PARKVIEW TRAUMA 2014

ANNUAL REPORT



- * PARKVIEW
 ADULT TRAUMA CENTER
- PARKVIEW
 PEDIATRIC TRAUMA CENTER

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.

Cover photo: Raymond Cava, MD, FACS, acute care/trauma surgeon, Parkview Physicians Group — Surgical Specialists (left);

Abby Massey, MD, pediatric emergency physician, Professional Emergency Physicians, Inc. (center, in blue gown), and co-medical director,
Parkview Pediatric ICU, and medical director, Children's Emergency Care Center; and other members of the pediatric trauma team treat a
young patient at Parkview Regional Medical Center. Below: Jayesh Patel, MD, FAAP, pediatric intensivist, Pediatric Specialty Physicians, PC,
and co-medical director, Parkview Pediatric ICU, directs the care of a young patient as her mother (left) looks on. Others pictured, left to
right: Britney Sharpe, RN, Emergency Department; Laura Macke, RRT, Respiratory Care; Sherry Burger, RN, Pediatric ICU; and
Jackie Yates, paramedic, Emergency Department.



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SETTING THE STAGE FOR THE BEST POSSIBLE OUTCOMES



Life in our tri-state area is a rich mix of urban and rural, farming and lake life. From a quality-of-life standpoint, the variety is a big plus. But from the perspective of our Level II adult and pediatric trauma centers, it's an environment offering a broad spectrum of possibilities for traumatic injury.

At Parkview Trauma Centers, we see it all.

From the Routine to the Highly Unusual

In this region, when traumatic injuries occur, they arrive courtesy of many different mechanisms (see page 11 for breakdown of actual 2013 cases). Electricity, farm equipment, chemical exposure, combustion, falls, traffic/off-roading crashes, sports and recreational activities, weather, animals and human behavior all take their toll. The resulting blunt-force and crush injuries, burns, puncture wounds and multiple traumas require a highly orchestrated, precisely coordinated response to save tissue and bone, function and life.

Those same critical injuries present us with an ongoing challenge to constantly be at our best for the sake of the severely injured patients who come through our doors at Parkview Regional Medical Center. No matter what the mechanism of injury, our role is unchanging: apply established protocols and expertise, work as a finely tuned team, treat complex injuries, stabilize the patient and set the stage for the best possible outcome.

With trauma specialists on site around the clock, the Parkview Adult and Pediatric Trauma Centers work hand in hand with other Parkview critical-care services to optimize care:

- Trauma surgeons, orthopedic traumatologists, neurosurgeons, cardiovascular surgeons and plastic surgeons
- > Emergency Department, staffed 24/7 by boardcertified emergency physicians
- Parkview Samaritan medical transport (air and ground services) and Parkview EMS

- Parkview Heart Institute, including an accredited PCI-Chest Pain Center
- Parkview Women's & Children's Hospital and pediatric critical-care physicians

Acute-care Surgery Program

Parkview Regional Medical Center care is enhanced by the addition of an acute-care surgery program. The general surgeons (trauma surgeons) are board-certified in both general surgery and critical care. They work with a complement of trauma/acute-care nurse practitioners and nurse clinicians to improve outcomes and expedite discharge planning. The surgeon/nurse teams must maintain their surgical, trauma and critical-care skills.

Patient and Family Support

Sustaining a traumatic injury and being hospitalized, possibly far from home, presents patients and their family members with a wide range of challenges. Supporting them in this time of physical, emotional and other stresses is an integral facet of our program. In cases of pediatric trauma, a child life specialist is present in the emergency room to provide age-appropriate distractions for the young patient and calm and reassure anxious parents. A chaplain is available 24/7 to meet with family members. The **trauma case coordinator** answers questions, helps track care and provides information on nearby accommodations, restaurants and other resources families may need while their loved one is hospitalized. In addition, discharge planning begins as soon as care is initiated. Treatment for post-traumatic stress is provided as necessary, as is other behavioral and physical health follow-up care.

Pursuing Excellence

Trauma care quality and performance improvement is a daily commitment for the staff of the Parkview

Trauma Centers. Striving for perfection is our goal. We incorporate both process and outcome measures in evaluating Performance Improvement and Patient Safety (PIPS). Through our **trauma registry**, we monitor the care we provide, develop action plans and continually fine-

tune our processes to provide the best possible care to our patients.

Our trauma registry data is uploaded to the Indiana State Health Department and the National Trauma Data Bank. We also choose to participate in the **Trauma Quality Improvement Program (TQIP) of the American College of Surgeons.** This allows us to benchmark outcomes with other high-level trauma centers. Parkview was among the initial, elite group of 65 hospitals nationwide to embrace participation in TQIP.

An Essential Community Resource

As a not-for-profit health system, Parkview Health maintains an unwavering focus on service and community. In fact, improving the health and well-being of the communities we serve is our stated mission. It's a mission that dovetails with those of other organizations operating for the common good across northeast Indiana, northwest Ohio and south-central Michigan, and it has driven our efforts to develop and sustain Level II adult and pediatric trauma centers that are second to none in our region.

In 2013, Parkview Adult and Pediatric Trauma Centers achieved reverification through the American College of Surgeons (ACS) Committee on Trauma. Ours was the **first Indiana trauma center outside Indianapolis to be verified** as an adult trauma center by ACS, in 2000, and verification for our pediatric trauma center followed in 2003.

Parkview Health provides service to the region through eight hospitals, two Samaritan medical helicopters, a mobile ICU and a critical care transport unit, a sizable fleet of ambulances, surgery centers and a vast network of physician offices that work in conjunction with local emergency medical services, public safety departments and many other organizations to provide high-quality treatment for people with serious injuries. As an essential community resource, we also seek to **share best practices with pre-hospital providers -** who perform the first patient

SETTING THE STAGE FOR THE BEST POSSIBLE OUTCOMES continued



assessment and discern the appropriate course of action – as well as with hospital-based providers. Developing clinical expertise among network members through a growing number of educational opportunities is the goal of Parkview Trauma Centers' burgeoning community outreach program. (See the Outreach and Education section on page 32 of this report for more information.)

We strongly believe the trauma system is for everyone – an essential element of the quality of life we enjoy in our Midwest home.

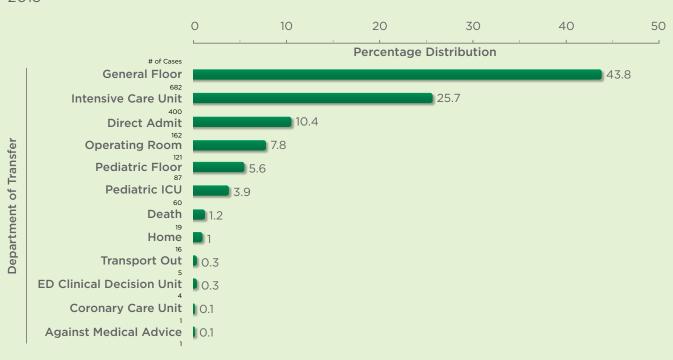
Sharing a Vision

Our vision is to widen the circle for trauma care in Indiana, to foster creation of an integrated, statewide trauma care

Mitchell S. Farber, MD, FACS, FCCM, Trauma Medical Director, Pediatric Trauma Medical Director and Pediatric ICU Co-medical Director, Parkview Regional Medical Center; and Acute Care/Trauma Surgeon, Parkview Physicians Group — Surgical Specialists

ER Disposition, All Ages

2013



system that enables patients to receive the best possible care no matter what their location when they experience traumatic injury. Our Trauma Services medical director and program manager have worked over a number of years to bring together trauma medical professionals from every trauma center in the state to focus on that goal. Late in 2012, former Indiana Governor Mitch Daniels appointed Trauma Services Program Manager Lisa Hollister, RN, BSN, to serve on the Indiana State Trauma Care Committee.

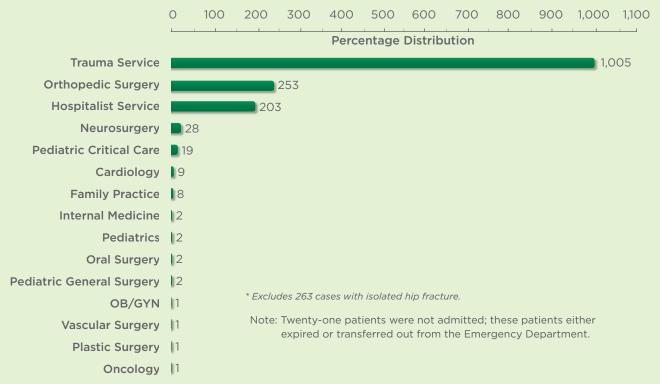
The State of Indiana has a protocol for injured patients to be triaged to trauma centers, a rule for hospitals to collect and send injury data to the State, and an "inprocess" state designation program for hospitals that are working toward becoming trauma centers.

In addition, our relationship that began with **Cincinnati Children's Hospital Medical Center** in 2011 continues to yield not only opportunities for Parkview clinicians to further their trauma skills through simulations, but also the larger perspective gained through collaboration. The relationship also provides another benchmark against which we can compare trauma processes and outcomes specific to pediatric trauma care.

As healthcare continues to change with new available technologies and evidence-based protocols, Parkview Trauma Centers will continue to strive for the best possible outcomes for injured individuals and more collaborative, uniformly high-quality trauma care across the region.

Admission Service, All Ages

2013* (n = 1,558)



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.

REGISTRY



Left to right:

Britney Sharpe, RN, Emergency Department, Parkview Regional Medical Center Jackie Yates, Paramedic, Emergency Department, Parkview Regional Medical Center

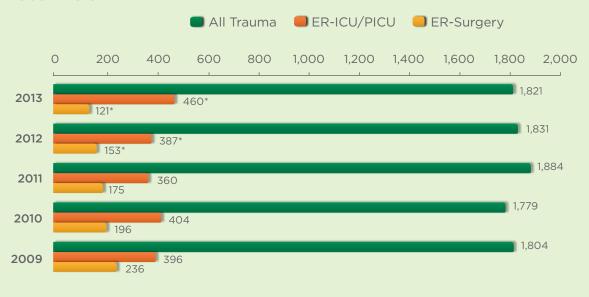
A trauma registry is an electronic database that is essential to providing trauma service. This database is

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.

Volume of All Ages Admitted from ER to ICU or Surgery

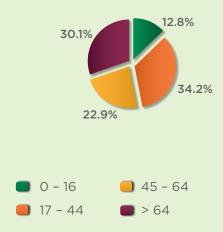
2009 - 2013*



* Excludes 263 cases with isolated hip fracture.

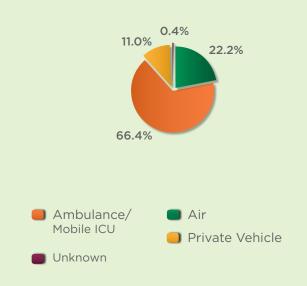
Ages of All Patients

2013



Mode of Transportation

2013



Mechanism of Injury, All Ages

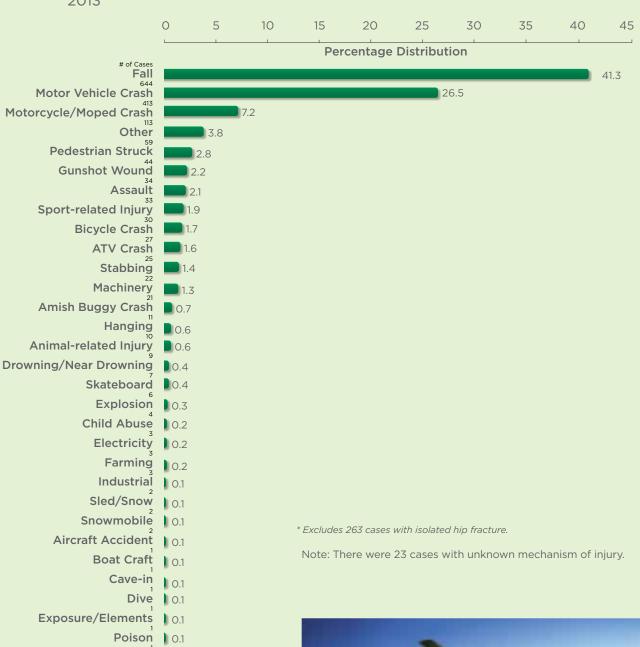
2013*

Roller Blade

Train

0.1

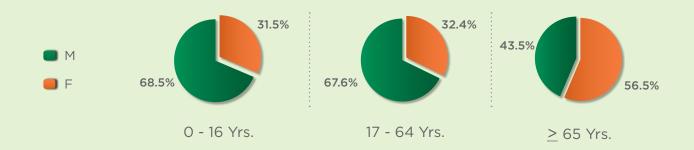
0.1





Age and Gender

2013



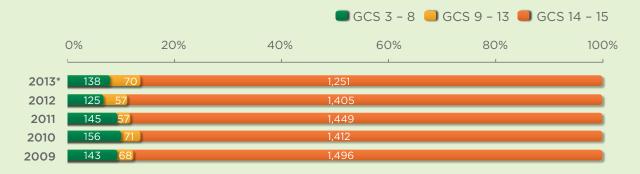
Trauma Type

2013



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

2009 - 2013



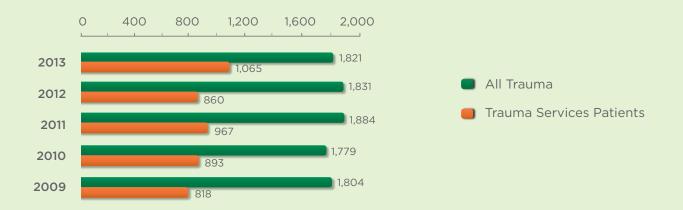
GCS 3 - 8 = Possible severe head injury

GCS 9 - 13 = Possible moderate head injury

GCS 14 - 15 = Possible mild head injury

Trend of Trauma Admission by Type

2009 - 2013

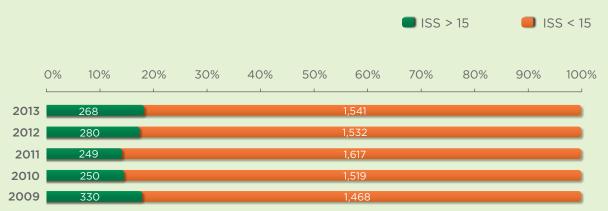


^{*} Excludes 21 cases for which GCS is unknown.



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

2009 - 2013



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

PEDIATRICS



Parkview's Pediatric Trauma Physician Team includes, from left to right:

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

Sai Ganesh Yarram, MD, Radiologist, FWRadiology, and Medical Director, Diagnostic Imaging, Parkview Regional Medical Center Abby J. Massey, MD, Pediatric Emergency Physician, Professional Emergency Physicians, Inc.; Co-medical Director, Pediatric ICU; and Medical Director, Children's Emergency Care Center, Parkview Regional Medical Center

Raymond A. Cava, MD, FACS, Acute Care/Trauma Surgeon, Parkview Physicians Group — Surgical Specialists Not pictured:

Mitchell S. Farber, MD, FACS, FCCM, Trauma Medical Director, Pediatric Trauma Medical Director and Pediatric ICU Co-medical Director, Parkview Regional Medical Center; and Acute Care/Trauma Surgeon, Parkview Physicians Group — Surgical Specialists James C. Dozier, MD, Neurosurgeon, Fort Wayne Neurological Center

Children experience trauma differently than adults due to significant anatomical and physiological differences, as well as varying mechanisms and to major trauma in children, which drives a need for specialized pediatric services. The Parkview **Pediatric Trauma Center at Parkview Regional Medical Center is dedicated to providing the** resources necessary to accommodate the unique needs of pediatric trauma patients.

Injury is the number one cause of child fatalities. Parkview provides effective care to the injured child through a

comprehensive and inclusive approach that recognizes childhood injury as a major public health concern.

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, in addition to a commitment to injury prevention, outreach, performance improvement and education.

Injured children require special resources in any trauma center dedicated to their care. The high quality of pediatric trauma care at Parkview can be attributed to the combined efforts of pre-hospital providers,

PEDIATRICS continued

physicians and hospital-based personnel who support the trauma program. All members of the trauma team are committed to pediatric trauma care, and all members of the trauma team who care for injured children are properly trained and credentialed.

For the pediatric patient, there is active collaboration with other surgical and pediatric subspecialists, such as neurosurgeons, orthopedic surgeons, pediatric emergency medicine physicians and pediatric critical care physicians. Child life specialists assist in meeting needs of both the pediatric patient and his or her family members.

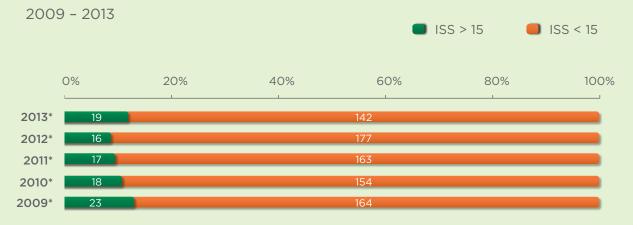
Parkview trauma team members receive ongoing training through simulation exercises using state-ofthe-art child and infant patient simulators. Through vocalizations and "physical responses" to critical injuries and care measures, these programmable,

interactive mannequins facilitate sharpening of assessment and treatment skills. The trauma outreach coordinator conducts these training sessions, as well as one-on-one skills augmentation exercises with area pre-hospital providers. (See the Outreach and Education section on page 32 for more information.)

Parkview Trauma Centers hosted the third annual Pediatric Trauma Symposium in November 2013 and continues to coordinate site visits to the simulation lab at Cincinnati Children's Hospital Medical Center in Cincinnati, Ohio. Additionally, the Trauma Program supports Parkview's annual Child Abuse Prevention Symposium to increase awareness and prevention of child maltreatment.

These efforts support a high level of trauma expertise among the regional system of providers who care for injured children.

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



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

^{*} Excludes cases for which ISS is unknown.

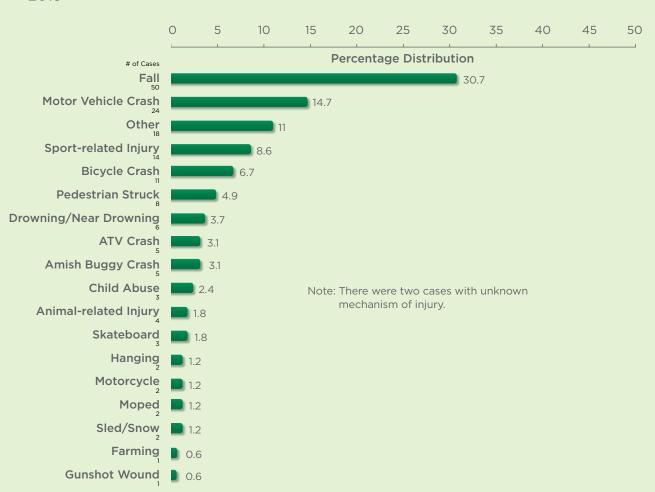
ICU Length of Stay (LOS), Pediatric Patients (Ages 0 - 14)

2009 - 2013



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

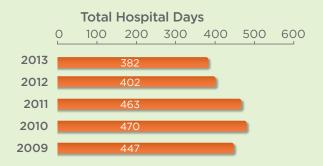
2013



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

2009 - 2013

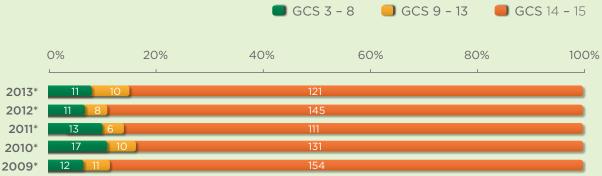




Note: Excludes patients who expired in the Emergency Department or were transferred out of the Emergency Department.

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

2009 - 2013



GCS 3 - 8 = Possible severe head injury

GCS 9 - 13 = Possible moderate head injury

GCS 14 - 15 = Possible mild head injury

^{*} Excludes cases for which GCS is unknown.

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

2009 - 2013



Below: Trauma team members practice their skills on a pediatric patient simulator. Parkview has adult, pediatric and infant simulators to facilitate training using appropriate protocols.



GERIATRICS

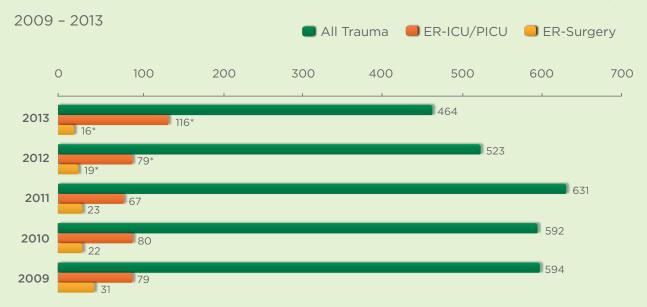
ICU Length of Stay (LOS), Geriatric Patients (Ages ≥ 65)

2009 - 2013



^{*} Excludes geriatric patients with isolated hip fracture.

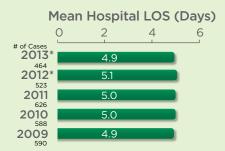
Volume of Geriatric Patients (Ages ≥ 65) Admitted from ER to ICU or Surgery



^{*} Excludes geriatric patients with isolated hip fracture.

Hospital Length of Stay (LOS), Geriatric Patients (Ages ≥ 65)

2009 - 2013





^{*} Excludes geriatric patients with isolated hip fracture.

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

Volume (and Percentage) of Geriatric Patients (Ages ≥ 65) by Admit **Glasgow Coma Score (GCS) Value**

2009 - 2013

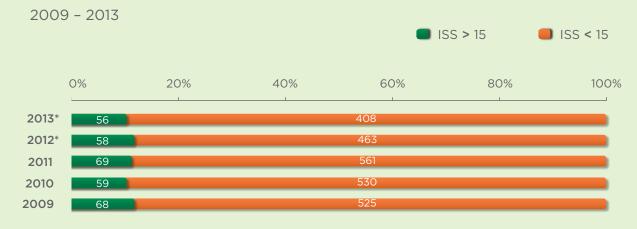


GCS 3 - 8 = Possible severe head injury GCS 9 - 13 = Possible moderate head injury GCS 14 - 15 = Possible mild head injury

^{*} Excludes geriatric patients with isolated hip fracture.

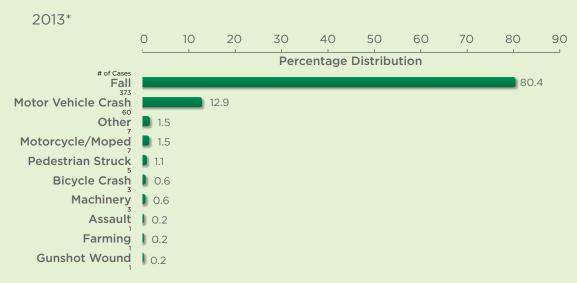
GERIATRICS continued

Volume (and Percentage) of Geriatric Patients (Ages ≥ 65) by **Injury Severity Score (ISS) Value**



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

Mechanism of Injury, Geriatric Patients (Ages ≥ 65)



^{*} Excludes geriatric patients with isolated hip fracture.

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

^{*} Excludes geriatric patients with isolated hip fracture.

POST-TRAUMA CARE



Parkview's state-of-the-art hyperbaric oxygen chambers help stimulate patients' healing by saturating the tissues with oxygen. Many types of chronic wounds can begin healing in just a few treatments.

Wound care

For patients who need follow-up care for wounds following inpatient treatment, wound care is available at Parkview Regional Medical Center and all other Parkview hospitals. In addition, the Parkview Center for Wound Healing, located at Parkview Hospital Randallia, is the central location for focused, state-of-the-art treatment of the most stubborn, non-healing wounds. The center features:

- > Hyperbaric oxygen therapy provided via two individual hyperbaric chambers
- > Bioengineered tissue substitutes
- Negative pressure wound therapy
- Growth factor therapies
- Advanced dressings and wraps
- Debridement

Hyperbaric and other therapies have been proven to stimulate the body's cell-regeneration capabilities, promoting healing for a wide variety of difficult wounds, including crush injuries/acute traumatic peripheral ischemia, other traumatic wounds, burns, venous insufficiency, surgical wounds, vasculitis and many other conditions related to chronic illness, chemical or radiation exposure, or use of skin grafts and flaps.

Expert physicians and staff members from a variety of medical specialties provide care in a team-based approach that centers on the patient and his or her primary care physician. Hyperbaric technicians, physicians and other staff members have received specialty training accredited by the Undersea and Hyperbaric Medicine Society.

POST-TRAUMA CARE continued

Rehabilitation

Parkview Rehabilitation Center provides a full range of inpatient, therapeutic services and programs for patients age 6 and older.

As an integral part of the trauma care continuum available through Parkview's verified Level II Adult and Pediatric Trauma Centers, the acute-care rehabilitation center is well equipped to treat patients who have a wide range of traumatic injuries, as well as neurological conditions and diseases.

Quality and expertise

Committed to providing excellent patient care, the rehab center:

- > Is accredited by The Joint Commission
- > Has consistently received certification for its comprehensive inpatient, brain injury and stroke programs from CARF, the Commission on Accreditation of Rehabilitation Facilities
- > Offers the added expertise of:
 - Certified rehab registered nurses
 - Staff members certified as brain injury specialists
 - Therapy staff members certified in neuro/ developmental treatment (NDT)
 - Staff members certified in the use of VitalStim® therapy for dysphagia, or difficulty swallowing

Parkview Rehabilitation Center offers patients huge advantages over other rehabilitation facilities in the region:

- > Location on a dedicated floor inside Parkview Hospital Randallia, an acute-care hospital
- On-site availability of any medical services required during the patient's stay - such as CT scans and other diagnostic procedures, wound care or constant care. The skilled medical specialists of this acute-care hospital are readily available to assist in patient care as needed. If there are critical needs, the rehab physician and consulting physicians will identify the appropriate level of care.

Continuity of care

Physicians who have treated a patient prior to his or her admission to the rehab program may continue to participate in care along with the rehab team.

The rehab team includes medical professionals from many different specialty areas. In a well-coordinated process, these physicians, nurses, therapists and other staff members provide intensive therapies with 24-hour rehabilitation nursing care. The patient and family are integral members of the team. This approach helps patients maximize their highest level of ability during recovery from illness or injury.

Accreditation

Parkview Rehabilitation Center meets rigorous national standards as evaluated by The Joint Commission and CARF. Earning accreditation is an exacting process, and the Rehabilitation Center strives to continually meet and exceed recognized quality standards. Patient families can be confident that the professionals providing care at the center are focused on helping their loved ones achieve the most favorable results possible.

Parkview Rehabilitation Center has been accredited by CARF for the following programs:

- > Brain Injury program (child/adolescent and adult)
- > Comprehensive Inpatient Medical Rehabilitation program (child/adolescent and adult)
- Stroke program

The Comprehensive Inpatient Medical Rehabilitation program received initial accreditation in 1978, and has been re-accredited for each period since then. The Brain Injury Program received initial accreditation in 1988 and has been re-accredited for each period since then. The Stroke Program was the first reviewed by CARF in 2009.



Therapy technician Sarah Coffelt and physical therapist Alyssa Keys, DPT, assist a patient in using the LiteGait®, a gait therapy device that enables him to work on walking without having to bear his full weight.

SBIRT (Screening, Brief Intervention and Referral to Treatment)

Alcohol Screening, Brief Intervention and Referral to Treatment is an evidence-based program that Parkview Trauma Centers implemented several years ago. It is aimed at reducing the unhealthy consequences of alcohol and drug use.

According to CMS (Centers for Medicare & Medicaid Services), SBIRT is an early-intervention approach that targets individuals with non-dependent alcohol use to provide effective strategies for intervention prior to the need for more extensive or specialized treatment. This approach differs from the primary focus of specialized treatment of individuals with more severe substance use, or those who have met the criteria for diagnosis of a substance use disorder.

SBIRT consists of three major components, as defined by CMS:

- > **Screening:** Assessing a patient for risky substance use behaviors using standardized screening tools
- > Brief Intervention: Engaging a patient showing risky substance use behaviors in a short conversation, providing feedback and advice
- > Referral to Treatment: Providing a referral to brief therapy or additional treatment to patients who screen in need of additional services.

SBIRT is conducted in conjunction with Parkview Behavioral Health.

LiteGait® is a registered trademark of Mobility Research. VitalStim® is a registered trademark of Empi, Inc.

PERFORMANCE IMPROVEMENT



Left to right:

Lisa Hollister, RN, BSN, Program Manager, Trauma Services, Parkview Regional Medical Center Sarah Hoeppner, RN, Trauma Performance Improvement Nurse, Parkview Regional Medical Center

TRAUMA PERFORMANCE IMPROVEMENT AND **PATIENT SAFETY**

Parkview Adult and Pediatric Trauma Centers, located at Parkview Regional Medical Center, have adopted the modern Performance Improvement and Patient Safety (PIPS) model for measuring continuous, multidisciplinary effort to measure, evaluate and improve the process of care and its outcome. Performance improvement and patient safety are inseparable. PIPS process is directed at the care itself, and the patient safety process directs efforts at the environment in which the care is given.

In the PIPS model, a trauma center must continuously monitor, assess and manage the environment in which

care is given, the trauma care itself and the patient outcomes that follow. This is accomplished by continuous, extensive chart review, peer reviews at multiple levels and multidisciplinary meetings that review all of the aspects of the trauma care. The process also involves guideline development, process assessment, process correction and monitoring for improvement.

PROCESS MEASURES

Process measures include:

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



- > Appropriateness and completeness of documentation
- > Professional behavior

CORRECTIVE MEASURES

Examples of corrective measures include:

- > Guideline, protocol or pathway development and revision
- Targeted education
- > Enhanced resources, facilities or communication
- > Process improvement team implementation
- Peer review presentations
- > External review

OUTCOME MEASURES

Outcome measures include:

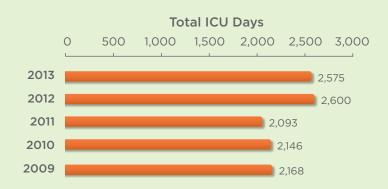
- > Mortality
- > Morbidity
- > Length of stay Emergency Department, ICU and overall
- > Cost
- > Quality of life

The definition of quality is neither exact nor constant. A systemic use of the PIPS process can demonstrate a commitment to the continuous pursuit of performance improvement and patient safety.

ICU Length of Stay (LOS), All Ages

2009 - 2013





Hospital Length of Stay (LOS), All Ages

2009 - 2013





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

^{*} Excludes 263 cases with isolated hip fracture.

RESEARCH



Left to right:

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

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 degree-level training in public health. Together, this research team is dedicated to data validation and tracking trends related to traumatic injury.

Within this report, we highlight two research studies.

Research Projects

Project 1: Provision of Rural Trauma Team Development Course (RTTDC) Education at Rural Hospitals

Parkview Adult and Pediatric Trauma Centers have been providing RTTDC education to raise the standard of trauma care at rural hospitals since November 2011. The purpose of the project is to improve the knowledge on initial assessment and resuscitation of trauma

patients at four Parkview community hospitals and other hospitals in the area.

We used a pre- and post-study design for collection of self-rated knowledge on 19 items related to trauma care, as suggested by the American College of Surgeons Committee on Trauma via the Ad Hoc Rural Trauma Subcommittee. The course instructors were members of Parkview's Trauma Services Department, including the medical director (or a professional emergency physician), the trauma program manager, the trauma outreach coordinator and the community trauma program coordinator. The report was based on the training courses attended by eight physicians, 101 nurses, 33 pre-hospital personnel, 13 respiratory therapists and eight radiology technicians from 11 rural hospitals. The trauma data specialist entered data in Excel®, and the trauma epidemiologist analyzed the data with SPSS® software version 21.

In brief, all participating healthcare personnel gained knowledge by attending the RTTDC program. The findings among the nurses are shown in the table on the next page.

RESEARCH continued

Significant Knowledge Improvement (Percentage) after **RTTDC Education among 101 Nurses**

2013

Survey Question	Knowledge Item with Correct Answer Given in Italic	Improvement*	Lower Limit	Upper Limit
1	False on "Every trauma patient requires a secondary survey prior to transfer"	72.00	61.39	79.73
2	False on "A teenager unconscious on arrival should have a CT head scan prior to transfer"	52.53	41.77	62.07
3	Delay Management is more likely cause of death in rural than in urban setting	15.15	6.82	23.95
4	A general surgeon should <i>make an operative attempt</i> to control bleeding on a motor vehicle crash patient with a BP of 60/40 who does not respond to crystalloid and who faces a transport time of 2 hours	45.56	32.32	56.33
5	False on "A trauma patient with rib fractures with only 15% pneumothorax can be safely transported without a chest tube"	22.00	8.35	34.52
6	Both tension pneumothorax and massive hemothorax can exhibit all of the following signs except <i>dullness</i> to percussion	36.08	24.15	46.54
8	The successful placement of endotracheal tube can be most accurately confirmed by <i>end tidal carbon dioxide</i>	59.41	48.63	68.30
11	Cervical spine is likely to be traumatically injured in a driver with head-on collision	7.92	2.6	14.86
14	False on "PIPS (Performance Improvement and Patient Safety program) improves patient care by finding out what went wrong and assigning blame"	13.86	7.06	22.04
15	A 50-year-old 60 kg female with a 40% burn who arrives at your facility 3 hours after the fire should receive 4800 ml of crystalloid <i>in the next 5 hours</i>	27.00	15.41	37.55
16	False on "A child is more likely than his mother to have rib fractures when run over by a car"	17.82	9.69	26.42
17	Hypothermia should be anticipated in a trauma patient injured in <i>all mentioned conditions</i>	53.47	42.64	62.41
18	True on "A pregnant woman struck by a car should have chest and pelvis X-rays"	32.67	22.72	42.34

^{*} Computed by a difference of pre- and post-test values based on matched samples. McNemar test and other procedures are used in estimating the 95% confidence interval values.

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SPSS® (Statistical Package for Social Science) is a registered trademark of IBM Corporation.

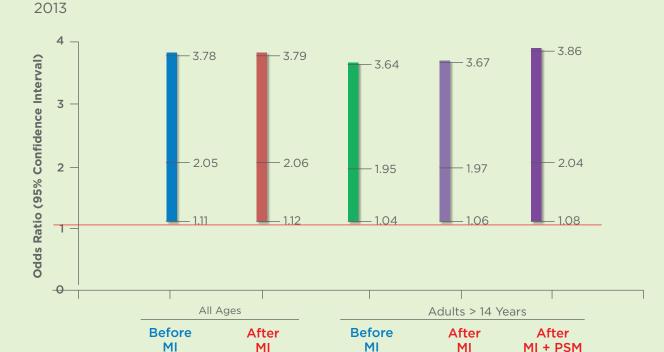
Project 2: Effect of Parkview Samaritan Flight Program (SAM) vs. Ground Ambulance (AMB) on Reduction in **Trauma Mortality**

The Parkview Samaritan (SAM) Flight Program provides emergency care and transports of trauma patients to the Level II Parkview Adult and Pediatric Trauma Centers for trauma care. The purpose of this research project was to determine the effectiveness of SAM transport vs. ground ambulance (AMB) on reduction in hospital mortality.

Trauma registry data were taken from 1999 to 2012 in Whitley, Noble and DeKalb counties. These three counties were selected to make the travel distance similar by both the SAM and AMB scene transports to Parkview Trauma Centers. National trauma triage criteria were used. The project was approved by the Parkview Health Institutional Review Board. The data were analyzed by using SPSS (Statistical Package for Social Science) software version 21. Risk adjustment was made to assess the effect of SAM vs. AMB on reduction in mortality.

SAM transport cases were significantly more severely injured than AMB cases in terms of Glasgow Coma Scale < 14, systolic blood pressure < 90 mm Hg, respiratory rate < 10 or > 29 breaths per minute and injury severity score > 15. Before the risk adjustment, SAM mortality was 1.6 times higher than that of AMB mortality in all ages and adult > 14 years. However, after the adjustment, or matching the baseline factors influencing the SAM and AMB cases, AMB mortality became 2 times higher than SAM in both age groups. This is displayed in the graph below.

Risk of Mortality: Parkview Samaritan Helicopter (SAM) vs. Ambulance (AMB)



AMB mortality was about 2 times that of SAM mortality in all ages and adults > 14 years as indicated by the odds ratios.

OUTREACH AND EDUCATION



Chris Scheumann, RN, BS, CCRN, NREMT-P, PI, Trauma outreach coordinator, Parkview Trauma Centers, center, instructs Northeast Allen County Fire & EMS crew members in a new procedure in stabilizing critically injured patients during transport. Pictured with him (left to right) are: Tim George, assistant EMS chief, paramedic and firefighter; Robin Bobay, advanced EMT and fire captain; and Heather Yoder, advanced EMT and fire captain. EMT and firefighter Kris Miller is the "patient."

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.

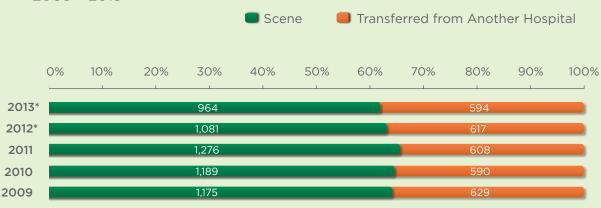
Trauma-related educational events are presented throughout the year to area community hospitals, fire departments and emergency medical services

providers. These courses are offered at each group's location. Presentations are customized to the audience, with the objective of improving the care of severely injured people. Since 1989, Parkview Trauma Services has provided trauma-related education to area physicians, nurses, prehospital providers and other allied health providers. The learning events have been held at organizations in 30 counties across northeast Indiana, northwest Ohio and south-central Michigan.

In November 2011, Parkview Trauma Services began offering a trauma team-building course called the Rural Trauma Team Development Course (RTTDC°) to area community hospitals. The course was created by The American College of Surgeons Committee on Trauma via the Ad Hoc Rural Trauma Committee. The goal of this

Volume (and Percentage) of All Patients from Scene or Transferred to **Parkview Trauma Centers**

2009 - 2013



^{*} Excludes 263 cases with isolated hip fracture.

education is to better equip clinical and emergency services personnel to provide quality trauma care in the rural setting. Since 2011, more than 250 physicians, nurses, pre-hospital providers, respiratory therapists and radiology technicians from 13 rural hospitals have successfully completed the course.

In February of 2011, Parkview Trauma Services also began offering the Advanced Trauma Care for Nurses (ATCN) course. This clinically intensive course, created by the Society of Trauma Nurses, is offered annually in conjunction with the Advanced Trauma Life Support Course for physicians. Since 2011, 72 emergency department, intensive care unit and operating room nurses have successfully completed our ATCN course.

Other ongoing education programs include:

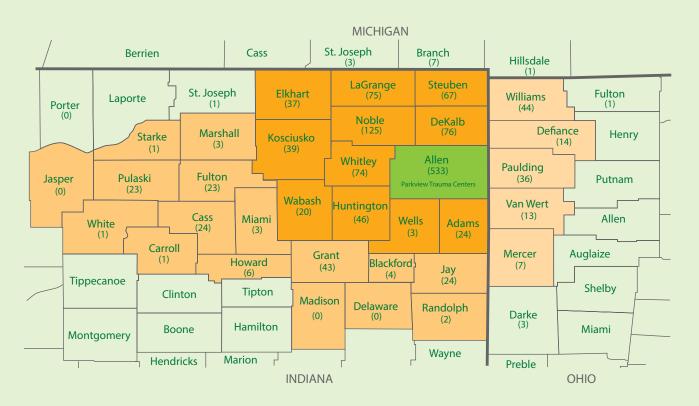
> Annual Trauma Symposium in May highlights a variety of topics related to trauma care of adults and children.

- > Annual Pediatric Trauma Symposium in November focuses solely on care of the injured child. The intended audience includes the entire team of healthcare professionals who care for injured children.
- > First Tuesday for Trauma, also known as Trauma Grand Rounds, is a live monthly educational event open to all clinical staff interested in developing their knowledge of trauma care. Trauma cases from the previous month are reviewed to celebrate trauma team success, as well as identify opportunities for improvement.
- > Monthly trauma case studies present a trauma case (identifying information removed) in which all aspects of care are reviewed, from triage at the trauma scene to discharge from the trauma center. The case studies enable participants to earn continuing education credit.
- > Trauma simulations are presented monthly to provide a realistic training experience using high-fidelity adult

OUTREACH AND EDUCATION continued

- and pediatric human patient simulators to practice trauma care under controlled conditions without lives being at stake. The focus is on teamwork, as well as on clinical care.
- > Pre-hospital Skills Workshops offer monthly educational offerings focused on the pre-hospital trauma provider. These workshops provide an opportunity to maintain and enhance the pre-hospital provider's hands-on skill, technique and knowledge.
- > Trauma MD newsletters communicate Performance Improvement and Patient Safety (PIPS) educational material to physicians who care for victims of traumatic injury at Parkview Trauma Centers.
- > Robust trauma education extranet page offers numerous trauma-related educational activities and resources in multiple formats, including audio, video, podcasts, webinars, images and links to additional information.

County of Injury Occurrence in Catchment Area 2013*



^{*} Excludes 264 cases (263 patients with isolated hip fracture), 147 patients whose county of origin is unknown, and three patients from outside the region.

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.

COMMUNITY HOSPITALS



Jennifer Konger, RN, BSN Community Trauma Program Coordinator, Trauma Services

Parkview LaGrange Hospital

From toll-road to Amish farm injuries, Parkview LaGrange Hospital sees a vast array of trauma. Parkview LaGrange Hospital physicians and staff continue to demonstrate their commitment to providing the best possible care for injured patients.

The hospital has adopted trauma activation guidelines and collaborated with LaGrange County EMS to develop a systematic response to caring for injured patients. In 2013, bedside ultrasound - standard of care in trauma - became available in the hospital's Emergency Department.

When additional resources are needed, adult and pediatric trauma patients are transferred to the Level II Parkview Trauma Centers at Parkview Regional Medical Center in Fort Wayne. Due to the distance between these two communities, Parkview Samaritan's flight and ground transport team plays a crucial role in these rapid transfers.

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

injuries as well, and it led the hospital and Parkview Trauma Centers to raise awareness in fall 2013 of the need for all members of the public to "Share the Road" by keeping safety in mind at all times. Serious accidents involving motor vehicles and people who are vulnerable due to their mode of transportation horse-drawn buggy, bicycle and foot - have been on the rise. Amish and Plain Church community members now represent nearly 40 percent of the county's population; heavy truck and tourist traffic have made for an often dangerous situation. Through a billboard campaign in late 2013 and into 2014, Share the Road aims to heighten awareness, promote safety for car and buggy riders and decrease the number of life-changing traumatic injuries.

Parkview Huntington Hospital

Parkview Huntington Hospital has continued to advance the quality of its trauma care with a team approach to traumatically injured individuals within Huntington County. The hospital continues to monitor metrics for standards of documentation and standards of care with trauma patients.

Two new goals for 2013 were earlier backboard removal and faster patient-transfer times. The Emergency Department (ED) staff and EMS personnel continue to collaborate, using their trauma team activation protocols for the severely injured patients arriving in the ED. As a result of the team's rapid response during trauma team activation, patients are treated efficiently and, when appropriate, transferred to Parkview Regional Medical Center's Level II Trauma Centers quickly, promoting the best possible patient outcomes.

Collaborating with a dedicated orthopedic surgeon who practices in Huntington County enables Parkview Huntington Hospital to treat patients closer to home if they have isolated orthopedic injuries. Helping patients remain within their own community for treatment whenever possible is a goal for Parkview hospitals. The collaboration of team members ensures that care for trauma patients at Parkview Huntington is optimized as shown by the metrics.

COMMUNITY HOSPITALS continued

Parkview Noble Hospital

Parkview Noble Hospital staff members follow a systematic approach when traumatically injured patients arrive at the hospital. Such an approach is critical for patients to receive the most appropriate, quality care each time.

"Like heart attack and stroke patients, victims of major trauma receive 'front of the line' evaluation and treatment because the success of treatment is time-critical," says Terry M. Gaff, MD, medical director, Parkview Noble Hospital Emergency Department, and emergency physician, Professional Emergency Physicians, Inc.

Parkview Noble Hospital collaborates with local EMS providers to identify triage criteria for trauma patients; EMS personnel follow triage guidelines and notify the hospital's ED of an incoming trauma patient, quickly capturing a coordinated response by the hospitalbased team. This process results in faster triage of patients, quicker diagnostic testing and shorter hospital stays.

In 2013, Parkview Noble's Emergency Department and EMS staff participated in the Rural Trauma Team Development Course designed by the American College of Surgeons specifically for community hospitals. Continued participation in this type of targeted trauma education is essential to providing optimal care to each trauma patient.

Parkview Whitley Hospital

The staff of Parkview Whitley Hospital strives daily to provide excellent care to seriously injured patients. Hospital-based providers have taken steps to identify injuries more quickly to facilitate the most appropriate disposition of injured patients and ensure that they receive the best possible care, with the ultimate goal of improved outcomes.

In accordance with state trauma system development, Parkview Whitley uploads its trauma data to the



Parkview Huntington Hospital EMS team members from left to right: Rick Uecker, Paramedic Supervisor Katrina (Katie) Adelman, Paramedic Isaac Martin, Advanced EMT

Indiana State Department of Health. With a goal of further developing the trauma program, data are also uploaded to the National Trauma Data Bank. As a continual process improvement measurement, the emergency department staff and physicians participated in the Rural Trauma Team Development Course designed by the American College of Surgeons specifically for community hospitals like Parkview Whitley.

The Parkview Whitley Emergency Department collaborates with EMS personnel in the appropriate triaging of trauma patients based on the national standards. The hospital continues to implement documentation standards, trauma team activation guidelines and quality metrics. New metrics monitored for the year included faster backboard removal times and immediate transfers to a higher level of care when necessary.

EMERGENCY PREPAREDNESS



Members of the Parkview Regional Medical Center Emergency Preparedness Team practice decontaminating a "patient" in a "wet decon drill." Skills exercises help ensure the team will be ready if needed.

As the home of the Parkview Trauma Centers, Parkview Regional Medical Center (PRMC) has a robust emergency preparedness program.

At its heart is a multidisciplinary team that meets monthly to discuss emergency codes and plan exercises. The team conducts several tabletop exercises each year with leadership, as well as a functional exercise for further education and training in the command center.

The in-house decontamination team, also comprising a multidisciplinary group of staff members, conducts quarterly "wet decon drills" to maintain their skills and ensure that equipment is in proper working order. Each year's activities culminate in a full-scale exercise using a scenario that is based upon the hazard vulnerability analysis from the prior year. This full-scale exercise involves multi-agency coordination and patient influx, as well as decontamination of live "victims."

These efforts, drills and exercises assist the Emergency Preparedness Team in building and maintaining a comprehensive program for the PRMC campus.

Facility design also contributes to preparedness efforts. The decontamination system on the PRMC campus comprises two distinct areas:

Decontamination shower room - Directly adjacent to the Emergency Department, this shower room has four shower heads and a closed containment tank system capable of holding up to 300 gallons of run-off water. It can be used in the event several people or a small group of ambulatory patients needs decontamination.

Built-in shower system - Incorporated into the EMS bay canopy outside the Emergency Department, this shower system can potentially be used for mass decontamination. The area beneath the canopy can be set up in two separate corridors to accommodate large groups of both male and female victims.

In addition, an inflatable decontamination tent, housed on the disaster trailer, provides a portable third option. The tent can be transported and set up on other areas of the campus, or off campus, should the PRMC's Emergency Department become contaminated or otherwise unsuitable for patient care.

PREVENTION



The Share the Road campaign promotes safety for all people using various modes of transportation in the region, and reminds motorists to be alert and allow plenty of room for more vulnerable, slower-moving travelers.

Trauma prevention programs reveal the Parkview **Adult and Pediatric Trauma Centers' continuing** commitment to reducing the number of lives impacted by life-threatening injuries.

Don't Text & Drive

Parkview's Don't Text & Drive (DT&D) campaign - which began raising awareness about the dangers of distracted driving years before national campaigns proliferated had a big year in 2013. Social media played a huge part

in ongoing growth as DT&D spread the word at local and regional events, and the Facebook page featured studies, videos and personal stories. An enthusiastic online community embraced DT&D to such a degree that page followers grew from 73,000 to more than 152,000.

In the spring, Parkview added new billboards and transit advertising with a thought-provoking message reminding adults that they, too, should refrain from texting and driving: "Your kids are watching."

In May 2013, DT&D traveled to Geneva, Switzerland, for World Telecommunications and Information Society Day. Parkview's wildly popular grassroots campaign had caught the attention of the International Telecommunications Union (ITU), the United Nations' specialized agency for information and communication technologies, which invited DT&D to attend the event. It was an exciting opportunity to share intelligence on strategies that have worked for DT&D and to participate in the kickoff of the ITU's road safety campaign, aimed at reducing distracted driving in 193 ITU member countries. Parkview representatives had the opportunity to exchange ideas with many of the 330 leaders who attended from countries around the world.

Don't Text & Drive Seminars for Teens and Parents

Parkview Trauma Centers periodically sponsor free seminars to help equip young drivers and their parents with the tools they need to become more focused, safer drivers. Powerful testimonials from people who have lost loved ones to distracted driving crashes prompt frank conversation.

Laws governing distracted driving are also discussed, and seminar participants experience the dangerous nature of distracted driving firsthand while using a driving simulator provided by AAA.

Share the Road

In recent years, with Fort Wayne's designation of bike lanes and residents' renewed interest in cycling, we created our Share the Road program to remind drivers to allow lane space for safe bicycle travel. But with injuries to motorcyclists, bicyclists, pedestrians and Amish buggy passengers mounting, we saw the need to expand Share the Road.

In mid-2013, we implemented a billboard campaign with four board designs depicting those travelers who are vulnerable in sharing the road with cars and trucks. And in the fall, we emphasized that campaign in LaGrange County, where heavy truck and tourist traffic are making travel ever more perilous for the horse-drawn buggies of Amish and Plain Church residents. This awareness campaign continues in 2014.

Provision of Trauma Prevention Education Program

Members of the Public Attending Presentations/Program Displays



¹ Started in 1990 ² Implemented in 1998 ³ Began in 2009 ⁴ Launched in 2010

PREVENTION continued

Bike Helmet Safety and the Parkview Safety Store

The Parkview Safety Store will reopen in May 2014, following a hiatus in 2013.

Parkview Safety Store 1818 Carew Street, Suite 140 Parkview Hospital Randallia campus Fort Wayne, IN 46805 (260) 373-7201 Tuesdays, 10 a.m. - 1 p.m. and 4 - 7 p.m.

As in the past, the store will offer injury-prevention merchandise and safety supplies to community members. The store will also provide safety-certified bike helmets and fittings to ensure the proper fit for each individual. Apparel and other items supporting Parkview's Don't Text & Drive and Share the Road campaigns will also be available for purchase.

Don't Drink and Drive

In order to reduce the number of deaths and severe. long-term disabilities from crashes due to drinking and driving, Parkview Trauma Centers offer free presentations and displays to schools and community organizations. Presentations offer a personal story involving loss of life due to drunk driving. The very powerful presentations are known for capturing the attention of even restless teens. "Fatal vision" glasses are also available for participants, enabling them to safely experience the sensation of driving drunk to fully understand how intoxication impairs vision and reflexes.

Multiplier Effect

Trauma prevention is a collaborative effort that reaches across departments and disciplines, so Parkview Trauma Centers convened a task force in 2013 to multiply the impact of a range of programs aimed at reduction of injuries. Trauma staff members are available to provide education on all of these programs, which are listed on the facing page.









Car seat safety awareness campaign web banner.

Multiplier Effect continued

Child Maltreatment Team

Parkview has initiated an expert team whose members are available at a moment's notice when abuse, neglect or other maltreatment is suspected. The trauma pediatric coordinator serves as a liaison to the team, which includes child life specialists and members from pediatric critical care, pediatric emergency medicine, trauma surgery and pediatric psychiatry.

Safe Sleep

In recent years, SIDS (Sudden Infant Death Syndrome) has been linked to unsafe sleep practices such as co-sleeping (infants sleeping with their parents in bed) and suffocation from inappropriate bedding. Under the aegis of Parkview's Safe Slumber program, registered nurses from Parkview Community Nursing educate parents-to-be on the hazards of unsafe sleep practices and provide tips on creating a safe sleep environment. The program also supplies cribs to families who need a safe place for their infant to sleep.

Car Seat Safety

Parkview provides free car seat inspections to aid parents in ensuring their children are properly restrained in safety-approved car seats whenever they're on the road. Inspections are offered by appointment and at some community events.

ThinkFirst

Parkview helps elementary and high school students recognize dangerous behaviors and avoid lifethreatening or permanently disabling injuries through ThinkFirst presentations in the classroom.

ThinkFirst is a National Injury Prevention Foundation program, and presentations are geared to specific age groups, with subject matter for younger children aimed at encouraging use of safety habits at an early age, and more serious discussion for teens. Individuals who have suffered brain or spinal cord injuries speak honestly with teens about risky behaviors and how their lives have been impacted by paralysis or brain damage. A rehab nurse facilitates discussion. Also covered are violence prevention, dealing with peer pressure and bullying, and safety in sports and recreation. Presentations are provided through Parkview Rehabilitation Center - in partnership with Fort Wayne Neurological Center - and Parkview Community Nursing.

Safety Camps

Parkview collaborates with emergency services providers and health-and-wellness organizations in several counties of its service area to provide one-day safety camps for youngsters. Camps provide fun, interactive activities that teach grade-school children about safety with regard to water, fire, household hazards, recreation, strangers and pets. They also give the children a chance to learn about basic health topics and talk with first responders and law enforcement officers.

Driver Rehabilitation

Medical conditions, effects of aging and other factors can erode a person's ability to safely operate a vehicle. Parkview Outpatient Therapy's Driver Rehabilitation program helps older adults and others regain their driving skills and avoid accidents. Occupational therapists, who are certified driver rehab specialists, evaluate each person's physical condition and cognition, provide on-the-road driving assessments and make recommendations for any education, equipment or other resources needed. These may include driving aids, behind-the-wheel training, vehicle modification and alternative transportation.



Don't Text & Drive volunteers of all ages came out in force for the 2013 Three Rivers Festival Parade in downtown Fort Wayne. Participating in the annual event to display their personal commitment to saving lives by eliminating distracted driving, they also encouraged others to take up the cause. Parkview Trauma Centers' Don't Text & Drive campaign has educated teens and adults across the region - and even across the globe, via Facebook - about the dangers of texting while driving.

Multiplier Effect continued

Suicide Prevention

Suicide is, alarmingly, on the increase among teens and younger adults. Parkview has created a suicide prevention program to:

- > Help individuals recognize when they are experiencing symptoms of depression
- > Connect them with counseling, support groups and other local mental health resources
- > Provide rapid assessment of severely depressed individuals who may require inpatient treatment

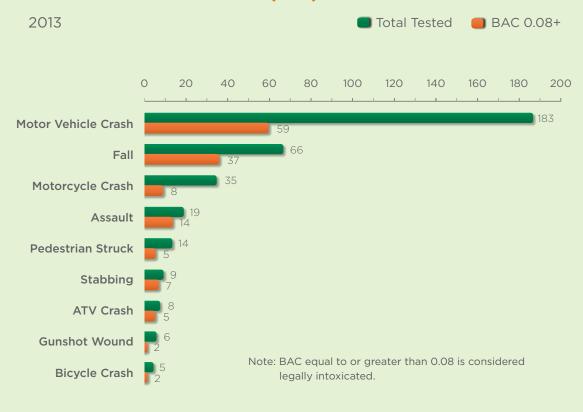
The program will be piloted in a Parkview emergency department in 2014.

Fall Prevention

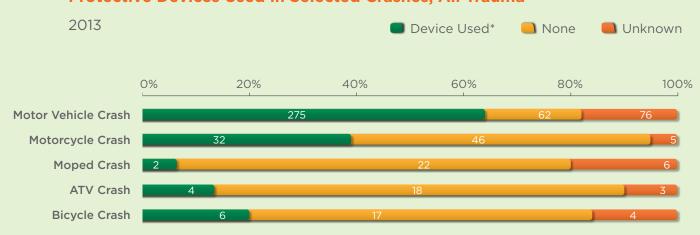
Many older adults restrict their activities because they are concerned about the possibility of falling. Indeed, falls are among the most numerous injuries treated at Parkview Trauma Centers. New for 2014, the Parkview Center on Aging & Health will offer a fall prevention program enabling patients to determine their risk for a fall. In addition, Parkview Senior Services offers an eight-session "A Matter of Balance" workshop that emphasizes practical strategies for managing falls, such as eliminating household tripping hazards and increasing activity levels.

A Matter of Balance: Managing Concerns about Falls Volunteer Lay Leader Model © 2006. This program is based on Fear of Falling: A Matter of Balance, Copyright © 1995 Trustees of Boston University. All rights reserved.

Blood Alcohol Concentration (BAC) Level in Selected Patients



Protective Devices Used in Selected Crashes, All Trauma



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

Parkview Health 10501 Corporate Drive Fort Wayne, IN 46845

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TRAUMA SERVICES TEAM

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Joseph C. Muller, MD, FACS, Surgical/Trauma ICU Medical Director, Parkview Regional Medical Center; and Acute Care/Trauma Surgeon, Parkview Physicians Group — Surgical Specialists

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