

Community Trauma Report

Fourth Annual





Table of Contents

INTRODUCTION

Welcome	4
Top five injury causes	5
Spotlight	6

INJURIES TO CHILDREN

Injuries to children	8
Injuries by age group	9
Caden and Amenzi McBride	10
Five-year trends	12
Burns	14

INJURIES TO ADULTS

Injuries to adults	16
Injuries by age group	17
Julie Mogenis	18
Five-year trends	20
Car crashes	22
Violence	23

ABOUT THE TRAUMA PROGRAM

Trauma Nursing Fellowship	24
Stop the Bleed	25
Research and innovation	26
Resources	27
Trauma faculty and staff	28
Leadership	29



Welcome

In June, we celebrated an extraordinary accomplishment — one that we've been working toward for several years now. In addition to our longstanding adult Level I designation, The American College of Surgeons Committee on Trauma has now recognized University Hospital as a pediatric Level I trauma center — one of only five in the state of Texas. Earning this additional distinction means that the American College of Surgeons has recognized our expertise in the care of children with life-threatening injuries.

And that expertise goes beyond direct patient care. As a Level I pediatric trauma center, we help develop national protocols to provide better care for injured children. We conduct research to find new and better treatments for childhood injuries. In addition, we have staff members out in the community every day working to prevent injuries before they happen — whether it's distributing hundreds of car seats to families each year, visiting schools to teach high school students about the hazards of drunk and distracted driving, or raising awareness about how deadly a hot car can be in the blistering South Texas sun. The time-tested adage, "An ounce of prevention is better than a pound of cure" has never been so true as when you are talking about injury.

We have been a Level I trauma center since 1997, taking care of tens of thousands of seriously injured patients from across Texas. Two of our main areas of focus in 2017 are to teach lifesaving bleeding control techniques to all South Texans, and to decrease the number of firearm injuries in South Texas.

Uncontrolled bleeding from extremity injuries is a major cause of preventable death and complications. In these situations, time really matters—in as little as five minutes, someone can die unless the bleeding can be stopped. Practically, this means all our community members need to be taught the basics of rapid bleeding control. The good news is the approach is simple, effective and can be done with your own two hands. The ACS Committee on Trauma has launched a national campaign to "Stop the Bleed," which is a public education endeavor that teaches the layperson how to immediately control

bleeding before pre-hospital professionals arrive. Another important effort is to address the significant rise in injuries from firearms over the past year. In our Trauma Service Area, firearm-related injuries are up 78 percent overall, with a more than doubling of injuries in children under the age of 17. Unfortunately, over three-quarters of the deaths from penetrating injuries occur within the first 24 hours after injury, indicating that the initial injury was not recoverable by the time the patient arrived to us and the only way the life could have been saved would have been to prevent the injury.

Tragically, many of these are the result of impulsive teens and young adults who had easy access to firearms and either hurt themselves or others. We plan to initiate a public education effort that specifically addresses safe firearm maintenance and storage, especially in households with children. As always, we also continue to work together with our partners in EMS and law enforcement to make San Antonio and South Texas a safer place to live.

While reading this community report, we hope you will think about how the injuries and trends mentioned can impact your life, as well as the lives of your family, friends and neighbors. Thank you for your interest in helping to build a safer community.

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TOP 5 INJURY CAUSES 2015

1. Falls 30%
2. Car and truck crashes 27%
3. Burns 7%
4. Assaults 6%
5. Pedestrian injuries 5%

Spotlight

A closer look at three major causes of injury in our community, identified by the doctors and nurses of our trauma team.



FALLS AND BLOOD THINNERS

THE NUMBERS: In 2015, 596 adults ages 65 and older were seen by University Hospital's trauma team after suffering injuries from falls. Just over 9 percent of them died from their injuries. If they had bleeding in the brain from their fall, as 264 did, the death rate climbed to almost 19 percent. And for the 90 patients with a brain hemorrhage who also were taking a blood thinner, the odds of dying were even greater — with more than 21 percent dying after a fall.

THE PROBLEM: Falls are the leading cause of serious injuries seen at University Hospital among people of all ages, and in the elderly they can be devastating. One reason is the increased use of blood-thinning medicines prescribed to older adults for conditions such as atrial fibrillation, a major cause of stroke. Combined with a head injury from a fall, these medicines can make a bad situation worse.

THE RECOMMENDATIONS: The risk of falling increases with age. Balance, coordination and physical strength often decline as people get older. Discuss your medicines and your risk of falling with your doctor. Minimize those risks through physical activity such as walking, Tai Chi or leg lifts to maintain strength. Avoid ladders and stepstools, and keep commonly used items within reach. Check for trip hazards in your home, or ask a friend or family member to help you check.

Regular eye exams and turning lights on at night will help you see where you're going. Register for one of our fall awareness classes to learn how you can prevent falls.

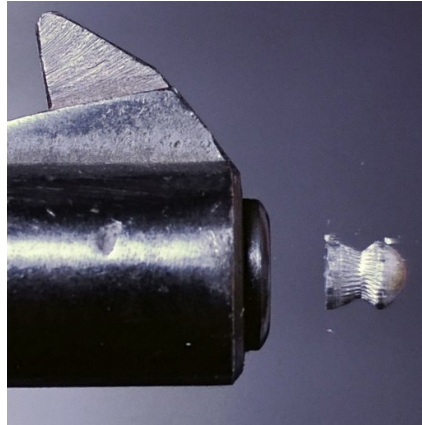
AIR AND PAINTBALL GUNS

THE NUMBERS: In 2015, 23 children sustained injuries from air guns and paintball guns serious enough to require treatment at University Hospital's trauma center. Six of those were 4 years of age or younger. All but one took place at home. Ten were injuries to the eyes, four to the face or head, three to the neck and three to the chest or abdomen. The average hospital stay was just over five days.

THE PROBLEM: Guns that use compressed air or gas to fire pellets, BBs or paintballs are popular. They also can cause serious harm — particularly pellet guns, which are far more powerful than the air rifle you might have had as a child. Today's pellet guns fire 17- or 22-caliber metal pellets at velocities up to 1,400 feet per second. Most handguns fire rounds at less than 1,000 feet per second.

THE RECOMMENDATIONS: Both parents and children should understand that air guns are not toys, and that children and adolescents should be supervised by an adult when using them. Children should be educated in gun safety and how to handle and fire guns. Protective eyewear should always be used. And when not in use, all guns in the home should be locked away and unloaded.

SPOTLIGHT ON INJURIES



UNINTENTIONAL SHOOTINGS

THE NUMBERS: Forty-nine people were brought to University Hospital in 2015 because of unintentional shootings involving powder-fired handguns, rifles, shotguns and military-type weapons. Four were 14 years of age or younger. Two were 4 or younger. The majority of these injuries, or 33, were caused by handguns. Rifles and shotguns made up another 10. Almost three-quarters of unintentional shootings took place in the victims' homes. Three resulted in death.

THE PROBLEM: The purpose of a gun is to wound or kill, and guns are very effective at doing that — deliberately or unintentionally. Adults inadvertently discharge weapons through inexperience or carelessness, with alcohol or drug use a common contributing factor. Children are naturally curious about weapons and often harm themselves, adults or other children with firearms.

THE RECOMMENDATIONS: Store guns unloaded in a locked location. Store ammunition in a separate, locked location. Both guns and ammunition should be out of reach and sight of children. Keep the keys and combinations hidden. When a gun is not in its lock box, keep it in your line of sight. Make sure all guns are equipped with effective, child-resistant gun locks (call our Injury Prevention team at 210-358-4295 to obtain one). If a visitor has a gun in a backpack, briefcase, handbag or an unlocked car, provide them with a locked place to hold it while they are in your home. Leaving guns on a nightstand, table or other place where a child can gain access may lead to injuries and fatalities. Talk to your kids about how a gun they might see on television or a video game is different from a gun in real life. Teach kids never to touch a gun and to immediately tell an adult if they see one. Talk to grandparents and the parents of friends your children visit about safe gun storage practices. If you decide that you no longer need to have a gun in your home, dispose of it in a safe way. Consult with law enforcement in your community on how to do so.



More resources for safety and injury prevention can be found on Page 27, or at UniversityHealthSystem.com/services/injury-prevention

Injuries to Children

Injuries are the leading cause of death among children. Almost all could be prevented through safer driving, better education of both children and adults, and by being alert for hazards in our homes and neighborhoods.

A record 1,342 seriously injured children were treated at University Hospital in 2015. That represents a 15 percent increase in the number of injured children from the previous year, and a 22 percent increase in the rate of injuries per 100,000 children. That rate has climbed by 56 percent over a five-year period.

Burns were the leading cause of injury among children 16 and younger in 2015, with 347 patients treated. Falls were the second-leading cause at 317. The rate of burns among children has risen 56 percent over a five-year period, while the rate of falls is up 61 percent. University Hospital operates the only pediatric burn program in the region.

The third leading injury cause in children 2015 was car crashes, with 244 patients — a 34 percent rate increase over five years. University Health System's injury prevention team has a number of programs aimed at making our streets safer by distributing infant and child car seats and showing parents how to properly use them. They work in schools to raise awareness about the hazards of drunk and distracted driving, and teach younger children how to recognize and

avoid hazards when walking or riding their bikes.

In 2015, 44 children were seriously injured while riding bicycles. The rate of bicycle injuries involving children rose 87 percent from the previous year, and was almost 300 percent higher than the rate in 2011.

Some good news could be found in the injury trends related to violence among children treated at University Hospital. Overall violent injury rates fell by 11 percent over a five year period. Both the rates of shootings and stabbings each fell by 40 percent over that period. However, unarmed assaults were unchanged.

In June 2016, University Hospital became the only Level I pediatric trauma center in South Texas, and only the fifth in Texas. Research has shown that younger and more seriously injured children have better outcomes at a pediatric trauma center staffed by specially trained physicians and nurses, and has appropriate resuscitation equipment and medications, special protocols for imaging and diagnostic procedures, and special pain management guidelines.





Injuries to children

YOUNGER THAN 1 YEAR

1. Falls 45%
2. Burns 34%
3. Child abuse 9%
4. Car crashes 7%
5. Struck by object 3%

AGES 1-4

1. Burns 41%
2. Falls 29%
3. Car crashes 11%
4. Pedestrian 5%
5. Struck by object 4%

AGES 5-9

1. Car crashes 24%
2. Burns 22%
3. Falls 22%
4. Pedestrian 5%
5. Animal bites 4%

AGES 10-14

1. Car crashes 23%
2. Falls 17%
3. Burns 15%
4. Sports injuries 10%
5. Bicycle 6%

AGES 15-16

1. Car crashes 24%
2. Sports injuries 14%
3. Falls 12%
4. Burns 9%
5. Pedestrian 7%

Caden and Amenzie McBride

Amenzie McBride danced that night. The 12-year-old loved to sing and dance, and her parents had arranged for dance lessons in nearby Pearsall, about 20 miles from their home in the tiny town of Bigfoot. The family had moved to Bigfoot from San Antonio after buying land for a weekend home and falling in love with the way of life there.

The dance class ended at 8:30 p.m. Amenzie's 18-year-old sister, Dayziah, drove to pick her up. When they didn't return right away, their mother, Tina Shippy, wasn't too worried. "I thought, she's either driving or stopped to get a bite to eat."

But a few minutes later, their son got a text from a neighbor asking if the girls had returned. "I automatically knew something was wrong," Ms. Shippy said. "We all jumped in the truck."

They located the site of the wreck about two miles from their home by the presence of a helicopter. What had happened wasn't clear, but on the dark road Dayziah had lost control and the car hit a utility pole. A passer-by found them and called for help.

The helicopter flew Amenzie to University Hospital, where she was rushed to surgery to remove part of the left side of her skull to relieve pressure from a major head injury. More surgeries followed. She was placed in a medically induced coma for two-and-a-half weeks.

Her prognosis was uncertain. "You never know with the brain — that's what they told me," her mother said. "But it was severe. That was the hardest part." When Amenzie awoke, she couldn't speak or move her legs or the right side of her body. Her left arm drifted uncontrollably.

Ms. Shippy, trained as a nurse, found herself beginning to despair. Then, while she was in the hospital cafeteria one day, she got a call from her mother-in-law back in the room, telling her Amenzie had begun to speak.

"I didn't think I could run that fast," she said.

A lengthy rehabilitation process followed. And while her recovery continues, Amenzie has resumed dance lessons — the music and movement a source of joy, her mother said.

But the family's ordeal wasn't yet over. Five months after the crash, the day before Amenzie was to return to University Hospital for a final operation to repair her skull, her 15-year-old brother was seriously injured in a bull-riding mishap.

Caden McBride had been competing in junior bull-riding events for years. He had taken safety courses and wore protective gear. But after a fall during a practice session, he was kicked in the torso by the bull.

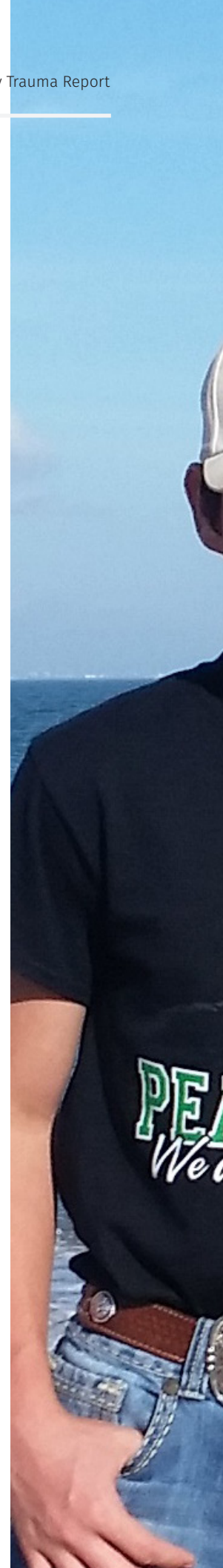
At a nearby regional hospital, Caden and his father were first told that the injury didn't appear to be serious. But a subsequent MRI found a ruptured spleen, a secondary tear in his kidney and a collapsed lung. It would later turn out he had bleeding from his colon as well.

He too was flown to University Hospital and underwent surgery to stop the bleeding. His room was a short distance from Amenzie's.

Hospital staff in the Emergency Department and the operating room were impressed by Caden's humor and grace — despite his pain.

The anesthesiologist told his mother that before he was given anesthesia, Caden asked her to stop. He then thanked every member of the surgical team for taking care of him.

"These traumatic situations take such a toll," Ms. Shippy said. "You have to have faith."



Left to right: Caden, Amenzi and Dayziah
McBride



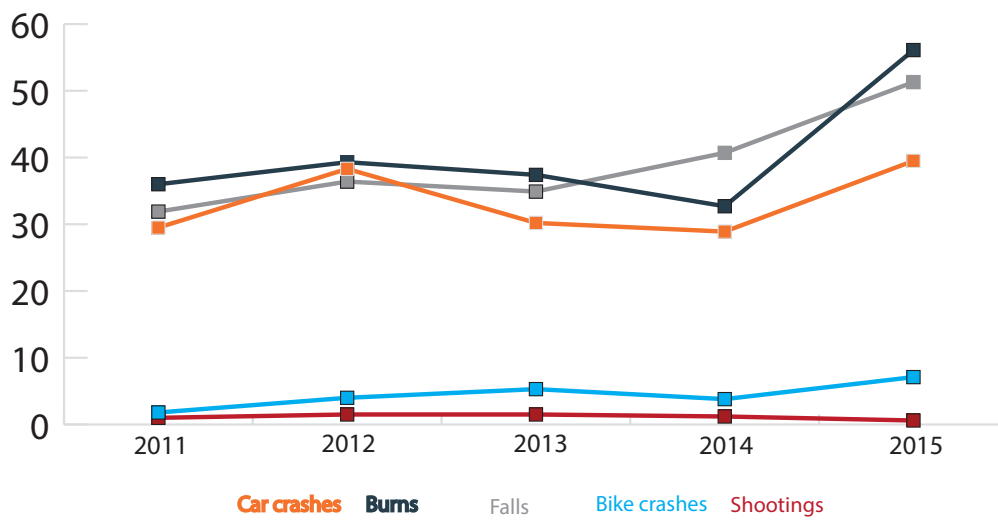
Injuries to Children

Ages 0 - 16

	2011		2012		2013		2014		2015		2011-2015 Rate change
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	
CRASHES	247	40.0	340	55.0	323	52.1	318	48.6	389	62.9	57%
Car or truck	182	29.5	237	38.3	187	30.2	189	28.9	244	39.5	34%
Motorcycle	9	1.5	10	1.6	3	0.5	10	1.5	6	1.0	-33%
Bicycle	11	1.8	25	4.0	33	5.3	25	3.8	44	7.1	294%
Pedestrian	40	6.5	58	9.4	47	7.6	47	7.2	64	10.4	60%
Railway	0	0	1	0.2	0	0	1	0.2	1	0.2	-
Other vehicles	5	0.8	9	1.5	53	8.6	46	7.0	30	4.9	513%
NON-VEHICLE INJURIES	244	39.5	283	45.8	326	52.6	354	54.2	428	69.2	75%
Burn	222	36.0	243	39.3	232	37.4	214	32.7	347	56.1	56%
Animal bite	14	2.3	17	2.8	44	7.1	42	6.4	47	7.6	230%
Struck by object	1	0.2	6	1.0	11	1.8	59	9.0	31	5.0	2400%
Machinery	0	0	2	0.3	5	0.8	10	1.5	3	0.5	-
Electrical shock	3	0.5	4	0.6	5	0.8	10	1.5	9	1.5	200%
Fireworks	4	0.6	11	1.8	29	4.7	19	2.9	21	3.4	467%
VIOLENCE	27	4.4	36	5.8	29	4.7	27	4.1	24	3.9	-11%
Shooting	6	1.0	9	1.5	9	1.5	8	1.2	4	0.6	-40%
Stabbing	3	0.5	12	1.9	5	0.8	3	0.5	2	0.3	-40%
Assault	18	2.9	15	2.4	15	2.4	16	2.4	18	2.9	0%
FALLS	197	31.9	225	36.4	216	34.9	266	40.7	317	51.3	61%
OTHER	142	23.0	167	27.0	200	32.3	200	30.6	184	29.8	30%
TOTAL INJURIES	857	138.9	1,051	170.1	1,094	176.6	1,165	178.2	1,342	217.0	56%

Rate per 100,000 population, 16 and younger. Source: Texas State Data Center population estimates and projections for 22 counties in Trauma Region P.

Injuries to Children



Burns were the leading cause of childhood injuries seen at University Hospital in 2015, involving 347 children. Over a five-year period, the rate of burn injuries rose by 56 percent. Falls brought 317 children, with an injury rate 61 percent higher over the same period. The biggest cause of childhood burns continues to be hot soup and ramen noodles. These burns often occur when children are sitting in front of the TV with the bowl on their laps. As for falls, they tend to vary by age. Very young children often are hurt falling from furniture — beds and sofas, for example. Older children often fall from bicycles or while playing sports.

Car crashes continue to be a major cause of childhood trauma. After a slight dip in the rate of car crash injuries involving children in 2014, the rate jumped by 37 percent in 2015. Over a five-year period, car crash injury rates among children rose 34 percent. The number of children 16 and younger injured on motorcycles is a far smaller number, but that rate declined over five years by a third.

The rate of children hurt on bicycles has been rising fairly steady over the past five years, and is now almost 300 percent higher than at the start of that

period. Pedestrian injuries, or children hit by cars, has been up and down in recent years, but over a five-year period rose by 60 percent. And while the rate of children hurt in other types of vehicles including golf carts and all-terrain vehicles is much higher now than five years ago, that rate has fallen 43 percent over the past two years.

The rate of children bitten by animals rose 230 percent over a five year period. Of the 47 children who suffered bites in 2015, 35 were by dogs and 12 by snakes. Fireworks injury rates have fallen somewhat since a peak in 2013, but have risen 467 percent over five years.

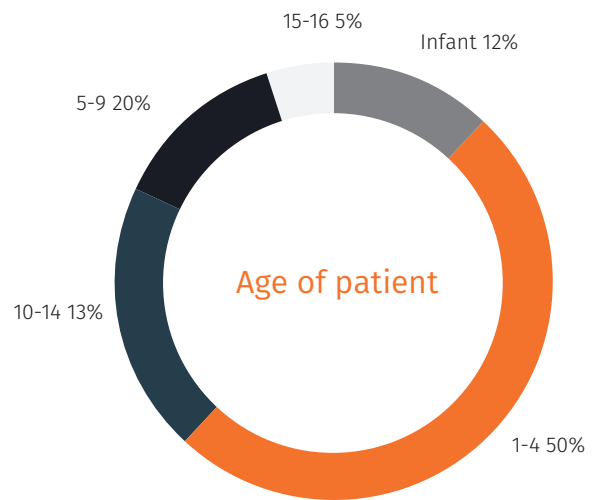
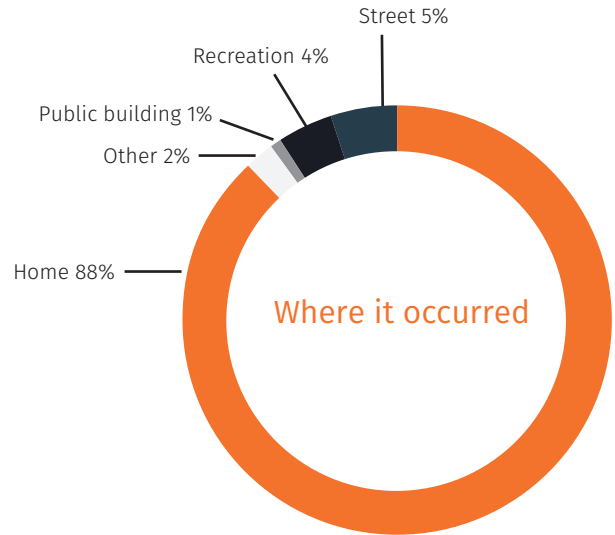
The rates of violent injuries to children has declined over a five-year period. Four children were shot in 2015, half the number and half the rate as the previous year, and a 40 percent five-year decline. Two children were stabbed — also a 40 percent, five-year decline. Unarmed assaults are more-or-less unchanged over five years.

Our Injury Prevention website, universityhealthsystem.com/services/injury-prevention, contains resources on all of these types of injuries.

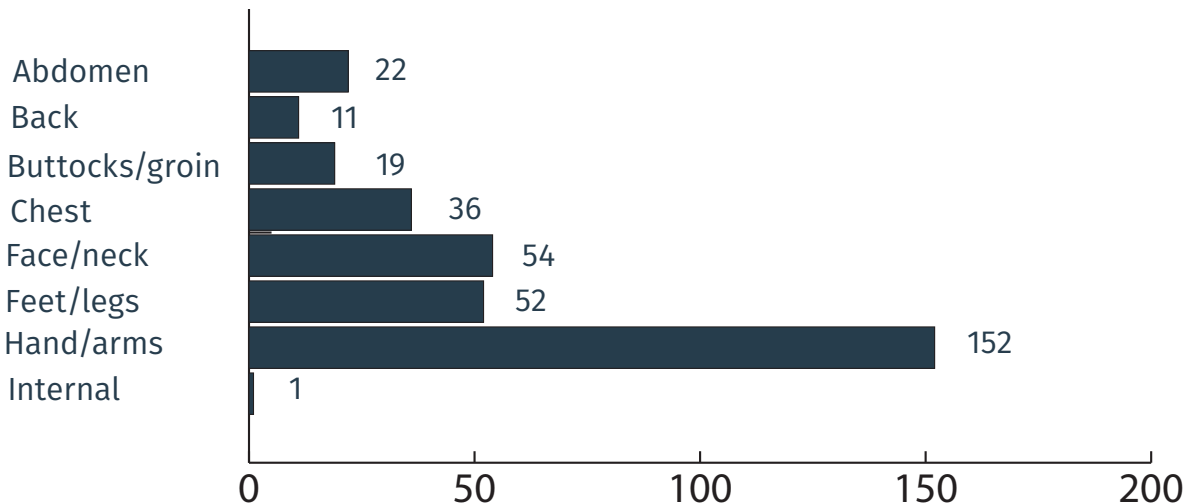
Children and Burns

Causes of burns

	No.	Percent
Soup	69	20%
Boiling water	56	16%
Hot drinks	36	10%
Fireplace/pit	26	8%
Fireworks	21	6%
Stove	19	5%
Hairstyling tool	18	5%
Oil/grease	17	5%
Explosive material	16	5%
Barbecue/hot coals	12	5%
Electric current	9	2%
Iron	8	2%
Other food	8	2%
Exhaust pipe	5	1%
Other	27	8%
TOTAL	347	100%



Location of burn



May involve more than one site



From left to right: Jenny Oliver, assistant director of Pediatric Trauma & Burn; Amanda Loquias, nurse practitioner; Dr. Lillian Liao, Pediatric Trauma & Burn Medical Director; Dr. Izabella Tarasiewicz, neurosurgeon; Dr. Anh Dinh, critical care

Injuries to Adults

The number of adults with serious injuries treated by the trauma team at University Hospital has increased each year since 2009.

A record 3,938 seriously injured adults ages 17 and older were brought to University Hospital's Level I trauma center in 2015. That represents a 36 percent increase in the rate of adult injuries over a five-year period. Rates are calculated based on the number of injuries per 100,000 adults — allowing injury trends to be seen while taking account for the rapid growth in population throughout South Texas.

Falls were the leading injury cause among adults, with 1,255 patients. As a major cause of injury, falls have seen an enormous rise with a rate that has doubled over a five-year period. And while the rate has been higher in each of those five years, it grew by almost a third from 2014 to 2015. Of some two dozen reasons for fall injuries reported in 2015, by far the largest category included people who fell from an upright position (standing, running and dancing were mentioned). This year's Spotlight section examines the problem of falls that injure older adults who are taking blood-thinning medications.

Car and truck crashes continue to be an enormous cause of serious injuries in adults (and children). The rate of car crashes is 20 percent higher than five years ago, although the

2015 rate is a little below that seen in 2012, when a sharp spike in car crash injuries was seen. Some improvement has taken place in the category of motorcycle injuries, with a 23 percent, five-year decline. A closer look at adult injuries from car and truck crashes can be found in this section.

The rate of adults hurt on bicycles has continued to climb, and was 145 percent higher in 2015 than in 2011. A significant number of pedestrians are struck by motor vehicles each year, with a rate that has grown by 21 percent over a five-year period.

The category of other vehicles, which includes golf carts and all-terrain vehicles, saw a significant decline in the rate of adult injuries — down 63 percent from the previous year, and down 33 percent over the five-year period.

Unlike the favorable trends seen among children, adult injuries from violent acts are increasing — up 44 percent over five years overall. Among categories of violence, unarmed assaults have seen the highest five-year increase at 81 percent. Shootings have risen 2 percent and stabbings 27 percent over that five years.





Injuries to adults

AGES 17-24

1. Car crashes 43%
2. Shootings/stabbings 11%
3. Falls 11%
4. Assaults 7%
5. Pedestrian 4%

AGES 25-34

1. Car crashes 36%
2. Falls 13%
3. Shootings/stabbings 11%
4. Assault 10%
5. Motorcycle crashes 6%

AGES 35-44

1. Car crashes 32%
2. Falls 18%
3. Assaults 12%
4. Shootings/stabbings 7%
5. Glass, cutting tools 6%

AGES 45-54

1. Falls 32%
2. Car crashes 26%
3. Assaults 8%
4. Motorcycle crashes 6%
5. Pedestrian 5%

AGES 55-64

1. Falls 40%
2. Car crashes 24%
3. Motorcycle crashes 7%
4. Pedestrian 7%
5. Assaults 5%

AGES 65 AND OLDER

1. Falls 67%
2. Car crashes 18%
3. Pedestrian 3%
4. Motorcycle crashes 2%
5. Assaults 2%



Julie Mogenis

Julie Mogenis has lived a big life. Her legal career led her to a stint with the FBI, along with time spent as a prosecutor, a municipal judge and, for a time, a private investigator. But her love of outdoors tugged her in a different direction. In recent years she found greater satisfaction as a hunting guide, a rancher and host of a television show about hunting, “Huntin’ with the Judge.”

That big life almost came to an end in December 2004. She was guiding a hunting excursion on a ranch in Utopia when she was shot by a high-powered rifle as it was removed from a vehicle.

“We had a very strong safety policy. That’s the irony,” Ms. Mogenis said.

The group had spent the early morning hours hunting and was returning to the lodge for breakfast in multiple vehicles, each with a different guide. A client in a different vehicle asked to stop to track an animal he thought he might have wounded earlier. The caravan stopped.

“We spent time making sure everybody understood the protocol that there were no loaded weapons allowed the car. We don’t hunt from vehicles,” Ms. Mogenis said. “Unbeknownst to the person who was guiding him, he had left a live round in the chamber and the hammer back.”

She remembers the 307 Winchester lever-action rifle and the flat-nosed bullet that struck her in her left lower abdomen, shattering the pelvic bone into pieces and severely damaging her bladder and digestive tract — “it took out everything from my navel down,” she said — before exiting her buttock.

It was a remote and rocky terrain. An ambulance had to move her to a nearby deer pasture where a helicopter could land. She was flown to University Hospital and rushed to surgery. Dr. John Myers led the team.

“I wouldn’t be here if it wasn’t for Dr. Myers,” she said.

She was hospitalized for almost a month, much of that time in and out of consciousness, hooked up to catheters and a colostomy bag. But it was the rehabilitation that followed that was the hardest.

“At first I was devastated just trying to sit up. They said, we can’t let you go home unless you can sit up, get on this bar and take steps. That was quite a hurdle. I had been in bed for over 30 days and my left leg didn’t want to move at all.”

But the avid outdoors enthusiast and former triathlete was determined to heal. Back at home on her ranch, she had someone tape her feet to the stair-climbing machine and exercised while watching TV. She gradually regained her strength, but needed to regain her nerve as well. She visited neighboring ranches to get used to the sound of gunfire again without experiencing fear.

Her strength returned. In 2013, she climbed Mount Kilimanjaro. Her goal is to tackle Everest in 2017 — even though she still requires a catheter and a colostomy bag.

And she is a frequent speaker on the topic of firearm safety. She also works with wounded veterans to get them outdoors on their own paths to recovery.

“I’ve always been a pretty spontaneous person,” she said. “This was a bit of a setback. And the drama in my heart and soul was, how can I get that back? I think that’s what a lot of the vets go through, and that’s why I reached out to the Armed Forces Foundation and worked with them a lot. Because I felt like once you kind of conquer the fact that bags and tubes suck, you can recreate your passion. Your goals are different. Your personal markers are different.”





Injuries to Adults

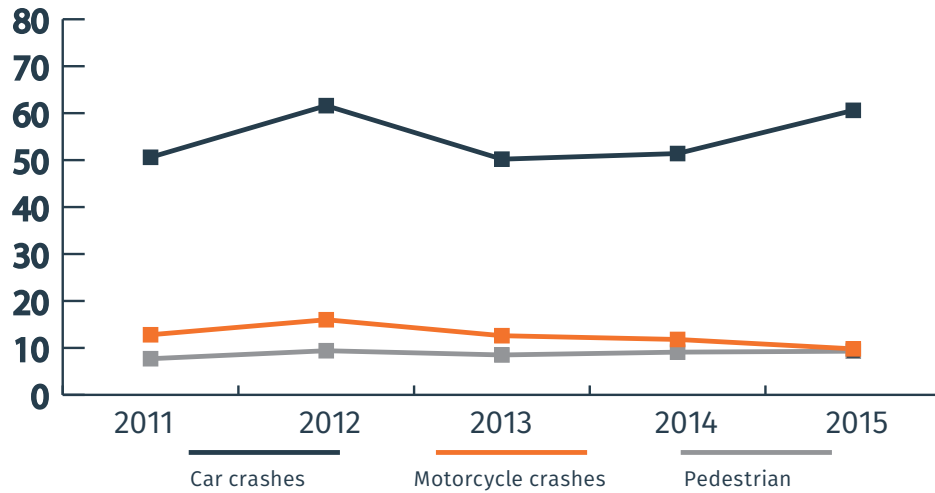
Ages 17 and older

	2011		2012		2013		2014		2015		2011-2015 Rate change
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	
CRASHES	1,349	73.3	1,672	89.9	1,434	76.3	1,484	76.1	1,591	83.0	13%
Car or truck	931	50.6	1,146	61.6	943	50.2	1,001	51.4	1,162	60.6	20%
Motorcycle	236	12.8	298	16.0	236	12.6	229	11.8	187	9.8	-23%
Bicycle	20	1.1	33	1.8	42	2.2	41	2.1	51	2.7	145%
Pedestrian	142	7.7	175	9.4	159	8.5	178	9.1	179	9.3	21%
Railway	4	0.2	4	0.2	3	0.2	4	0.2	0	0.0	-
Other vehicles	16	0.9	16	0.9	51	2.7	31	1.6	12	0.6	-33%
NON-VEHICLE INJURIES	96	5.2	121	6.5	160	8.5	259	13.3	228	11.9	129%
Burn	19	1.0	18	1.0	23	1.2	12	0.6	28	1.5	50%
Animal bite	26	1.4	35	1.9	38	2.0	60	3.1	57	3.0	114%
Struck by object	14	0.8	17	0.9	27	1.4	92	4.7	84	4.4	450%
Machinery	35	1.9	44	2.4	66	3.5	79	4.1	44	2.3	21%
Electrical shock	1	0.1	2	0.1	5	0.3	4	0.2	2	0.1	0%
Blast	1	0.1	5	0.3	2	0.1	12	0.6	13	0.7	600%
VIOLENCE	340	18.5	357	19.2	407	21.7	480	24.6	510	26.6	44%
Shooting	97	5.3	96	5.2	82	4.4	94	4.8	103	5.4	2%
Stabbing	94	5.1	109	5.9	123	6.5	123	6.3	125	6.5	27%
Assault	149	8.1	152	8.2	202	10.7	263	13.5	282	14.7	81%
FALLS	606	32.9	763	41.0	917	48.8	967	49.6	1,255	65.5	99%
OTHER	393	21.4	253	13.6	328	17.5	282	14.5	377	19.7	-8%
TOTAL INJURIES	2,784	151.3	3,166	170.2	3,246	172.7	3,472	178.2	3,938	205.5	36%

Rate per 100,000 population, 17 and older. Source: Texas State Data Center population estimates and projections for 22 counties in Trauma Region P.

Injuries to Adults

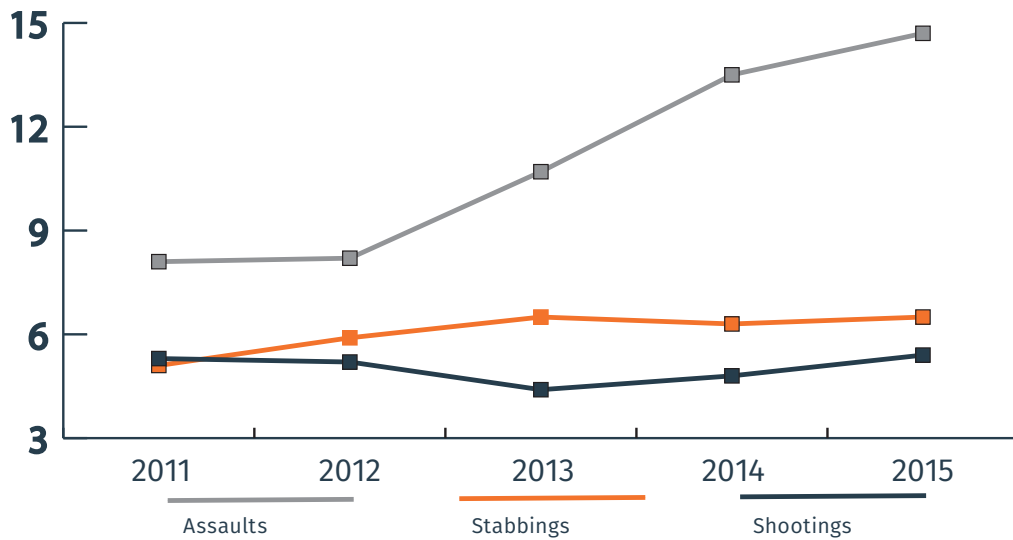
Adult crash injuries



Of the major causes of adult crash injuries, only motorcycle crashes saw improvement in 2015, with a rate that has declined each year since 2012. The rate of adults injured in car crashes rose 18 percent from the previous year, and was 20 percent higher than five years earlier. Among acts of violence, the rate of

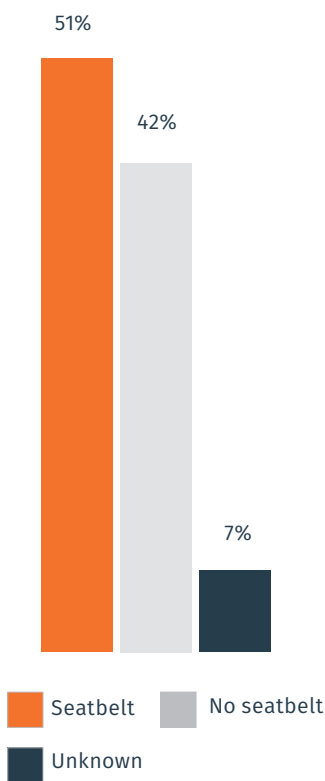
serious injury from unarmed assault rose 81 percent over a five-year period, while the rate of injuries from shootings stayed more or less the same over the same five-year period, and stabbings about the same the past three.

Adult violence



Adults and Car crashes

Use of seatbelts



Alcohol involved

28%

Drugs involved

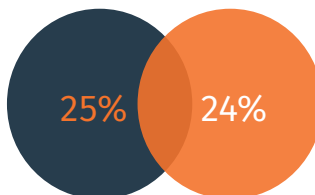
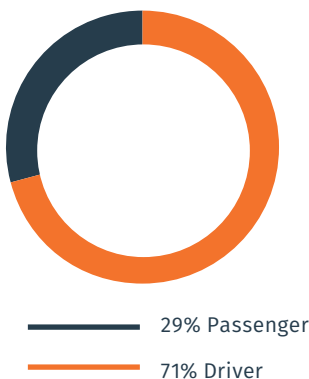
17%

Of 1,162 adults injured in car crashes and brought to University Hospital in 2015, at least 42 percent weren't wearing seatbelts. Those who were not securely fastened were more likely to suffer fatal injuries. In 28 percent of injuries, alcohol was involved. Drugs were involved in another 17 percent. Eighty-nine adults injured in crashes, or 8 percent of all adult patients, had evidence of both alcohol and drugs in their bloodstream.

Outcomes



Position in vehicle



The two youngest groups made up almost half of adult crash injuries. Those ages 17-25 made up 25 percent (286), those 25-34 were 24 percent (283). Of the rest:

- 14 percent - 35-44 (163)
- 12 percent - 45-54 (144)
- 11 percent - 55-64 (126)
- 14 percent - 65 and older (160)

Adults and Violence

Age of person injured

Ages	Shooting/ stabbing	Unarmed assault	Total	Percentage
17-24	76	49	125	25%
25-34	86	82	168	33%
35-44	38	61	99	19%
45-54	20	47	67	13%
55-64	6	29	35	7%
65 +	2	14	16	3%
Total	228	282	510	100%

Alcohol
involved

40%

Drugs
involved

30%

In 2015, 510 adults were brought to University Hospital with intentional violent injuries – 228 from shootings and stabbings, and another 282 from unarmed assaults. Alcohol was a factor in 40 percent of all violent injuries and drugs another 30 percent. Both alcohol and drugs were a factor in 13 percent. Fifty-seven percent of the injured were young adults ages 17 to 34.

Trauma Nurses

In 2014, University Hospital launched an innovative Trauma Nursing Fellowship Program aimed at building a cadre of highly trained trauma nurses.

University Hospital is known for delivering advanced trauma care for both adults and children. That reputation depends on having a highly trained and experienced staff. The Trauma Nursing Fellowship program recruits nurses with at least two years of critical care experience. Fellows are immersed in all aspects of trauma and critical care nursing, including pre-hospital care, resuscitation, surgery, the Surgical Intensive Care Unit and trauma administration.

The ultimate goal is to develop a cadre of high-caliber nurses who can follow a patient throughout the continuum of care — minimizing handoffs and improving quality. It's also a good recruiting tool.

The program is now training its third class of fellows, Daniel Castro and Katherine Brunney. Luisa Cochran, Mark Brister, Amber Hicks and Matthew Lozano made up the first two classes of fellows.

Ms. Hicks said the fellowship took her interest in trauma nursing and expanded it, giving her a new understanding and appreciation of the journey her patients take. It's an understanding her busy job wouldn't have afforded otherwise.

Fellows receive classroom training and five clinical rotations that also include AirLife flight nursing, pediatric trauma, the Pediatric ICU and trauma administration. They are mentored by senior trauma nursing staff.

Stop the Bleed

A badly injured person can bleed to death in a few short minutes — faster than paramedics can arrive. University Health System has joined the nationwide Stop the Bleed campaign to teach bystanders how to save lives in an emergency.

The goal of the Stop the Bleed campaign, announced at the White House in October 2015, is to give everyone the knowledge and tools to stop uncontrolled bleeding until help can arrive.

Mass casualty events such as the Sandy Hook Elementary School shootings and the Boston Marathon explosions drove home the point that first responders cannot always arrive quickly to an emergency, but with a little instruction, ordinary citizens can save lives. A number of groups, including the American College of Surgeons Committee on Trauma, the National Association of Emergency Medical Technicians, the Department of Defense and the Federal Emergency Management Agency, came together to launch the Stop the Bleed campaign.

“The goal is to turn bystanders into immediate responders,” said Dr. Ronald Stewart, chair of surgery at University Health System and The University of Texas Health Science Center, who also chairs the American College of Surgeons Committee on Trauma.

In San Antonio, University Health System is working with the Southwest Texas Regional Advisory Committee, or STRAC, to offer training courses where in as little as an hour people can learn a few basic techniques to stop bleeding and save lives. University

Health System will offer courses on a regular basis. Schools, businesses and churches can request an instructor come to their site to provide the training. Call 210-358-4295 for more information.

A new website, STOPTHEBLEEDTX.org, will soon allow people to sign up for a course or request an instructor, volunteer to become a trained instructor, or find a trauma first aid kit for purchase.

The course will focus on teaching people to identify what types of bleeding are life-threatening. If a trauma first aid kit is available, participants will learn how to use a tourniquet or pack the wound with bleeding control gauze and apply pressure. If no trauma first aid kit is at hand, the course will teach how to stop bleeding with other materials that might be available, and how to apply pressure with their hands.

The campaign will also work to make trauma first aid kits more available to individuals and in public buildings. These kits often contain a recommended tourniquet, hemostatic or regular gauze, protective gloves and other items.



“The goal is to turn bystanders into immediate responders,”
Dr. Ronald Stewart said.



Research and Innovation

As the premier Level I trauma center for South Texas, University Hospital doctors and staff are not only tasked with saving lives, but with finding new and better ways to save lives through research. Below is a sample of recent research studies and articles.

Alarhayem AQ, Myers JG, Dent D, Lamus D, Lopera J, Liao L, Cestero R, Stewart R, Eastridge BJ. "Blush at first sight": significance of computed tomographic and angiographic discrepancy in patients with blunt abdominal trauma. *Am J Surg*. 2015 Dec;210(6):1104-11. Epub 2015 Sep 18. PMID 26456683.

Alarhayem AQ, Myers JG, Dent D, Liao L, Muir M, Mueller D, Nicholson S, Cestero R, Johnson MC, Stewart R, O'Keefe G, Eastridge BJ. "Time is the enemy: Mortality in trauma patients with hemorrhage from torso injuries occurs long before the golden hour." *Am J Surg*. 2016 Oct 20. pii: S0002-9610(16)30554-2. doi: 10.1016/j.amjsurg.2016.08.018. [Epub ahead of print]. PMID: 27832843

Holloway TL, Nicholson SE, Rani M, Cap AP, Schwacha MG. "Toll-like receptor responses are suppressed in trauma ICU patients." *Journal of Surgical Research*. 2016 Nov;206(1):139-45.

Jenkins DH, Cioffi WG, Cocanour CS, Davis KA, Fabian TC, Jurkovich GJ, Rozycki GS, Scalea TM, Stassen NA, Stewart RM; Coalition for National Trauma Research (CNTR). "Position Statement of the Coalition for National Trauma Research (CNTR) on the National Academies of Sciences, Engineering and Medicine (NASEM) Report, A National Trauma Care System: Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths After Injury." *J Trauma Acute Care Surg*. 2016 Nov 81(5):816-818. [Epub ahead of print]. PMID: 27533908 [PubMed - as supplied by publisher].

Luftman K, Aydelotte J, Rix K, Ali S, Houck K, Coopwood TB, Teixeira P, Eastman A, Eastridge B, Brown CV, Davis



Dr. Brian Eastridge, trauma medical director

M. "PTSD in those who care for the injured." *Injury*. 2016 Nov 10. pii: S0020-1383(16)30722-7. doi: 10.1016/j.injury.2016.11.001. [Epub ahead of print]. PMID: 27871770

Salhanick MA, Sams VG, Pidcoke HF, Fedyk CG, Scherer MR, Dubick MA, Dent DL, Cap AP, Schwacha MG. "Shed pleural blood from traumatic hemothorax contains elevated levels of pro-inflammatory cytokines." *Shock*. 2016 Aug;46(2):144-8. PMID: 26974427.

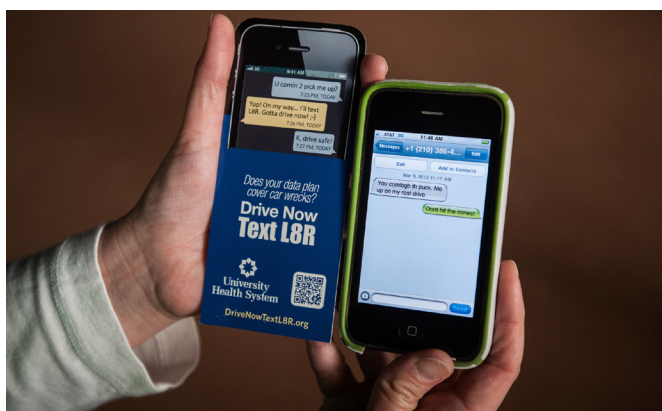
Smith SL, Price MA, Fabian TC, Jurkovich GJ, Pruitt BA Jr, Stewart RM, Jenkins DH. "The National Trauma Research Repository: Ushering in a new ERA of trauma research (Commentary)." *Shock*. 2016 Sep;46(3 Suppl 1):37-41. doi: 10.1097/SHK.0000000000000678. PMID: 27496599 [PubMed - in process].

Sordo S, Holloway TL, Woodard RL, Conway BE, Liao LF, Eastridge BJ, Myers JG, Stewart RM, Dent DL. "Small bowel perforations by metallic grill brush bristles: Clinical presentations and opportunity for prevention." *Am Surg*. 2016 May;82(5):412-5. PMID: 27215721.

Stewart RM, Kuhls DA. "Firearm injury prevention: A consensus approach to reducing preventable deaths." *The Journal of Trauma and Acute Care Surgery*. 2016 Jun;80(6):850-2. [Epub ahead of print 2016 Mar]. PMID: 26982702.

Resources

A number of organizations offer injury prevention information and tools to keep your family and community safe.



University Health System's Adult and Pediatric Injury Prevention Program

Child passenger safety, safe driving, elderly falls and education, home safety, sports safety. www.universityhealthsystem.com/services/injury-prevention

CDC Injury Center

Safe driving, violence prevention, falls, home safety, animal bites, concussions. www.cdc.gov/injury/overview

Safe Kids Worldwide/Safe Kids San Antonio

Safety tips in dozens of categories, from household and playground to bike and pedestrian safety, listed by age group. Safe Kids San Antonio offers local resources. safekids.org

San Antonio Fire Department safety page

Smoke detectors and carbon monoxide safety, child car seats, fireworks safety, water safety. sanantonio.gov/safd/safetyinformation

National Highway Traffic Safety Administration

Bike safety, 5-star crash ratings, child safety, teen driving, distracted driving, substance abuse. nhtsa.gov

Texas Parks & Wildlife

Firearm safety, hunting safety, boater education. tpwd.texas.gov

Texas Falls Prevention Coalition

Classes and programs for the elderly, fall-proofing at home. texasfpc.org

Consumer Product Safety Commission

Recalls and alerts, product safety advice. cpsc.gov

Texas Department of Transportation

State laws, safe driving tips, traffic conditions, child safety, motorcycle safety classes. txdot.gov/driver

Occupational Safety and Health Administration

A wide range of safety and health topics by industry and specific hazards. osha.gov

Stop the Bleed

National campaign to teach the public how to provide first aid to others with life-threatening bleeding. Information, training courses and more. stopthebleedtx.org

Trauma Faculty and staff

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Dr. Lillian Liao, Clinical Assistant Professor, Pediatric Trauma & Burn Director

Dr. Mark T. Muir, Clinical Assistant Professor, Director of Trauma Student Clerkship, Assistant Trauma Medical Director, Medical Director of Trauma Acute Care Unit

Dr. Daniel L. Dent, Distinguished Teaching Professor, General Surgery Residency Program Director, Professor of Surgery

Dr. Donald Jenkins, Clinical Professor, Betty & Bob Kelso Distinguished Chair in Burn & Trauma Surgery

Dr. Deborah L. Mueller, Clinical Associate Professor

Dr. Ramon F. Cestero, Clinical Associate Professor, Surgical Critical Care Fellowship Program Director, Medical Director Surgical Trauma ICU

Dr. Susannah Nicholson, Clinical Assistant Professor, Director of Trauma Research

Dr. Elizabeth Scherer, Clinical Assistant Professor

Dr. Christopher Crane, Clinical Assistant Professor, Director of Emergency General Surgery

Dr. Basil A. Pruitt, Clinical Professor of Surgery, Dr. Ferdinand P. Herff Chair in Surgery and Trauma

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Terri Christy, RN, Adult Performance Improvement Manager



Leadership

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Nelson W. Wolff
Bexar County Judge

Sergio “Chico” Rodriguez
Commissioner Precinct 1

Paul Elizondo
Commissioner Precinct 2

Kevin Wolff
Commissioner Precinct 3

Tommy Calvert
Commissioner Precinct 4

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University Health System

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Executive Vice President/COO

Reed Hurley
Executive Vice President/CFO

Dr. Brian Alsip
Executive Vice President/CMO

Michael Roussos
Hospital Administrator

Nancy Ray
Senior Vice President/CNE

Mark Webb
CEO, Pediatrics

Michelle Ryerson
Senior Vice President/
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Community Trauma Report

Fourth Annual

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Community Trauma Report

Fourth Annual



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