PARKVIEW TRAUMA 2012

ANNUAL REPORT

PARKVIEW
ADULT TRAUMA CENTER

PARKVIEW
PEDIATRIC TRAUMA CENTER

TRAUMA SERVICES

MISSION STATEMENT

Our multidisciplinary team is dedicated to the treatment of victims of trauma, the education of the community and the prevention of injury. We strive for optimal outcomes by providing efficient, quality care, and are committed to supporting the caregivers in the crisis arena.

Dr. Gaby Iskander, trauma medical director, checks vital signs in a trauma room at the new Parkview Regional Medical Center. Trauma team members include Laura Merica, RN, Perioperative Services; Judi Mathieson, RN, Emergency Department; Meghann Treesh, RN, Perioperative Services; and Jeffrey Nickel, MD, Emergency Department.

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Abby Massey, MD
Pediatric Emergency Physician,
Professional Emergency Physicians

Parkview Adult and Pediatric Trauma Centers' Annual Report was published in May 2012.

MESSAGE FROM THE MEDICAL DIRECTOR

March 17, 2012, marks a milestone for the way in which the physicians and team members of Parkview Adult and Pediatric Trauma Centers provide care for individuals who experience traumatic injury within our region. On this day, Parkview Regional Medical Center opened its doors to patients and their families.

For patients who need critical care services such as trauma care, Parkview Regional Medical Center is a destination of healing. The new hospital offers easier access to healthcare services from I-69 as well as several other roadways, advanced medical technology and the best in patient-centered care. The "smart" beds and courier robots that outfit the new hospital are among the most striking examples of cutting-edge medical technology. Features such as these allow hospital-based providers to spend more time where it matters most – with our patients.

While the Parkview Regional Medical Center offers a pleasant physical environment inspired by nature and the latest technology, several critical elements of the trauma program continue unchanged:

- Rely on teams of pre-hospital providers who perform the first assessment and discern the appropriate course of action.
- Adhere to a team approach that draws on expertise of physicians and other skilled professionals upon the arrival of patients to the trauma centers.
- Focus on trauma patients and providing a level of care that optimizes their safety and recovery.

PERFORMANCE IMPROVEMENT AND PATIENT SAFETY (PIPS)

Hospitals throughout the nation – whether trauma centers or not – must measure, evaluate and continually work to enhance their performance. For verified trauma centers, such as Parkview's, this process is even more critical. Traumatic injury requires an expert and well-rehearsed response by a team that anticipates the contribution of each team member. Little room exists for delay or miscalculation.

Performance improvement is validated by process and outcome measures. Parkview Trauma Centers incorporate both types of measures in efforts to continually monitor and evaluate performance improvement and patient safety. Outcome measures include tracking the trend of delayed diagnosis, as revealed upon patient follow-up visits at the trauma follow-up clinic, and TRISS data, a mathematically calculated aggregate probability of survival for trauma patients based on various injury factors and patient characteristics. Process measures include policy development, clinical continuing education for trauma team members and participation in the Trauma Quality Improvement Project (TQIP). Parkview was among the initial, elite group of 65 hospitals nationwide to participate in TQIP.

PEDIATRIC TRAUMA CARE

Trauma is the leading cause of death for children between the ages of 1 and 14 nationwide and results in temporary or permanent disability for millions of infants and children annually. Established last year, the relationship with Cincinnati Children's Hospital Medical Center continues to evolve and offer new opportunities. Parkview clinicians have utilized Cincinnati's children's pediatric simulation lab for hands-on training to further trauma skills.

This collaboration provides the added benefit of creating a benchmark against which we can compare trauma processes and outcomes. Unlike TRISS and TQIP, the benchmark is specific to pediatric trauma care.

COMMUNITY OUTREACH

Within the universe of trauma, outreach efforts are dedicated to developing clinical expertise among the entire team – pre-hospital and hospital-based providers. In the past year, Parkview has more than doubled the number of education events: symposia and other education programs. The inaugural pediatric symposium in November attracted more than 150 professionals who work in emergency medicine, trauma surgery, neurosurgery and pediatric intensive care medicine. Please see the Outreach section of this report for more information on trauma education opportunities.

Looking forward, Parkview Adult and Pediatric Trauma Centers will continue to devote resources to strengthening both our processes and the trauma team comprising pre-hospital and hospital-based providers. The ultimate goal remains to provide the best trauma care to each adult and pediatric patient, each time injuries occur.

Gaby A. Iskander, MD, MS, FACS
Trauma Medical Director, Pediatric Trauma Medical Director, Surgical Trauma ICU Medical Director and Pediatric ICU Co-medical Director

PARKVIEW REGIONAL MEDICAL CENTER

Caring for the **Critically Ill and Injured**

More than just a hospital, Parkview's expanded north-Fort Wayne campus includes a nine-story, main tower containing 410 patient beds, as well as numerous specialty hospitals and centers. This revolutionary facility offers improved access to healthcare for the entire region, as well as advanced technology and healing spaces inspired by nature. So, what is state-of-the-art about our new facility?

TECHNOLOGY WITHIN PATIENT ROOMS INCLUDES:

- Nurse call system that notifies caregiver by tone, light and text notification on computer and iPhone when a patient needs assistance.
- Real-time locating system that uses monitors in patient rooms and hallways to track badges worn by caregiving team members and tags on equipment. These badges and tags send data every few seconds to a system that tracks individuals and specific pieces of equipment, making it easier and faster for co-workers to find resources they need. This system also communicates the presence of a staff member in a patient's room and records the room visit automatically in the patient's electronic medical record.
- "Smart" beds that use wireless communication technology to alert caregivers about critical patient information to enhance patient safety. Such information as side rail position and elevation of the bed is monitored and entered into the patient's electronic medical record.
- Guldmann™ overhead lifts in every patient care room to enhance safety for patient and caregiver alike.
- Bedside documentation and barcode scanner for patient medication.
- Large-screen television in each patient room that uses an interactive system in order to deliver educational health content, based on a patient's specific needs.

OTHER KEY FEATURES:

- Wall-mounted "boom" arms that swing as needed to keep equipment off the floors in critical care rooms.
- TUG® Automated Robotic Delivery System robots that deliver meals, medication, linens and supplies throughout the facility.

CRITICAL-CARE SERVICES:

- Adult Trauma Center
- Pediatric Trauma Center
- 24-hour Emergency Department, staffed 24/7 by board-certified emergency physicians
- Samaritan helicopters and Mobile ICU, providing medical transportation
- Parkview Heart Institute, including an accredited PCI-Chest Pain Center
- Surgical/Trauma/Neuro/Medical ICU offering 48 dedicated beds for critical-care patients. In addition, Coronary/Cardiovascular ICU provides 20 dedicated beds.
- The Parkview Women's & Children's Hospital, featuring a Level III Newborn ICU with 31-bed capacity and neonatologists on site 24/7
- Hospitalist and intensivist programs
- Ronald McDonald House at Parkview, providing overnight accommodations for parents of hospitalized ill or injured children age 21 and younger (opening December 2012)

The all-private patient rooms of Parkview Regional Medical Center offer advanced technologies, quiet healing space and medical specialties that allow our physicians and other caregivers to be more efficient, allowing us to spend more time with each and every patient.

Parkview Huntington Hospital

In the past year, Parkview Huntington Hospital has taken measures to advance the quality of trauma care its team provides to traumatically injured individuals in Huntington County. The hospital has implemented metrics for monitoring care of trauma patients and standards for documentation. Emergency Department (ED) staff and local EMS providers collaborated to implement trauma team activation protocols for patients arriving in the Emergency Department with severe injuries. The result is a systemic, multidisciplinary team approach to the injured patient. All members of the team arrive at the ED upon notification that a patient with potentially traumatic injuries is in transport. Adopting this protocol has reduced measurable time to CT imaging, transfer to definitive care, if needed, and length of stay in the ED for patients at Parkview Huntington.

The level of support by orthopedic surgeons in Huntington provides opportunity, if needed, for the local hospital to manage a large population of injured patients at the facility, while transferring only patients that require more resources than are available at the local hospital. The goal is to keep patients in their own community whenever possible. The collaboration of care among the hospital's trauma team optimizes quality of care delivered to each patient.

Parkview LaGrange Hospital

Parkview LaGrange Hospital physicians and staff have demonstrated their commitment to provide the best possible care for injured patients. The hospital has adopted new guidelines and collaborated with LaGrange County EMS to develop a systematic response to care of injured patients.

Metrics have been established for appropriate patient charting, orders for diagnostic testing and transfer of patients within the hospital.

Parkview LaGrange has begun using trauma team activates to ensure that patients receive a rapid assessment upon arrival at the hospital. This clearly defined process facilitates rapid evaluation and treatment of injured patients and ensures proper care is provided. When additional resources are needed, trauma patients are transferred to the Parkview Adult and Pediatric Trauma Centers in Fort Wayne. In the case of the Parkview LaGrange trauma team, the use of trauma team activates has improved patient care, as well as fostered a greater sense of collaboration among team members overall. Following this process has also resulted in a decreased length of stay for patients at the hospital.

Working in partnership with EMS and other first responders, Parkview LaGrange Hospital is dedicated to achieving the best possible outcome for every patient served.

COMMUNITY HOSPITALS

Parkview Noble Hospital

Parkview Noble Hospital began taking steps this past year to ensure that the trauma team within the hospital follows a systematic approach when traumatically injured patients in Noble County arrive at the hospital. Such an approach is critical for patients to receive the most appropriate, quality care each time.

Parkview Noble instituted documentation metrics to capture vital information about the care of each patient so it can be embedded in the patient record. In addition, hospital personnel collaborated with their local EMS providers to identify triage criteria for trauma patients. When EMS personnel follow established triage guidelines and notify the hospital's Emergency Department of an incoming trauma patient, the hospital-based team can respond more quickly.

Trauma team activates were implemented at Parkview Noble. This process alerts a multidisciplinary group to assemble immediately and prepare for the patient's arrival. Hospital personnel from the Emergency Department, diagnostic imaging, lab, respiratory therapy and registration gather upon notification. This process results in faster triage of patients; quicker orders for, and completion of, diagnostic testing; and shorter patient length of stay in the hospital.

Implementing such processes as triage criteria, documentation metrics and trauma team activates enhances quality of trauma care and patient outcomes.

Parkview Whitley Hospital

Being the Parkview-affiliated community hospital with the shortest distance to Parkview Adult and Pediatric Trauma Centers has not stopped Parkview Whitley Hospital from scrutinizing the trauma care it delivers. Hospital-based providers have taken steps to identify injuries more quickly, which facilitates appropriate disposition of patients. The ability to make sure that an injured patient receives the appropriate care for his/her injuries is imperative to ensuring the best possible outcome.

Hospital leadership consulted with construction personnel to plan for the inclusion of two trauma suites spacious enough for the trauma team and necessary equipment before construction of the new hospital on S.R. 205 in Whitley County. Careful design of these trauma rooms added to the quality of care for the injured patients. The new Parkview Whitley Hospital opened to patients in the fall of 2011.

The Parkview Whitley Emergency Department collaborated with EMS in the appropriate triaging of trauma patients based on national standards. The hospital has implemented documentation standards, trauma team activates and quality metrics to ensure that injured patients who are evaluated at the facility have the best care possible. Reportable times from patient arrival to CT scanning have decreased for trauma patients, allowing hospital-based providers to more quickly evaluate and identify severe injuries.

Collaboration between members of the trauma team is crucial if providers are to swiftly evaluate a patient's injuries in hopes of beating the clock during the "Golden Hour" of trauma.

CLINICAL DEFINITIONS

WHAT QUALIFIES AS A TRAUMA?

Trauma resulting in injury may be characterized by abnormal energy transfer, involving mechanical energy (moving objects), thermal, electrical, chemical and radiation; the catastrophic injuries arising from automobile crashes are the result of transfer of energy between the victim and a stationary object (the ground) or a moving object (another vehicle).

TRAUMA PATIENT

Trauma patients include individuals with an injury diagnosis of ICD-9 codes 800.00 – 959.90, excluding ICD-9 codes 905 – 909 (late effects of injuries) and 930 – 939 (foreign bodies entering through orifice).

RATING SCALES

INJURY SEVERITY SCORE (ISS)

Injury Severity Score is an anatomical scoring system designed to provide an overall score for trauma patients with multiple injuries. The Injury Severity Score is the sum of squares of the three highest abbreviated injury scale scores for injuries to different body regions (head/neck, face, thorax, abdomen and pelvic contents, extremities, and external). ISS takes values from 0 to 75 and correlates with mortality, morbidity and hospital length of stay.

GLASGOW COMA SCALE (GCS)

The Glasgow Coma Scale is a standard measure to quantify level of consciousness in head injury patients. It is composed of three parameters: best eye response (4), best verbal response (5) and best motor response (6). The lowest GCS total is a 3 and the best score is a 15.

TRISS MODEL

TRISS refers to the probability of survival of a trauma patient using revised trauma score, injury severity score, mechanism of injury and age. It is used to assess quality trauma care in a trauma center.

PEDIATRICS

Children and youth from the ages of 1 to 14 who are traumatically injured are unique among trauma patients because of their size and stage of development. The Parkview Pediatric Trauma Center is dedicated to providing quality trauma care that responds to the specific needs of pediatric patients. In addition, the trauma team recognizes that care must extend to the patients' families as well.

Trauma is the leading cause of death for children between the ages of 1 and 14 nationwide and results in temporary or permanent disability for millions of infants and children annually. Through trends identified by the trauma registry and research efforts, Parkview monitors common mechanisms of injury for the children in our region. This knowledge shapes our injury prevention and outreach initiatives, which are intended to decrease the number of injuries.

If a child experiences trauma, the Parkview Pediatric Trauma Center provides multidisciplinary care to produce the best possible outcome. Parkview Regional Medical Center is verified as a pediatric trauma center by the American College of Surgeons. Verification is granted to trauma centers that demonstrate the highest quality of care as well as a commitment to injury prevention, outreach, performance improvement and education.

Parkview credits the high quality of its pediatric trauma care to pre-hospital providers, physicians and hospital-based personnel who support the trauma program.

The most critically injured patients are evaluated by the trauma team in the Emergency Department, which is outfitted with equipment to accommodate smaller patients as well as adults. This trauma team is available 24 hours a day, seven days a week to respond to a child's immediate needs. Led by a trauma surgeon, the team is composed of pediatric nurses and physicians with specialization in emergency medicine, critical care, medical transport and surgery. Depending on the needs, physicians specializing in pediatric emergency medicine, pediatric critical care, pediatric orthopedic surgery and pediatric neurosurgery also provide care to a young patient.

This past year, Parkview expanded educational opportunities for clinicians working with children. The Parkview Trauma Centers hosted their first pediatric-focused symposium and coordinated site visits to the simulation lab at Cincinnati Children's Hospital Medical Center. These efforts support a high level of trauma expertise among the regional system of providers who care for injured children and youth.

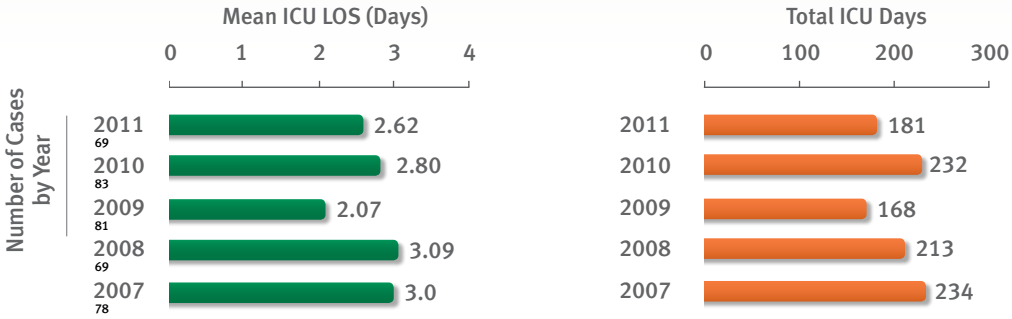
Pediatric critical care specialists include, from left to right:

Yalamanchali Chowdary, MD
Pediatric Intensivist,
Pediatric Pulmonary and Critical Care, PC

Jayesh P. Patel, MD
Pediatric Intensivist, Pediatric Specialty Physicians, PC,
and Co-medical Director, Pediatric ICU,
Parkview Regional Medical Center

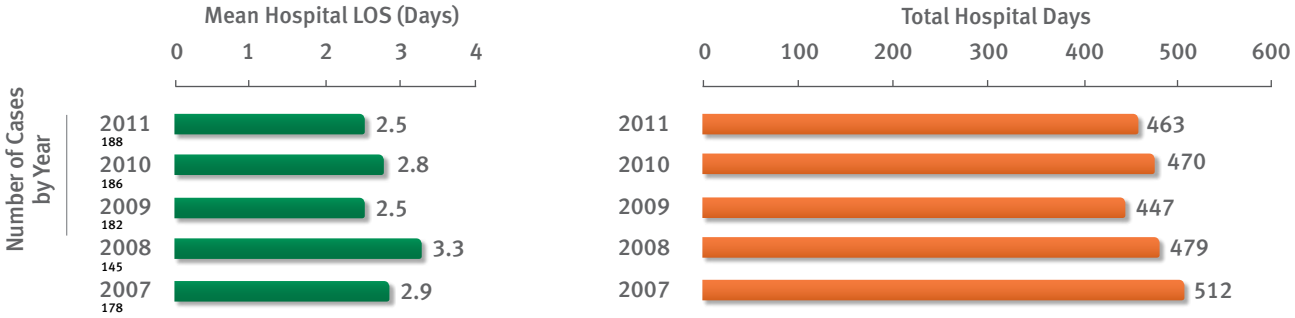
ICU Length of Stay (LOS), Pediatric Trauma (Ages 0-14)

2007 – 2011



Hospital Length of Stay (LOS), Pediatric Trauma (Ages 0-14)

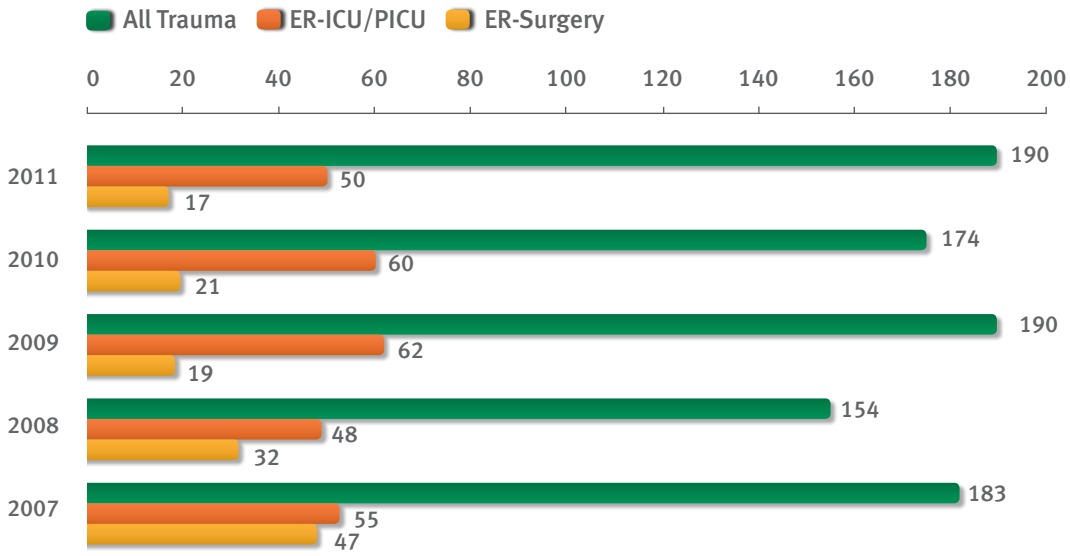
2007 – 2011



Note: Excludes patients who expired in the Emergency Department or who transferred out of the Emergency Department.

Volume of Pediatric Patients (Ages 0-14) Admitted from ER to ICU or Surgery

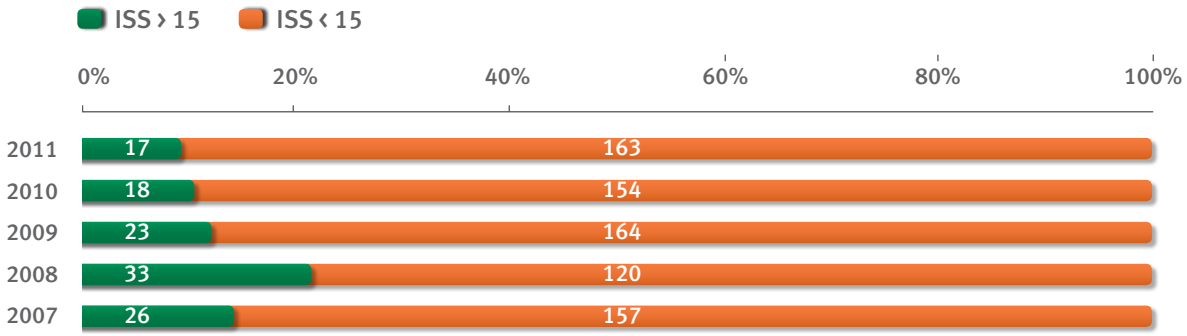
2007 – 2011



PEDIATRICS

Volume and Percentage of Pediatric Patients (Ages 0-14) by Injury Severity Score (ISS) Value

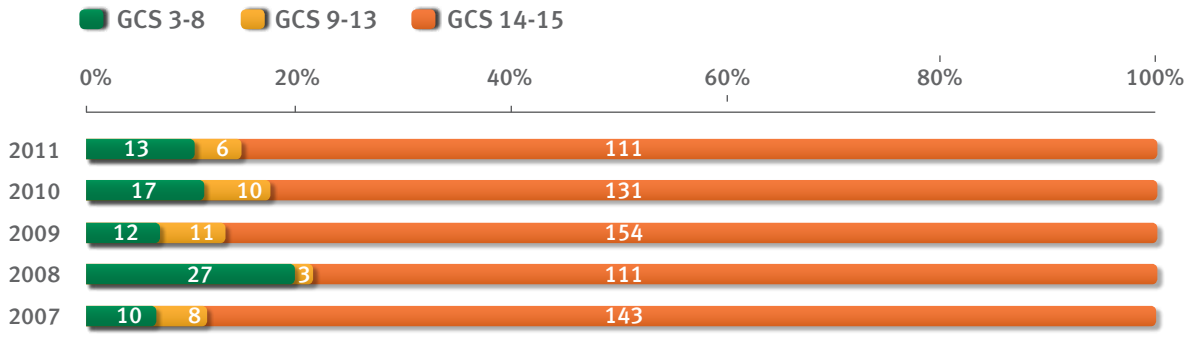
2007 – 2011



ISS › 15 can include life-threatening, critical or fatal injuries.

Volume and Percentage of Pediatric Patients (Ages 0-14) by Admit Glasgow Coma Score (GCS) Value

2007 – 2011



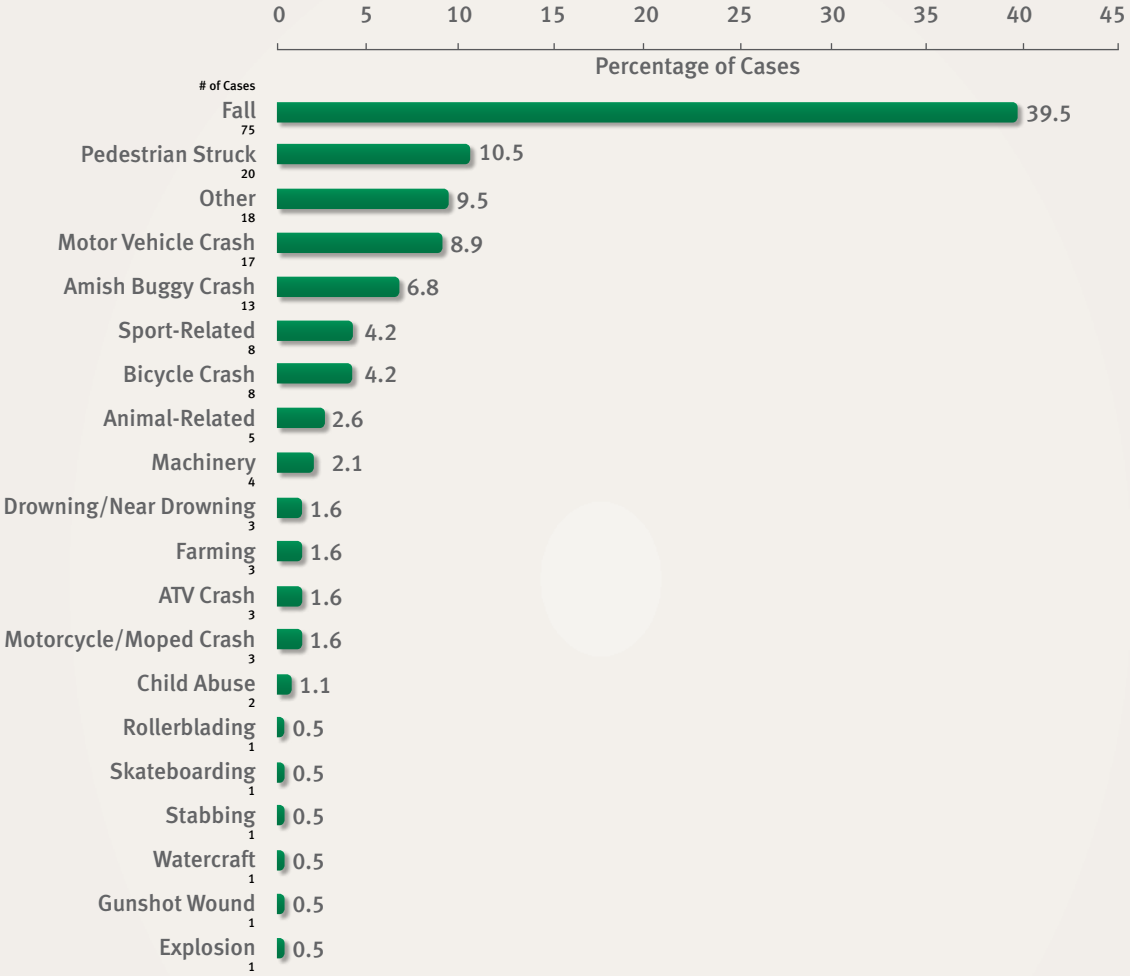
GCS 3-8 = Possible severe head injury

GCS 9-13 = Possible moderate head injury

GCS 14-15 = Possible mild head injury

Mechanism of Injury, Pediatric Patients (Ages 0-14)

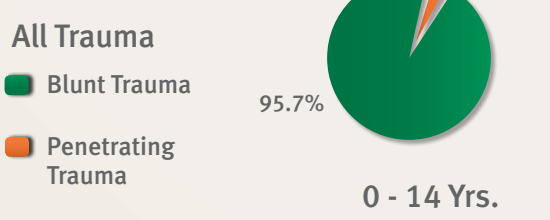
2011



Note: There were two cases with unknown mechanism of injury.

Trauma Type

2011



OUTREACH

A verified trauma center is one component of a trauma system – the broad network of emergency medical providers, firefighters and law enforcement personnel who care for individuals with life-threatening injuries. The Parkview Trauma Centers have a robust outreach program designed to enhance the quality of trauma patient care by supporting ongoing clinical education for members of the trauma system.

Parkview both provides instruction and hosts educational opportunities featuring industry experts.

Trauma courses are typically presented on site at area community hospitals or at fire and EMS stations. In February 2011, Parkview Trauma Centers hosted the area's first Advanced Trauma Care for Nurses (ATCN) course, in conjunction with the Advanced Trauma Life Support (ATLS) course for physicians. Developed by the Society of Trauma Nurses, the ATCN course is designed for registered nurses who care for severely injured patients. Nurses attend the same lecture as the physicians taking the ATLS course and then participate in hands-on, scenario-based skill stations. Fourteen RNs participated and successfully completed certification in the course.

In November, Parkview Trauma Centers presented the Rural Trauma Team Development Course (RTTDC) for the first time to community hospitals throughout our region. More than 100 physicians, nurses, pre-hospital providers, respiratory therapists and radiology technicians in the area participated. Dr. Gaby Iskander, medical director of Parkview Trauma Centers, and members of the trauma team present the course content developed by the American College of Surgeons Committee on Trauma.

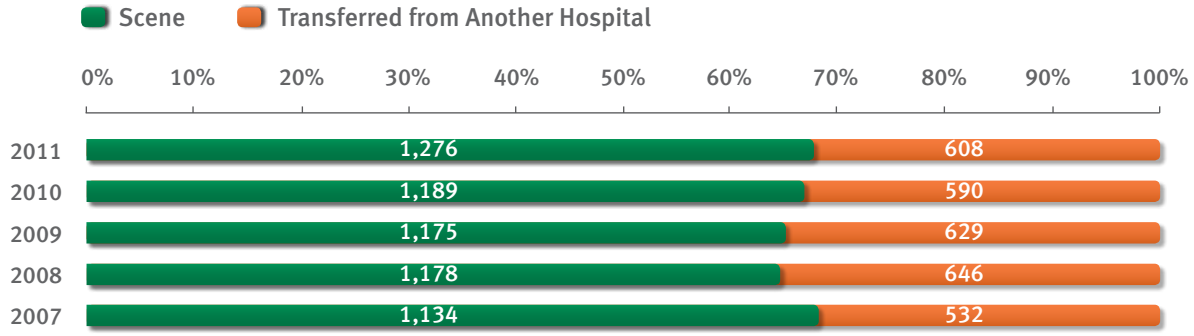
Also in November, Parkview hosted its first trauma symposium dedicated to the care of injured children. More than 150 participants gathered to hear relevant topics presented by pediatric specialists in emergency medicine, trauma surgery, neurosurgery and pediatric intensive care medicine.

Van Wert County Hospital staff participating in the Rural Trauma Team Development Course presented in Van Wert, Ohio, in April 2012, include (left to right) Jessica Bradford, RN; Lori McCarter, respiratory therapist; April Smith, radiology technologist; and Kelly Twigg, RN.

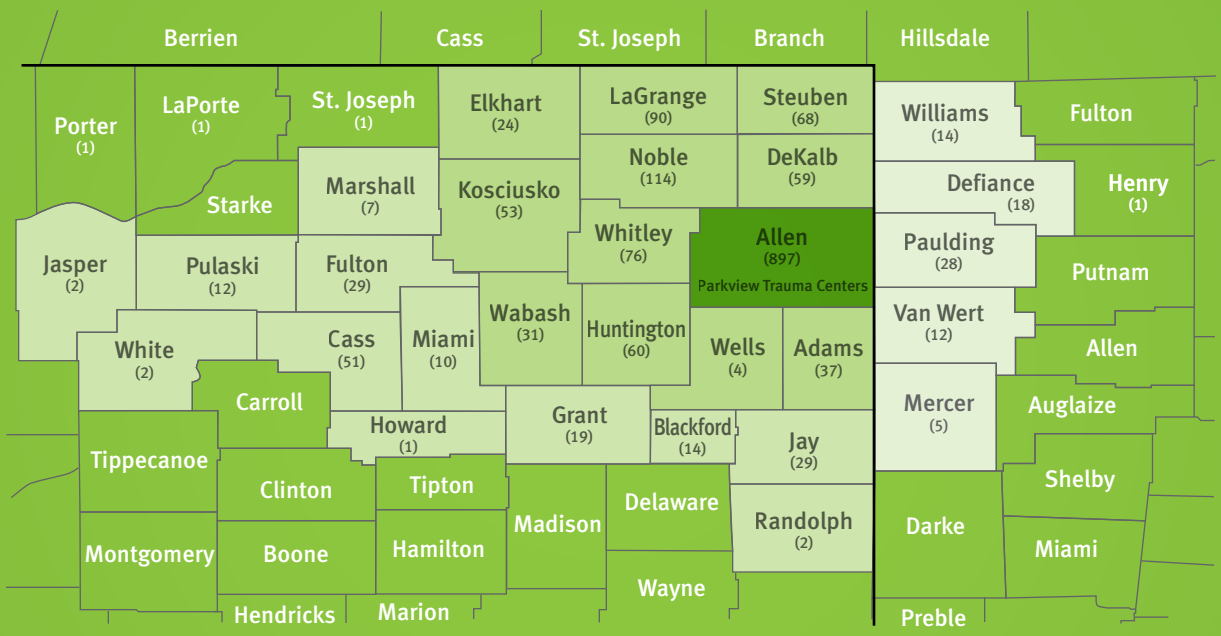
ONGOING EDUCATION PROGRAMS INCLUDE:

- 23rd annual Trauma Symposium in May presented topics relevant to the trauma care of adults as well as children.
- Individual case studies were presented on site for various regional trauma care providers. Such case studies review actual de-identified cases in which all aspects of care are reviewed, from triage at the trauma scene to discharge from the trauma center.
- Online programs offer continuing medical education credit for completion of trauma case studies, podcasts, video casts and webinars .

Volume and Percentage of Patients from Scene or Transferred to Parkview Trauma Centers
2007 – 2011



County of Injury Occurrence in Catchment Area
2011



Inference: Parkview Adult Trauma Center and Parkview Pediatric Trauma Center are regional referral trauma centers. As such, Parkview Trauma Centers received patients from these counties for treatment.

QUALITY

Trauma Performance Improvement and Patient Safety

Parkview Adult and Pediatric Trauma Centers have adopted the modern Performance Improvement and Patient Safety (PIPS) model for measuring quality. Performance improvement and patient safety are inseparable. PIPS requires a continuous cycle of monitoring, assessment and management of factors that contribute to quality, from institution-wide factors to individual provider performance. The model is used to reduce variation in trauma care and to improve patient safety.

In the PIPS model, a trauma center must monitor, assess and manage the *environment* in which care is given, the *trauma care* itself and the *patient outcomes* that follow. This cycle is supported by reliable data that consistently obtains valid and objective information necessary to identify opportunities for improvement.

Data measures focus on either process or outcome.

PROCESS MEASURES

As examples, process measures include:

- Compliance with guidelines, protocols and pathways
- Appropriateness of triage by pre-hospital providers and Emergency Department
- Delay in assessment, diagnosis, technique or treatment
- Timeliness and availability of X-ray reports
- Judgment, communication and treatment
- Appropriateness and legibility of documentation

OUTCOME MEASURES

Examples of outcome measures include mortality and morbidity.

The definition of quality is neither exact nor constant. However, a systematic use of the PIPS process – established as an industry standard – can demonstrate a commitment to the continuous pursuit of performance improvement and patient safety.

Source: *Resources for Optimal Care of the Injured Patient 2006*, Committee on Trauma, American College of Surgeons

Parkview Trauma Services' Quality Committee includes, from left to right:

Sarah Begy, RN
Pediatric Trauma Coordinator

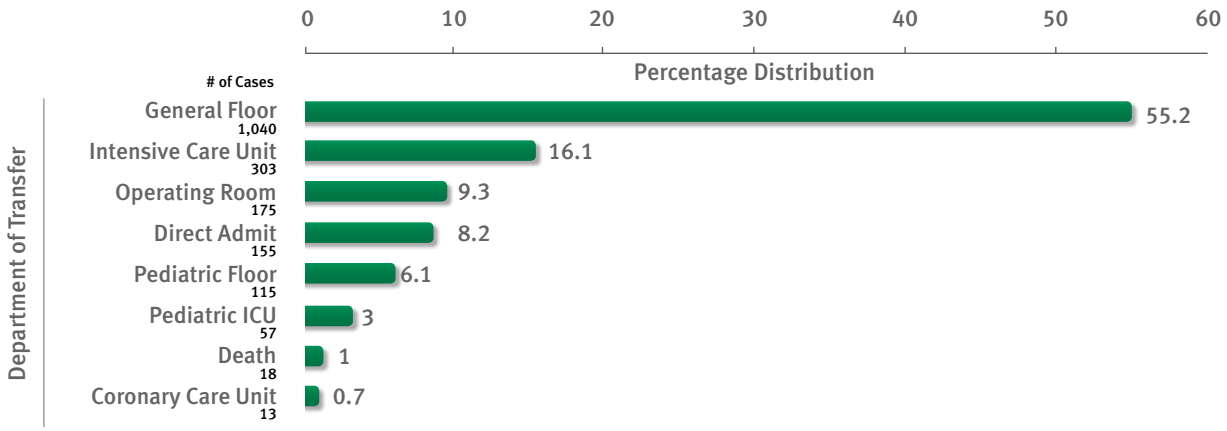
Lisa Hollister, RN
Trauma Program Manager

Tracy Collins, RN, BSN
Trauma Performance Improvement Program Nurse

Gaby A. Iskander, MD, MS, FACS
Trauma Medical Director, Pediatric Trauma Medical Director, Surgical Trauma ICU Medical Director and Pediatric ICU Co-medical Director

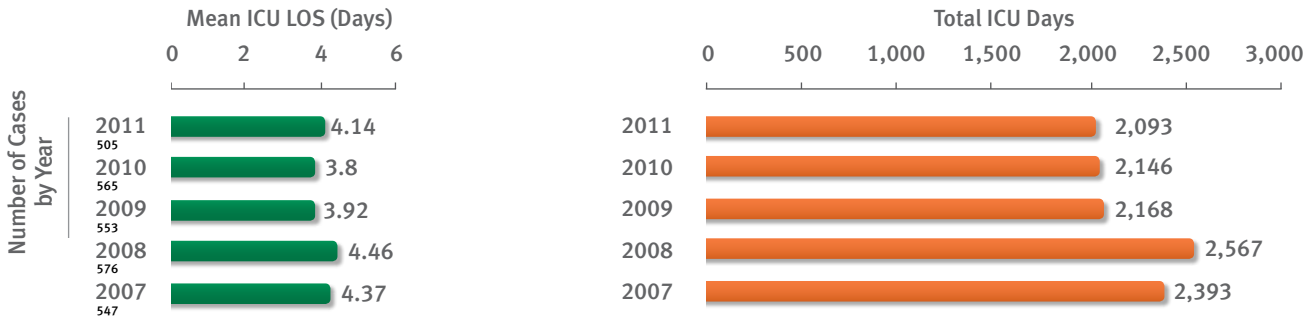
ER Disposition, All Ages

2011



ICU Length of Stay (LOS), All Ages

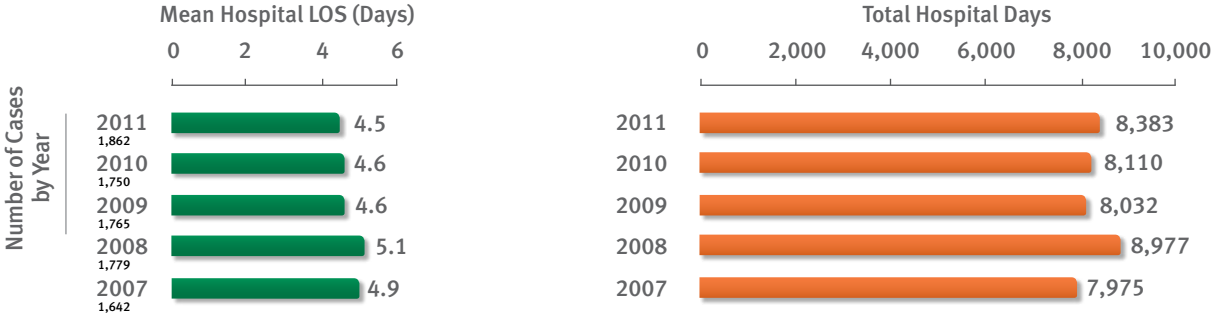
2007 – 2011



Parkview Samaritan flight nurse Andy Gilbert is joined by other team members as a patient is unloaded on the new helipad at Parkview Regional Medical Center. The team includes Andy Gilbert, RN; (front row) Scott Yoder, flight paramedic; Billy Workman, ECC technician; Cortina Cottle, ECC unit clerk; Tyler Burns, security officer; (back row) Dan Aavang, pilot; and Brad Armstrong, ECC technician. Parkview Samaritan helicopters typically provide medical flight services from locations in northern Indiana, southern Michigan and northwest Ohio.

Hospital Length of Stay (LOS), All Ages

2007 – 2011



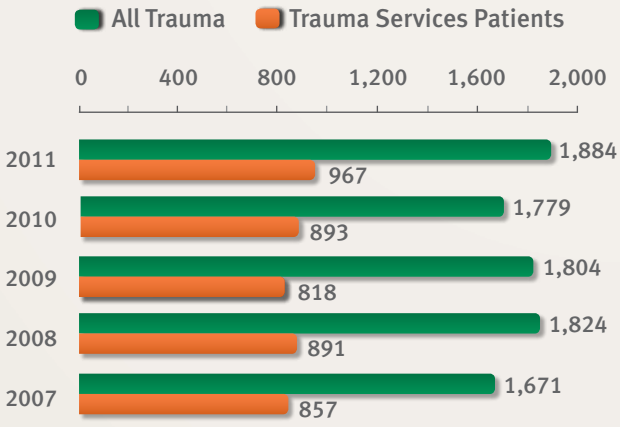
Note: Excludes patients who expired in the Emergency Department or who transferred out of the Emergency Department.

REGISTRY

Alex D. Antalis, MD, emergency department, Parkview Regional Medical Center, plays an instrumental role in Parkview's teen driver safety programs. Dr. Antalis practices with Professional Emergency Physicians.

A trauma registry is an electronic database that is essential to providing trauma service. This database is used to collect, organize and analyze information on trauma patients.

Trend of Trauma Admission by Type
2007 – 2011



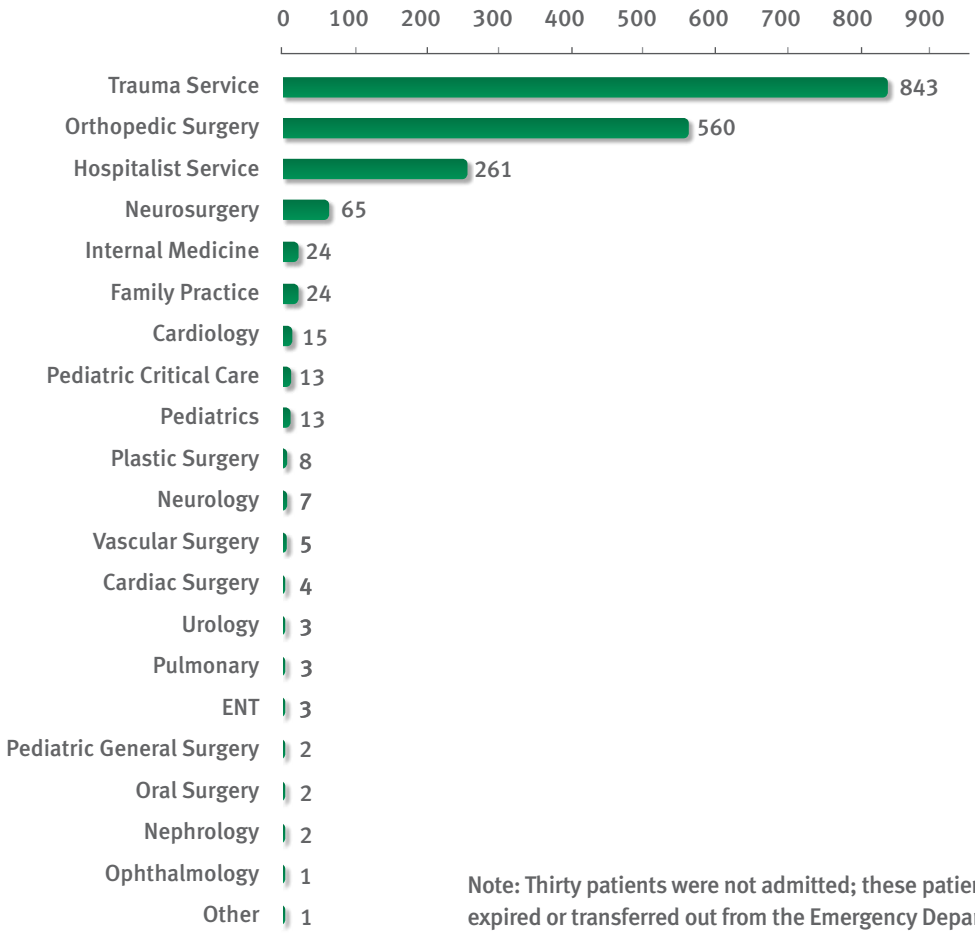
The data have many uses but are primarily used to monitor the continuum of care, from injury prevention to outcomes measurement. Currently, the Parkview trauma registry manages data for more than 35,000 patients.

The Parkview trauma registry contributes information to the National Trauma Data Bank, the Indiana State Department of Health and the Trauma Quality Improvement Project (TQIP) on a regular basis. This contribution to a larger database allows Parkview physicians and staff to identify trends in quality measurements, shape public policy and benchmark at national, state and regional levels.

Source: *Resources for Optimal Care of the Injured Patient*, 2006

Admission Service, All Ages

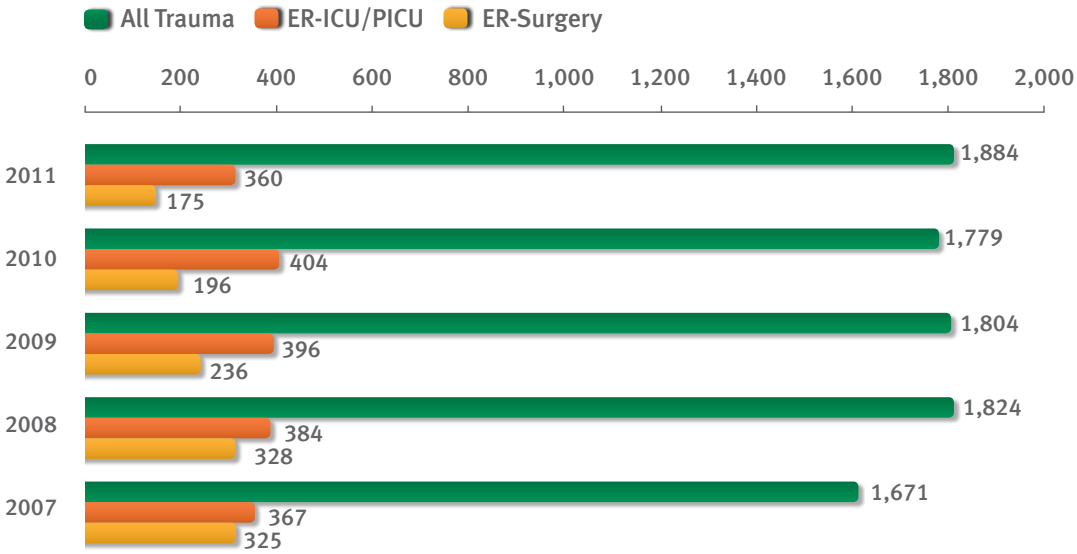
2011 (n=1884)



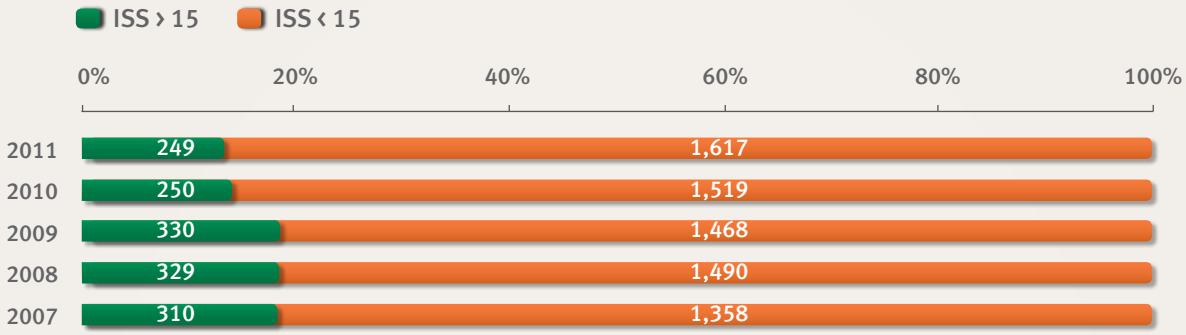
Note: Thirty patients were not admitted; these patients either expired or transferred out from the Emergency Department.

Volume of All Ages Admitted from ER to ICU or Surgery

2007 – 2011

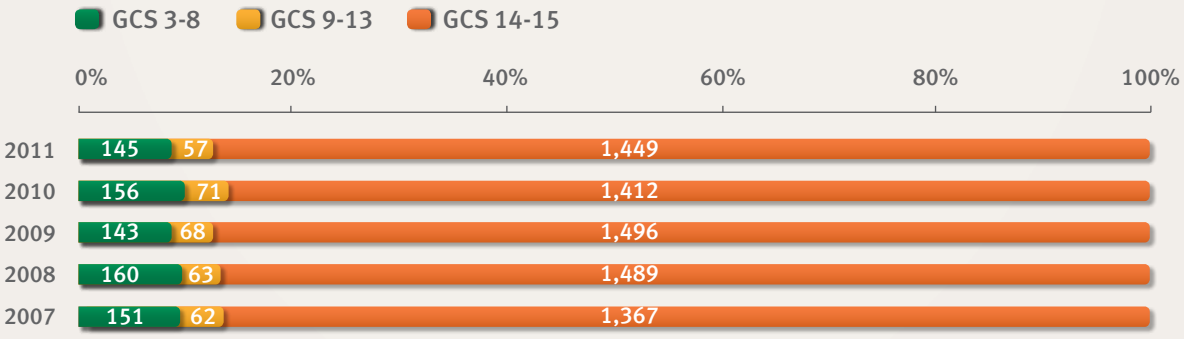


Volume and Percentage of All Ages by Injury Severity Score (ISS) Value
2007 – 2011



ISS › 15 can include life-threatening, critical or fatal injuries.

Volume and Percentage of All Ages by Admit Glasgow Coma Score (GCS) Value
2007 – 2011



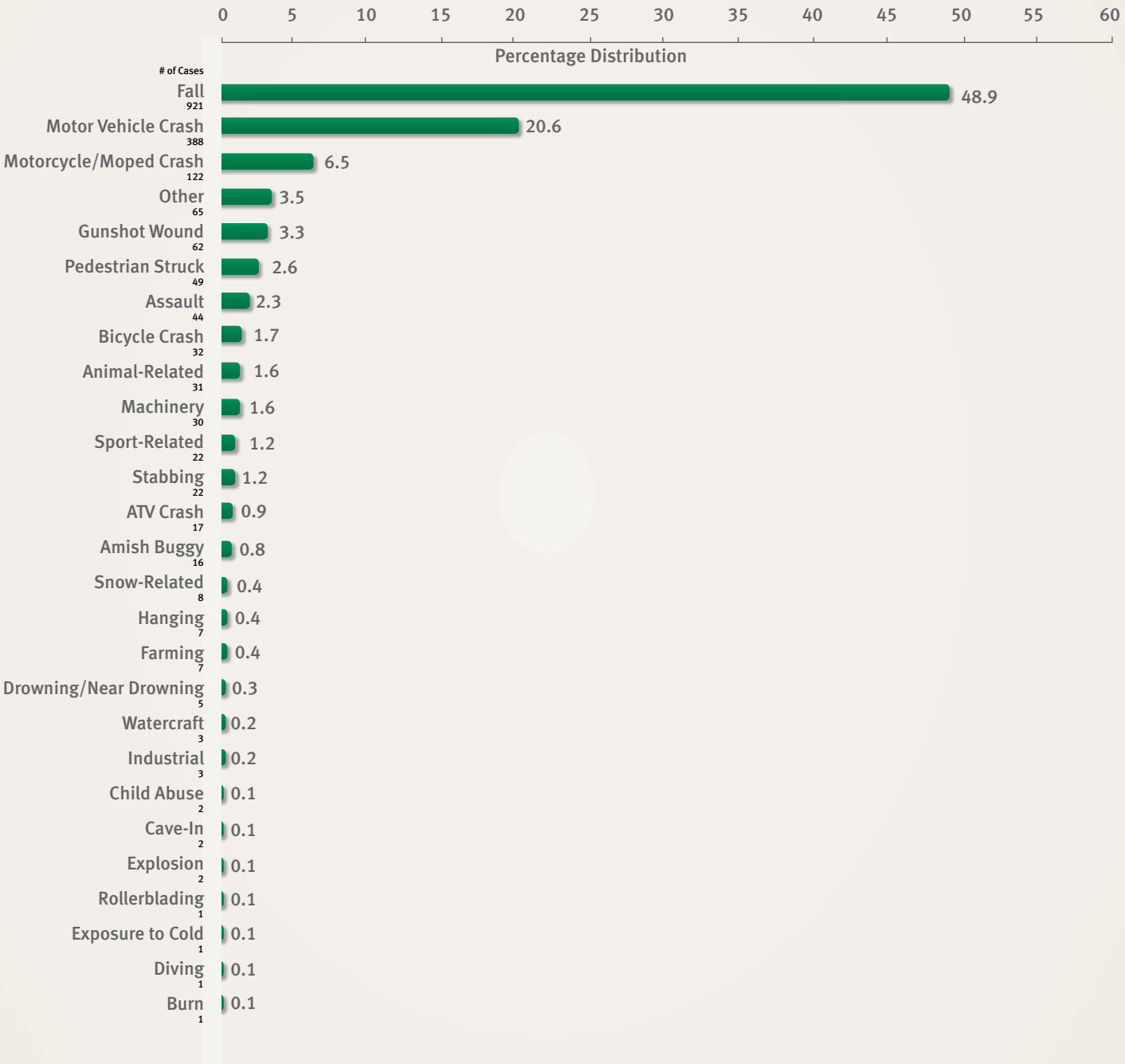
GCS 3-8 = Possible severe head injury

GCS 9-13 = Possible moderate head injury

GCS 14-15 = Possible mild head injury

Mechanism of Injury, All Ages

2011

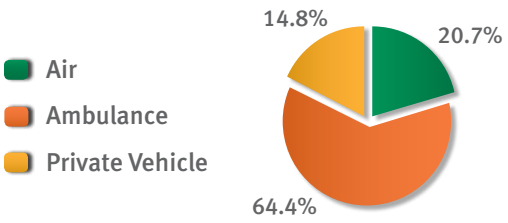


Note: There were 19 cases with unknown mechanism of injury.

Surgical trauma team members include Elise Wilson, RN; Kevin Howard, surgical technologist; Gaby Iskander, MD; and Mary Fields, surgical technologist.

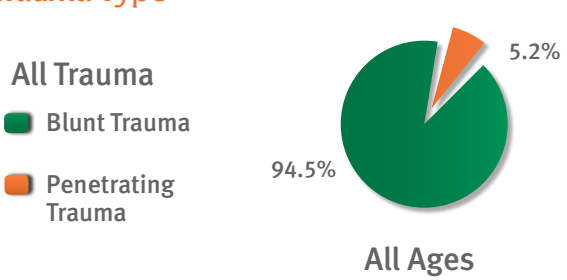
Mode of Transport for Patients to Parkview Trauma Centers

2011



Trauma Type

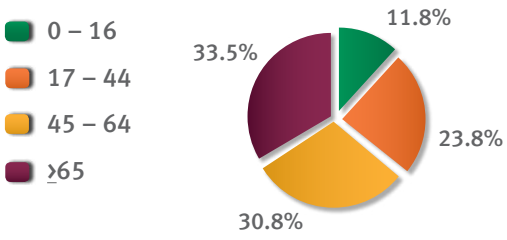
2011



Chris Scheumann, RN, CCRN, CEN, NREMT-P, PI, (right) uses an Ultimate Hurt trauma training manikin to demonstrate arterial line leveling to Three Rivers Ambulance Authority personnel Herb Anderson, Advanced EMT, (left) and Doug Call, EMT-P.

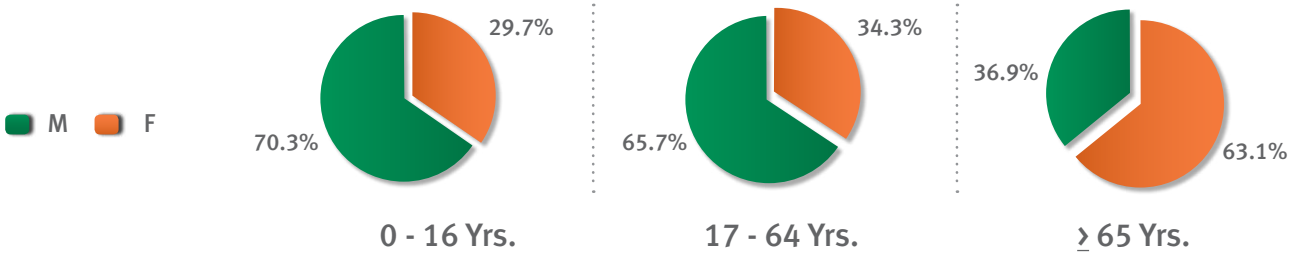
Age of All Patients

2011



Age and Gender

2011



Ultimate Hurt is a product of Laerdal Medical.

RESEARCH

Research is a vital activity of the Parkview Trauma Centers because of its implications for quality patient care, proper utilization of healthcare services within the hospital setting, quality registry data and prevention efforts.

Parkview has engaged in trauma research since initial verification as a Level II trauma center in May 2000. Parkview Adult and Pediatric Trauma Centers are among the elite few trauma centers nationwide whose staffs include a trauma epidemiologist and a data specialist with master's-level training in public health. Together, this research team is dedicated to data validation and tracking trends related to traumatic injury.

At the time of this publication, the Parkview Adult and Pediatric Trauma Centers were tracking active performance improvement projects covering such diverse topics as:

- The impact on rural hospitals from participating in the Rural Trauma Team Development Course
- A follow-up study on length of stay for trauma patients at a new regional medical center
- Factors contributing to door-to-doctor time within an emergency department

Within this publication, the team presents a summary of research efforts since 2000.

Dazar Opoku, MPH
Trauma Data Specialist, Trauma Services,
Parkview Regional Medical Center

Thein Hlaing Zhu, MB BS, DPTM, FRCP, FACE
Trauma Epidemiologist, Trauma Services,
Parkview Regional Medical Center

Regional and National Presentations by Trauma Services Department
2007 to April 2012

Nature	Topic
Poster Presentations	
Annual Student Poster Display sponsored by the Midwest Alliance for Health Education (MAHE) Summer Research Fellowship Program, August 2010	1. Readmission of Trauma Patients in a Non-academic Trauma Center (Vachon CM, Aaland MO, Zhu TH) 2. In-Depth Analysis of Loss to Follow-Up in a Trauma Clinic at a Non-Academic Trauma Center (Marose K, Aaland MO, Zhu TH)
Annual Scientific Meeting at the American College of Epidemiology, Silver Spring, Maryland, September 2009	3. Standardized Mortality Rate Ratio: A New Indicator for Assessing Trauma Center Performance (Zhu TH, Aaland MO, Hollister L)
Annual Scientific Meeting at the Southeastern Surgical Congress, Atlanta, Georgia, February 2009	4. A New Standardization Technique for Benchmarking Trauma Center Performance (Zhu TH, Aaland MO, Orsagh-Yentis DK)
Annual Meeting at American Assoc. for the Surgery of Trauma and the Japanese Association for Acute Medicine, Maui, Hawaii, September 2008	5. Trauma CT Scan of the Abdomen and Pelvis is a Reliable Screening Tool for Significant Thoracolumbar Injury Resulting from Blunt Trauma (Smith M, Reed JD, Facco R, Hlaing T, Aaland MO, Hicks B) 6. Ten-Year Retrospective Study of Delayed Diagnosis of Injury in Pediatric Trauma Patients at a Level II Trauma Center (Aaland MO, Williams B, Hlaing T)
Annual Student Poster Display sponsored by the MAHE Summer Research Fellowship Program, August 2007	7. A New Method of Mortality Standardization for Comparing Quality of Care in Trauma Centers (Orsagh-Yentis DK, Aaland MO, Hlaing T) 8. Outcome of Trauma Patients After Unfavorable Weather for Air Transport (Quinn B, Aaland MO)
Annual Scientific Meeting at the Southeastern Surgical Congress, Savannah, Georgia, February 2007	9. Splenic Artery Embolization in Blunt Trauma: High "Failure" Rate Means Success (Hanna JD, Aaland MO, Reed J, Hlaing T) 10. The Nursing Home – An Integral Part of the Rehabilitation Team in Motor Vehicle Collision Victims (Staron JS, Aaland MO, Hlaing T)
Annual CDM Conference, Breckenridge, Colo., June 2007	11. The Impact of a Trauma Case Manager on Hospital Length of Stay (Hollister L, Winters J, Aaland MO, Hlaing T)

Bryan Mathieson, FNP-C
Trauma Nurse Practitioner

Sara Speith, FNP-C
Trauma Nurse Practitioner

Chad Owens, RN
Trauma Program Coordinator,
Trauma Services, Parkview Regional Medical Center

Jon Hoeppner, RN
Mobile ICU Transport Nurse

Todd Nelson, EMT-P
Flight Paramedic



Nature	Topic	Comments
Paper Presentations		
Annual Western Surgical Conference, Gail, Colo., February-March 2012	1. The Loss to Trauma Patients Follow-up: A System or Patient Problem (Aaland MO, Marose K, Zhu TH)	
Joint Annual Meeting of the Safe States Alliance, SAVIR, & CDC, Iowa City, Iowa, April 2011	2. The Impact of Free Bicycle Helmet Distribution to Preschool Children in a Head Start Program (Zhu TH, Aaland MO, Kerrigan C, Schiebel R, Henry H, Hollister L)	
21st Annual Trauma Symposium, Fort Wayne, Ind., May 2010	3. Massive Transfusion and Fluid Resuscitation (Aaland MO)	
AACN-NEIC 12th Annual Critical Care Potpourri Conference, Fort Wayne, Ind., October 2009	4. Abdominal Trauma/Surgeries (Aaland MO)	
Indiana Society for Respiratory Care Annual Seminar, Bloomington, Ind., September 2009	5. Respiratory Implications of Abdominal Compartment Syndrome (Aaland MO)	
ACS Indiana Chapter Annual Meeting at French Lick, Ind., May 2009	6. The Impact of Helmet Use in Preschool Children in Northeastern Indiana (Zhu TH, Aaland MO, Kerrigan C, Schiebel R, Henry H, Hollister L) 7. Acute Cardiac Events Resulting in Cardiac Procedures in Traumatized Patients: An 11-year Review in a Non-academic Hospital (Hall A, Aaland MO, Zhu TH)	Dr. Hall won the 2009 Leonard D. Ensminger Award in trauma surgery paper for Indiana.
Annual Orthopaedic Trauma Association Meeting, Denver, Colo., October 2008	8. Standard Trauma CT Scan of the Abdomen/Pelvis is a Reliable Screening Tool for Significant TLS Injury Resulting from Blunt Trauma (Smith WM, Aaland MO, Reed JD, Facco R, Hlaing T)	
American College of Surgeons, Indiana Chapter Meeting, April 2008	9. Surgical Clinimetrics - The Time is Now (Aaland MO) 10. Ten-Year Retrospective Study of Delayed Diagnosis of Injury in Pediatric Patients at a Level II Trauma Center (Williams B, Aaland MO, Hlaing T) 11. Standard Trauma CT Scan of the Abdomen/Pelvis is a Reliable Screening Tool for Significant TLS Injury Resulting from Blunt Trauma (Smith WM, Aaland MO, Reed JD, Facco R, Hlaing T, Hicks BM)	Presidential Address Dr. Williams won the 2008 R. Morton Bolman II Award in trauma surgery paper for Indiana. Dr. Smith won the 2008 Leonard D. Ensminger Award in trauma surgery paper for Indiana.
ACS Indiana Chapter Annual Meeting at South Bend, Ind., May 2007	12. Splenic Artery Embolization in Blunt Trauma: High 'Failure' Rate Equals Success (Aaland MO, Hanna JD, Reed J, Hlaing T) 13. Trauma Case Manager: The Impact on Hospital Length of Stay (Winters JM, Aaland MO, Hlaing T) 14. The Nursing Home – An Integral Part of the Rehabilitation Team in MVC Victims (Staron JS, Aaland MO, Hlaing T)	Dr. Winters won the 2007 Leonard D. Ensminger Award in trauma surgery paper for Indiana.
Annual CDM Conference, Breckenridge, Colo., June 2007	15. Trauma Death Analysis: Fair and Balanced (Aaland MO, Hlaing T)	
ACS/COT Region V Resident Trauma Paper Competition, November 2007	16. Trauma Case Manager: The Key to Decreasing Length of Stay (Winters JM)	Dr. Winters competed in the competition.
Paper Publications		
	1. Delayed Diagnosis of Injury in Pediatric Patients (Williams BG, Hlaing T (Zhu TH), Aaland MO)	Pediatr Emer Care. 2009 Aug;25(8):489-93
	2. The Reliability of Non-reconstructed Computerized Tomographic Scans of the Abdomen and Pelvis in Detecting Thoracolumbar Spine Injuries in Blunt Trauma Patients with Altered Mental Status (Smith M, Reed JD, Facco R, Hlaing T (Zhu TH), McGee A, Hicks BM, Aaland MO)	J Bone Joint Surg Am. 2009 Oct;91:2342-9
	3. Standardized Mortality Rate: A New Indicator for Assessing Trauma Center Performance (Zhu TH, Aaland MO, Hollister LM)	Abstract in Annals of Epidemiology. 2009 Sep;19(9):673-4
	4. An Innovative Longitudinal (Follow-Up) Study Design to Determine Bicycle Helmet Effectiveness for Head and Facial Injury (A Feature Article) (Zhu TH, Aaland MO, Kerrigan C, Schiebel R, Henry H, Hollister L)	*Safe State Alliance QuickNews*. October 2011
	5. Preventable Head and Facial Injuries by Providing Free Bicycle Helmets and Education to Preschool Children in a Head Start Program (Zhu TH, Aaland MO, Kerrigan C, Schiebel R, Henry H, Hollister L)	Health. 2011; 3:689-697
	6. Readmission of Trauma Patients in a Nonacademic Level II Trauma Center (Vachon CM, Aaland MO, Zhu TH)	J Trauma, 2011, Oct 24 (Epub ahead of print) J Trauma 2012; 72: 531-536
	7. The Loss to Trauma Patients Follow-Up: A System or Patient Problem (Aaland MO, Marose K, Zhu TH)	J Trauma Submitted

PREVENTION

Trauma Prevention programs of the Parkview Adult and Pediatric Trauma Centers reveal the organization's commitment to reducing the number of individuals who suffer life-threatening injuries.

Trauma Prevention team members are available to provide education or other services related to these safety topics:

- Texting while driving
- Drinking and driving
- Teen driver safety
- ATV safety
- Car seat safety
- Share The Road safety initiative
- Fall prevention

Parkview's trauma registry identifies falls as the number one mechanism of injury that brings individuals of all ages to the Trauma Centers for care. Trauma personnel have collaborated with other departments within the Parkview Health system to develop a comprehensive Know Falls education program to reduce the number of falls both inside the trauma center and beyond the facility's walls.

Diana Jones (left) and daughter, Cheryce Davis-Jones, share the heartbreaking story of losing their daughter and sister, at the Parent-Teen Driving Contract Seminar. Ashley Jones died while texting and driving.

Within Parkview Regional Medical Center, and all Parkview-affiliated hospitals throughout the region, all patients receive information upon discharge to help them assess their risk for falling so they can alleviate such risks in their everyday lives.

Community-based efforts are currently in development. With comprehensive research and planning, Parkview Trauma Centers will become a resource, partnering with social service organizations, to provide fall prevention education targeting children and adults. Parkview has recently joined a statewide effort to form Indiana's first Fall Prevention Coalition.

DON'T TEXT AND DRIVE

This past year, Parkview Trauma Prevention efforts have used social media to further increase momentum and nationwide involvement for our Don't Text & Drive public awareness campaign. The Don't Text & Drive Facebook page has grown from 18,000 followers to 73,000 in the past year alone, introducing our message to new audiences in nearly every state, as well as locations around the world. Daily posts of current studies, statistics and videos allow regular and meaningful communication. Find us at www.facebook.com/DontTextandDriveParkview.

In addition, Parkview is partnering with McMillen Health Center — a local not-for-profit organization and major resource for health education — to offer our Don't Text & Drive program to schools and organizations throughout the United States and Canada via video conferencing.

TEEN DRIVING SEMINAR

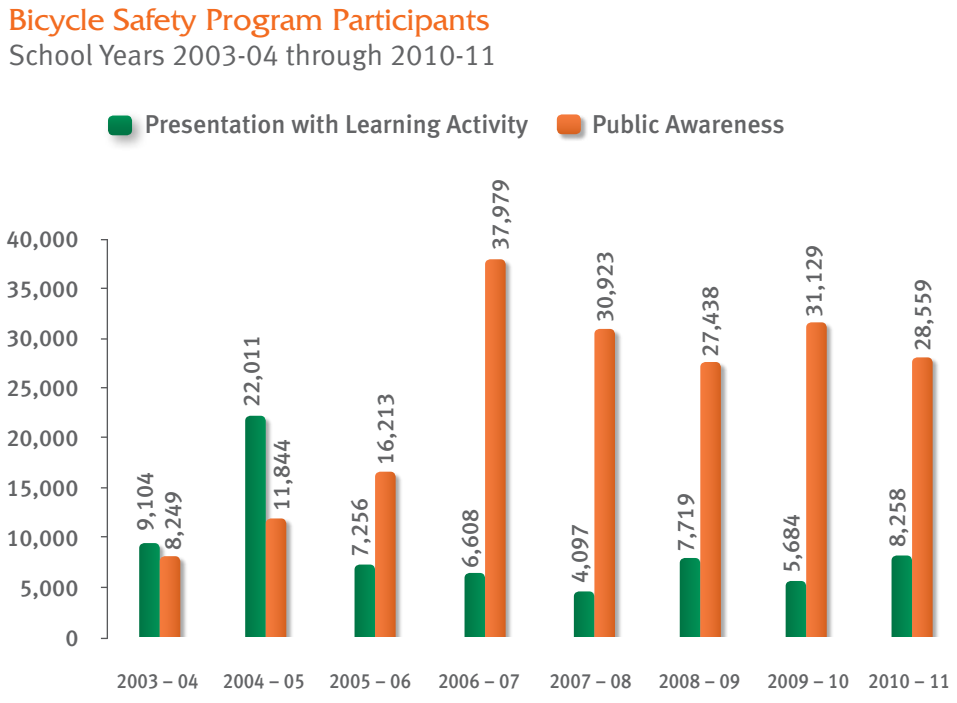
Parkview's Teen Driving Seminar continues to expand as well. Early in 2012, a mother and daughter team from Seattle, Wash., spoke about the pain of losing a loved one to distracted driving. Ashley Jones, their daughter and sister, died as a result of crashing head-on into a semi-trailer while texting and driving. In addition to hearing this very personal story, teen participants at the seminar experienced the dangers of distracted driving firsthand while using a driving simulator provided by AAA.

PARKVIEW SAFETY STORE

The Parkview Safety Store offers merchandise and services to local community members, promoting safety and preventing injuries. Bicycle and all-sport helmets for infants, children and adults are sold at discounted prices. Trained personnel provide helmet fittings to ensure the proper fit for each individual. Infant car seat fittings are offered by certified technicians on a walk-in basis.

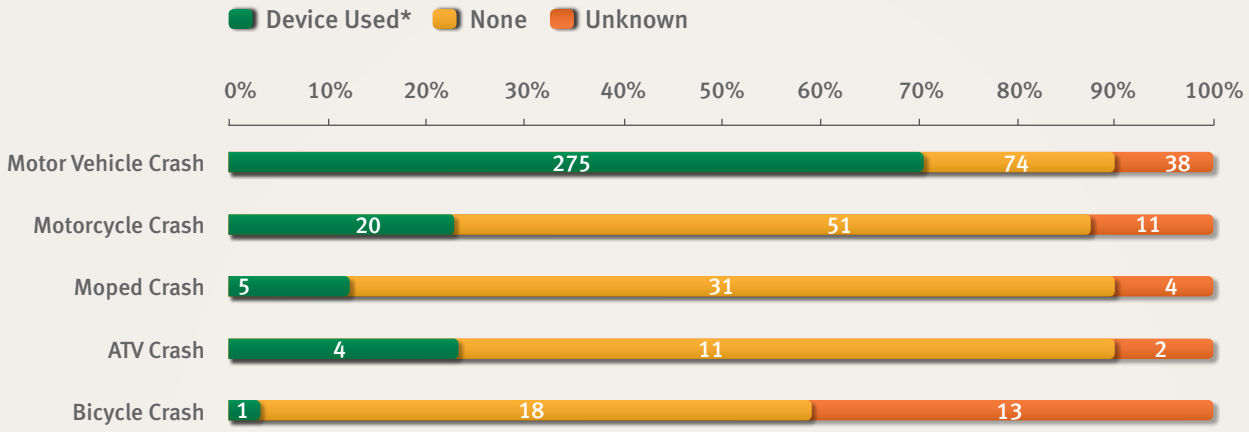
The Safety Store also serves as a retail location for apparel and other merchandise supporting Parkview's Don't Text & Drive and Share the Road campaigns.

Parkview Safety Store
Carew Medical Park
1818 Carew St., Suite 140
Fort Wayne, Ind.
Hours: Wednesdays, 4 – 7 p.m.



Protective Devices Used in Selected Crashes, All Trauma

2011

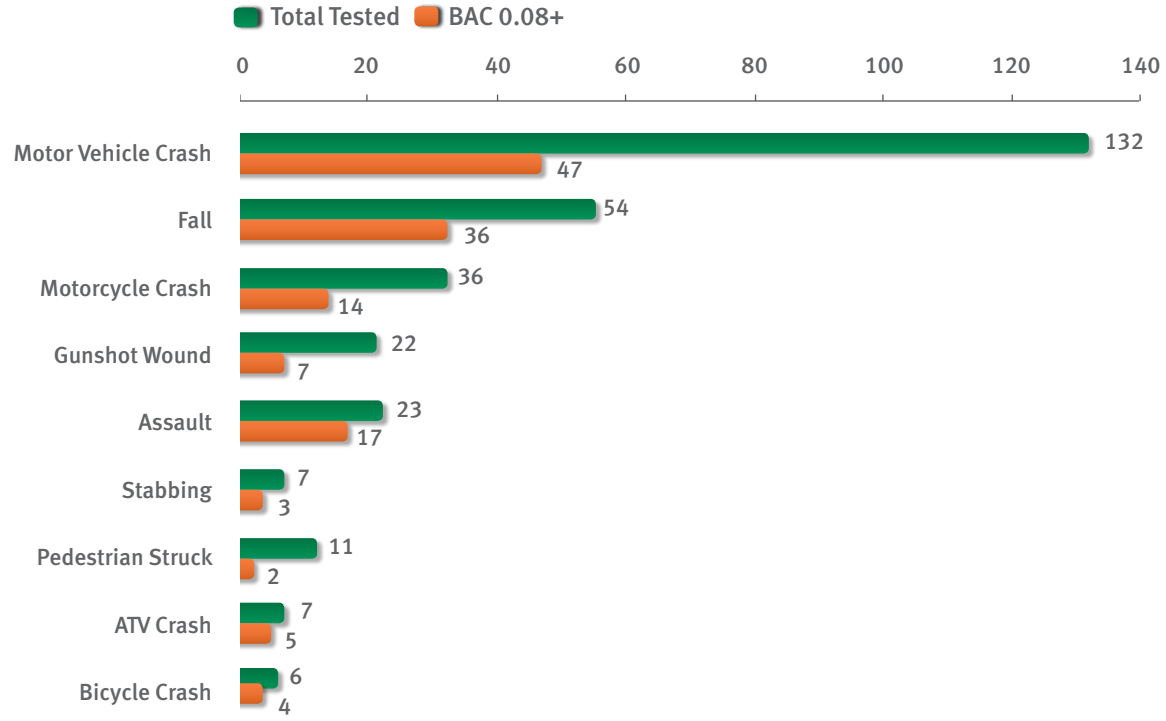


* Multiple devices used in a single vehicle are counted as one.

Since 2008, Parkview Trauma Centers have partnered with the City of Fort Wayne to present the Share the Road national cyclist-motorist safety initiative locally.

Blood Alcohol Concentration (BAC) Level in Selected Patients

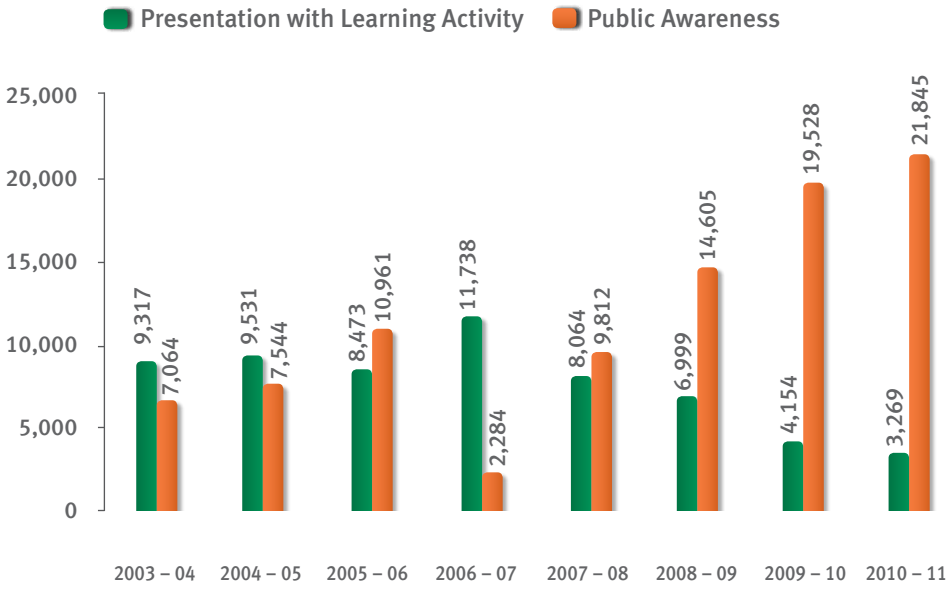
2011



BAC of equal or greater than 0.08 level is considered legally intoxicated.

Don't Drink and Drive Program Participants

School Years 2003-04 through 2010-11



Parkview Health
10501 Corporate Drive
Fort Wayne, IN 46845

TRAUMA SERVICES TEAM

Gaby A. Iskander, MD, MS, FACS, Trauma Medical Director, Pediatric Trauma Medical Director, Surgical Trauma ICU Medical Director and Pediatric ICU Co-medical Director, Parkview Regional Medical Center; and Trauma Surgeon, Indiana Surgical Specialists

Richard A. Falcone, Jr., MD, Pediatric Trauma Consultant, Parkview Pediatric Trauma Center; and Pediatric Trauma Medical Director, Cincinnati Children's Hospital Medical Center

Lisa Hollister, RN, Trauma Program Manager

Sarah Begy, RN, Pediatric Trauma Coordinator

Tracy Collins, RN, BSN, Trauma Performance Improvement Program Nurse

Debbie Hawkins, RN, BSN, Trauma Program Nurse

Cheryl Hoeppner, RN, BS, Trauma Program Nurse

Diane Hunt, Trauma Administrative Assistant

Lori Hunt, BA, Trauma Prevention Coordinator

Bryan Mathieson, FNP-C, Trauma Nurse Practitioner

Dazar Opoku, MPH, Trauma Data Specialist

Chad Owen, RN, CCRN, Trauma Program Coordinator

Chris Scheumann, RN, CCRN, CEN, NREMT-P, PI Trauma Outreach Coordinator

Sara Speith, FNP-C, Trauma Nurse Practitioner

Thein Hlaing Zhu, MB BS, DPTM, FRCP, FACE Trauma Epidemiologist