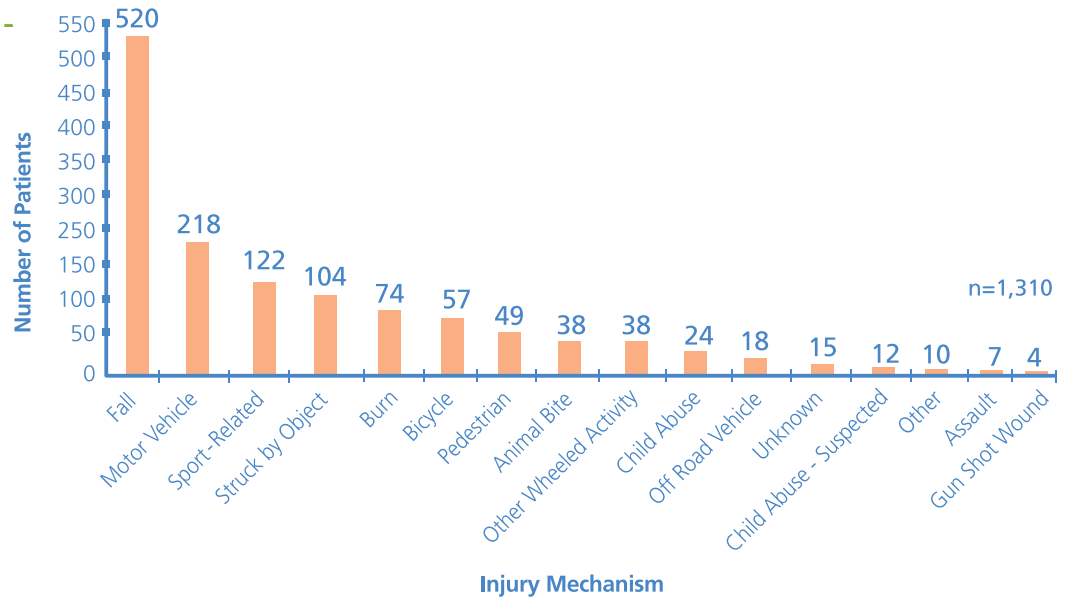
The majority of pediatric patients are injured unintentionally.

MECHANISM OF INJURY

39% of the trauma patients treated at Dell Children's were injured in a fall. Falls can occur when children are at play, at home, horseback riding, etc.

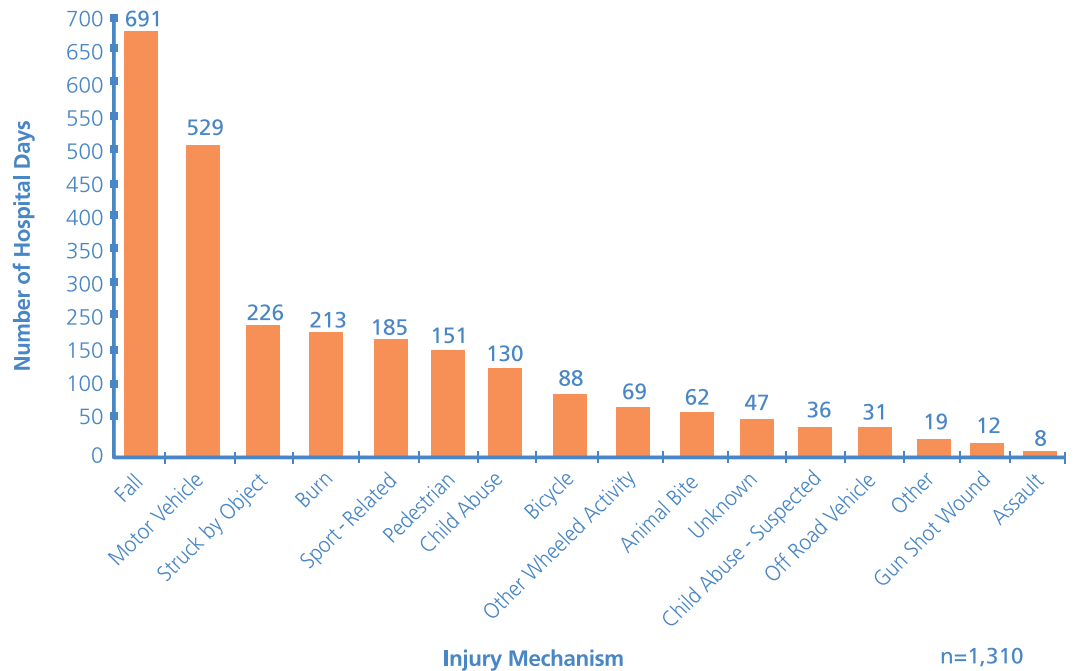
Injuries treated from motor vehicle collisions comprise 17% of all trauma evaluations.

Pediatric Trauma Patients - By Mechanism of Injury

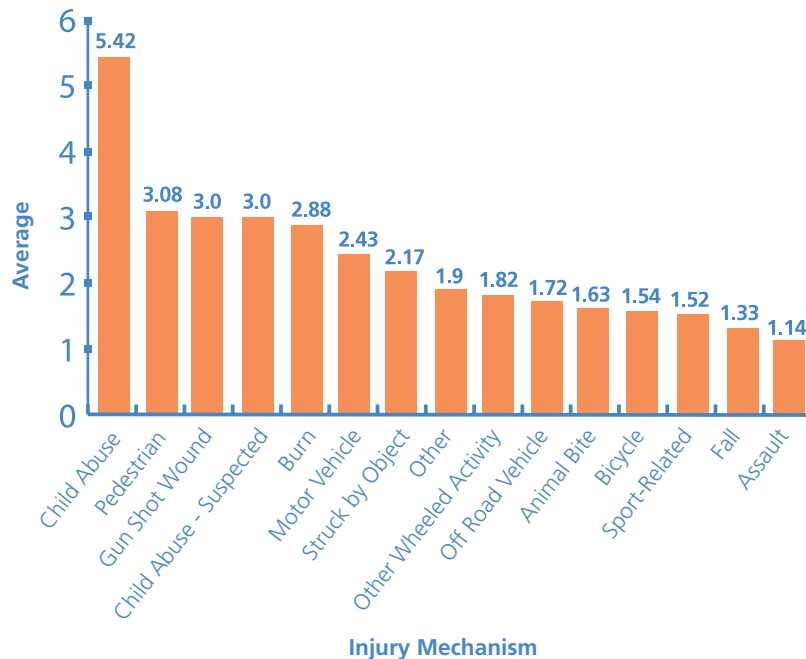


Falls and motor vehicle collisions account for the largest number of hospital days.

Pediatric Trauma Patients - Number of Hospital Days by Mechanism

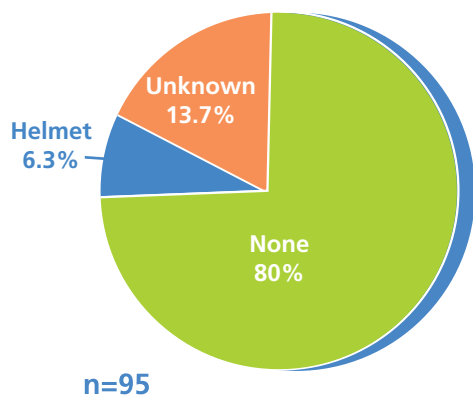


Pediatric Trauma Patients - Average Length of Stay by Mechanism

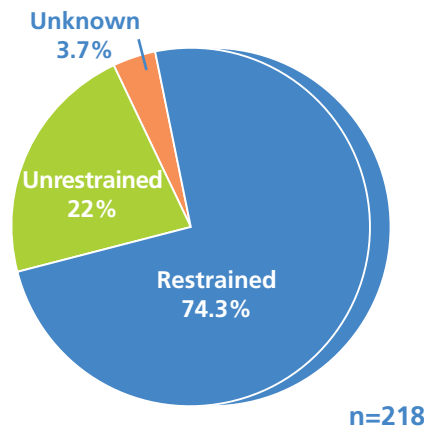


Patients who are treated for child abuse have longer average lengths of stay.

Pediatric Trauma Patients - Helmet Use in Bicycle-Related Injuries



Pediatric Trauma Patients - Restraint Use in MVC Injuries



Only 6.3% of children treated at Dell Children's for bicycle-related injuries were wearing a helmet. The national average for helmet use in children ranges from 15% to 25% (SafeKids USA).

74% of the patients treated for injuries sustained in motor vehicle crashes were restrained in a car seat, booster seat or seatbelt. In the U.S., for children ages 0 to 8, restraint use has increased from 15% in 1999 to 73% in 2005 (SafeKids USA).

HOSPITAL UTILIZATION

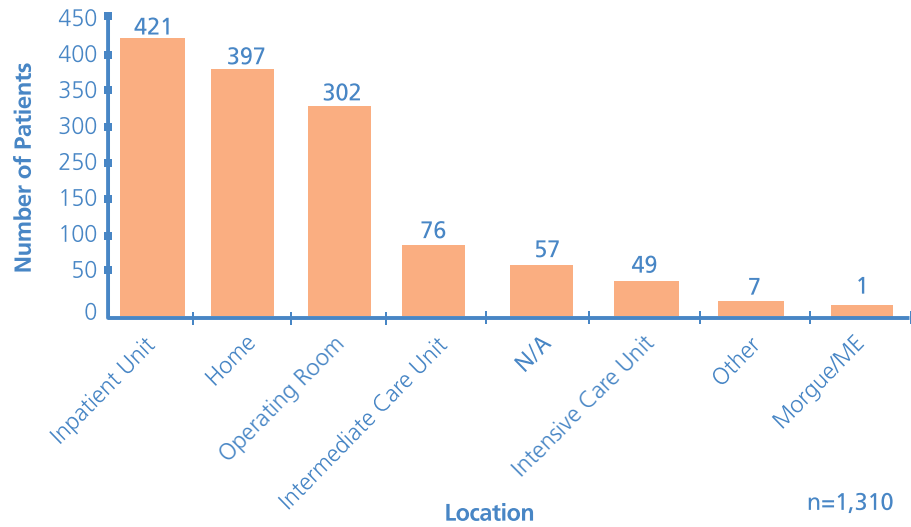
Most patients evaluated in the Emergency Department for an injury are admitted to an inpatient care unit.

302 patients required an operation after being evaluated in the Emergency Department.

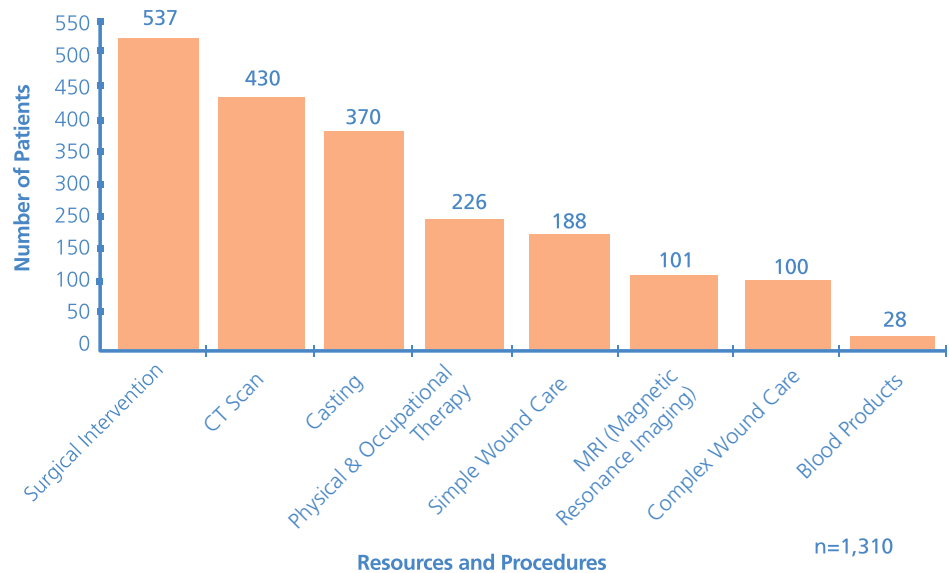
49 patients required admission to the Intensive Care Unit and 76 to the Intermediate Care Unit.

Trauma patients often utilize multiple hospital resources. They frequently require surgical intervention and advanced imaging (CT Scan or MRI).

Pediatric Trauma Patients - ED Disposition



Pediatric Trauma Patients - Resources and Procedures Used



PLEASE CONTACT US
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