CONTINUUM OF CARE:
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Quick to lend a hand

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‘Know what you’re diving into’

VCU Center for Trauma and Critical Care Education

Injury and Violence Prevention Program

International outreach

Publications, presentations and research
As medical director of Virginia Commonwealth University’s Level 1 trauma center, I am delighted to present our Trauma Center Report — highlighting our significant accomplishments over the past two years. They have been extraordinary, filled with challenges and accomplishments that made me proud of our exceptional staff and faculty and their dedication to the care of the injured in Central Virginia. Few are aware of the incredible stories and the daily miracles that occur in our trauma center. This report comes after our sixth annual Shining Knight Gala. In this event, we celebrate the heroic efforts and commitment of the pre-hospital and hospital personnel who protect and save lives in Central Virginia. At our most recent gala, we celebrated the story of one patient, Candi Spraggins, who by all standards should have died. Yet after a remarkable journey, and much to the credit of her resilient spirit and the solid commitment of well-trained and dedicated EMS providers, physicians, nurses, nurse practitioners and a multitude of other health care technicians and professionals, she was given another chance to live. Spraggins’ story is paralleled by the extraordinary story of another trauma survivor, Cole Sydnor, whose current efforts in awareness and injury prevention remind us of our ultimate goal to deliver the best care to our injured fellows and to strive endlessly to prevent injuries and violence and mitigate their impact on our families and communities. This report also highlights the recent accomplishment of VCU’s Injury and Violence Prevention Program and our mission to become a model for hospital-based programs.

Such efforts are only possible with a strong vision and institutional support as demonstrated by the investment of our CEO, John Duval, in a new, innovative, multifaceted and collaborative initiative between the Boys & Girls Clubs of Metro Richmond, the VCU Health System and the VCU Police Department to address the reduction of youth violence in Richmond’s East End.

The development and accomplishments of our trauma center owe much to the leadership and efforts of Rao R. Ivatury, M.D., Nancy Malhotra, R.N., M.S., ACNP, CCRN, and Nancy New, R.N., M.S., M.B.A., CENP, FACHE, who led the center over the past 14 years to become a nationally and internationally recognized trauma center. As we read about their accomplishments, we realize that our new vision is far-reaching because we stand on their shoulders. Yet they will be the first to say that our accomplishments are not due to the efforts of a few individuals, but the dedication of the many unsung heroes who work tirelessly to save lives in Central Virginia. We are incredibly grateful to the multidisciplinary teams, partners and specialists who share in our vision and make our mission possible, from the EMS providers at the scene to the nurses and ancillary staff in our units as well as our various collaborators, including emergency medicine, anesthesia, orthopaedics, neurosurgery, cardiothoracic surgery, plastic and burn surgery, otolaryngology, maxillofacial surgery and rehabilitation services.

Essential to our role in Central Virginia’s regionalized trauma care is the unparalleled education and training outreach through our Center for Trauma and Critical Care Education. In 2013 alone, CTCCE trained more than 3,600 students, EMS providers and clinicians in the art of caring for and providing the optimal care for the injured in Central Virginia.

Integral to the success of our mission is the community’s involvement and investment in all our efforts. We appreciate all our community partners and benefactors, especially G. Gilmer Minor III, chairman emeritus of Owens & Minor Inc., and his generous contribution to our Shining Knight Gala.

Finally, we hope this report continues to serve as a testimonial to the remarkable accomplishments of the VCU trauma center and its commitment to our community.

Michel B. Aboutanos, M.D., M.P.H., FACS
Professor and chair
Division of Acute Care Surgical Services
On the shoulders of giants
We honor the efforts and accomplishments of three team members.

Rao R. Ivatury, M.D.
Rao R. Ivatury joined the Virginia Commonwealth University Medical Center in 1998 as a professor of surgery and was appointed chief of the Division of Trauma, Critical Care and Emergency Surgery at the medical center, a position he held until his retirement in 2012. Between 2000 and 2012, he also served as director for the Center for Trauma and Critical Care Education, program director for the paramedic training program and program director for the Surgical Critical Care Fellowship.

During his tenure at VCU Medical Center, Ivatury, with the help of Nancy Malhotra, R.N., M.S., ACNP, CCRN, elevated the VCU trauma program to new heights in national and international academic recognitions. He grew the full-time trauma faculty from three to eight surgeons, along with two emergency medicine intensivists, and graduated 12 surgical intensivists. Under his leadership, the VCU trauma center became a Level 1 trauma center verified by the Virginia Office of Emergency Medical Services and the American College of Surgeons, receiving close to 4,000 trauma admissions per year. In 2013, Ivatury was appointed professor emeritus in the Department of Surgery, where he will continue to do what he loves and cherishes the most: teaching surgical residents and students.

Despite his incredible achievements and active academic life, Ivatury was always available for the faculty and staff, and earned the nickname "Trauma Master Jedi Yoda," for his academic prowess, operative superiority, humble demeanor, and profound wisdom and knowledge. As a master surgeon, he is sought after from the far-flung corners of the world, especially in Latin America, where he is often invited to help operate on difficult and intriguing cases. He always states that his help was not truly needed and the response is always: We could not have done it without him.

Ivatury is regarded as an icon in trauma surgery. For a man who has reached the pinnacle of success and earned the highest of rewards and recognition in his profession, he walks humbly and holds no encounter as small or unimportant. His methods of teaching all members of the surgical team, especially students, nurses and pre-hospital providers, have earned him the greatest love, admiration and respect. For those who have been taught and molded by him, we submit our greatest gratitude. He taught us that greatness lies in what we give of ourselves — and in that, he stands as one of the greatest.

Nancy Malhotra, R.N., M.S., ACNP, CCRN
Nancy Malhotra joined VCU Medical Center trauma program in 1999 as a trauma care coordinator and became the trauma program director in 2002. Her love of clinical care and outreach to EMS providers was evident throughout the medical center and Central Virginia. Malhotra’s expertise in trauma center operations and regional trauma systems ensured that VCU Medical Center achieved the highest accreditation possible for trauma care: the American College of Surgeons Level 1 trauma center verification.

In 2004, Malhotra was pivotal in bringing the Advanced Trauma Care for Nursing course to the medical center for nurses in the Emergency Department as well as to the intensive care units and trauma acute care units. The VCU trauma center was the first center in the commonwealth to offer this course. Malhotra not only became a local course director, she mentored other centers across the state as well as throughout the U. S. and served as a model instructor for other centers.

Malhotra was one of the key leaders in Virginia to develop criteria for burn center verification within the state trauma center guidelines. She worked with other burn centers to spearhead this legislation for the commonwealth. Through her efforts, VCU Medical Center became the first state-designated burn center and is now the only American Burn Association-verified burn center in Virginia.

Malhotra also was instrumental in the development of the Virginia Trauma System and has been recognized for her insight and systems approach to trauma care. She had an exquisite understanding of trauma performance improvement and was involved in the development of the Society of Trauma Nurses Trauma Outcomes and Performance Improvement course.

Malhotra elevated the level of trauma nursing — at VCU and beyond — through numerous clinical and educational initiatives throughout the medical center, as well as nationally and internationally. She gave numerous lectures, published research and clinical papers and was the chapter author for several books on trauma care.

On the shoulders of giants
We honor the efforts and accomplishments of three team members.

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Nancy New, R.N., M.S., M.B.A., CENP

For the past 10 years, Nancy New, nursing director for inpatient surgery and rehabilitation nursing, has been the silent shadow behind the trauma program. New has contributed to the success of the program through her partnerships and relationships with all team members including physicians, advanced practice nurses, clinical nurses and other inter-professionals. She worked hand in hand with Rao R. Ivatury, M.D., medical director, and Nancy Martin, nurse manager, to achieve the American College of Surgeons Committee on Trauma and the American Burn Association verifications as a Level 1 trauma center and a Level 1 state-designated trauma center. New’s clinical responsibilities span intensive care, progressive care and rehabilitation inpatient areas, which provide the highest quality coordinated care for trauma survivors.

Her legacy includes the establishment of the Shining Knight Gala, an event that raises funds for injury and violence prevention initiatives and honors those who protect and save lives in Central Virginia. The gala includes a multimedia presentation of a patient survival story highlighting the work of the Central Virginia Trauma System and VCU Medical Center’s trauma and injury and violence prevention programs. Care providers are honored with the Order of the Shining Knight for their contribution to the patient’s survival. The proceeds from the gala help fund the continued injury and violence prevention programs.

At the sixth annual Shining Knight Gala, New was recognized for assisting the VCU trauma center to become the leading provider of trauma care in the commonwealth. Her guidance and advocacy to the team was highlighted along with her legacy of the Shining Knight Gala.
What began as a routine afternoon for Candi Spraggins on Jan. 19, 2013, quickly spiraled into a fight for her life.

While driving to an internship at the Dinwiddie County (Virginia) Sheriff’s Office, Spraggins, 30, slid on some ice — or a wet patch — or swerved to avoid hitting an animal. Her car landed in an embankment and she was thrown from the vehicle before it hit a tree.

The details of that day are cloaked in the haze of trauma care and drug-induced comas. Spraggins only knows that she began crawling for help, dragging her legs with her.

Survival was far from certain when Spraggins first arrived at VCU Medical Center for trauma care. Her intestines were partly sheared off from their blood supply. Her heart stopped several times and her liver and kidneys malfunctioned.

Doctors performed 22 surgeries, including those to remove part of her broken pelvic bone and damaged muscle and tissue from her left leg, and to perform skin grafts. Spraggins also needed a tracheotomy tube and dialysis.

A year later, Spraggins is wheelchair-bound but learning to use a walker. (The accident caused irreparable damage to her upper left leg.) Once she graduates to crutches, she’ll have to use them permanently. Intestinal damage means she wears an ostomy bag, but that can be reversed once she heals further.

“After they reverse the colostomy, it’s just my legs that are affected,” Spraggins says. “Losing full use of your legs might seem like a big deal, but I’m just happy to be alive.”

Spraggins credits her recovery to the VCU trauma staff who cared for her during the five-month stay in the hospital. “They were absolutely wonderful,” she says. “I pretty much consider them family.”

Since returning home in June 2013, Spraggins’ progress includes getting in and out of bed on her own, standing up to wash the dishes or use the microwave and wheeling herself around the house. She is also continuing her online work toward a bachelor’s degree in criminal justice through ECPI University.

The crash came with a silver lining, says Spraggins, who is married to her high-school sweetheart, Reggie, and mom to a 7-year-old daughter, Maria. The accident forced her to slow down and really enjoy family and friends.

Strength and courage define Spraggins’ journey, says Stephanie Goldberg, M.D., trauma surgeon in the VCU Division of Acute Care Surgical Services.

“What she went through was devastating and completely life-changing,” she says. “Candi pulled through it with so much poise and grace. She’s really a true example of survival for anyone who goes through a trauma.”

### An incredible journey back to life

A year after a life-threatening car crash, Candi Spraggins learns to walk again.

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### Division hosts sixth annual Shining Knight Gala

On Saturday, March 29, 2014, the Division of Acute Care Surgical Services hosted the sixth annual Shining Knight Gala, an event to raise funds for injury and violence prevention and to honor those who protect and save lives in Central Virginia. All told, more than $143,000 was generated for this worthy cause.

The event took place at The Jefferson Hotel, and recognized honorary chairs G. Gilmer “Gil” Minor III, chairman emeritus of Owens & Minor Inc., and Vigneshwar Kasirajan, M.D., chair of the Division of Cardiothoracic Surgery and professor and interim chair of the Department of Surgery in the VCU School of Medicine.

A multimedia presentation of the Candi Spraggins story (see above) highlighted the work of the Central Virginia Trauma System and our trauma and injury and violence prevention programs.

Spraggins was involved in a horrific motor vehicle crash and struggled for months to recover from her life-threatening injuries. Twenty-five care providers were given the Order of the Shining Knight for their contributions to Spraggins’ survival.

*Article originally published in “The Spirit” newsletter for employees of the VCU Health System*
Some questions take just a few seconds to answer. Such was the case when Sheldon Retchin, M.D., M.S.P.H., senior vice president for health sciences and CEO of the VCU Health System, called G. Gilmer Minor III, and asked him if he would serve as honorary chair of the sixth annual Shining Knight Gala, held March 29, 2014, at The Jefferson Hotel. The gala, presented by the VCU Division of Acute Care Surgical Services, honors a patient treated in the past year and recognizes the heroic efforts of Richmond-area first-responders and the medical staff of VCU Medical Center.

Minor, chairman emeritus of Owens & Minor Inc., was familiar with the event, as his company had acted as a sponsor in previous years. He says he responded in about 10 seconds.

“My answer was ‘yes,’” Minor says. “When I thought about the individuals who perform these services, it didn’t take very much time.”

Having never seen the division’s facilities, Minor toured the VCU trauma center and met with its staff. Duly impressed with the quality of care and level of technology available for patients when they first arrive, he says what struck him most was the continuation of care after a patient leaves the hospital.

“The staff presumes that the patient will get through the initial phase of the trauma well,” Minor says. “Then a whole other life begins for that individual. The follow-up care is so necessary for the integrity of the individual who’s gone through the trauma to know that they have someone who is going to be there for them.”

Also humbling to Minor was meeting the caregivers, whom he calls the unsung heroes that people rarely hear about. “They don’t want recognition. They don’t want their picture in the paper,” he says. “They do what they do because they love what they do and their reward is being able to help save a life. It makes you think about how fortunate we are to have that kind of a team in place here in Richmond.”

A supporter of many local and national civic and charitable organizations, Minor feels an affinity toward the work of the VCU trauma center and the Shining Knight Gala. It is a connection he intends to maintain in the future.

“I can’t imagine going through this and just walking away from it,” he says. “This is a life-changing experience. I want to be involved and do whatever I can.”
New agenda: Reflection and vision

We aim to integrate social and clinical aspects in all levels of care.

Over the past 30 years, we have served the community with dedication, commitment and compassion. We have delivered the best care for our injured patients. We have formed top-quality programs in terms of clinical care, education and training.

It is our time now to shape tomorrow’s emergency medical system through a paradigm shift in trauma system management, community engagement, injury prevention and local modeling for global solutions. Our trauma center stands at the apex of the continuum of care of the injured from the street to the rehabilitation center. Our current actions are by definition reactive to the consequences of injuries that impact our society. Our future actions, by contrast, will be proactive to the mitigation and elimination of a preventable disease that affects every member of our families and community.

The trauma center will engage on a path toward centrality and visibility in community affairs. This centrality is dependent on our ability to properly engage our community in learning who we are and what we do. We often teach that the eye does not see what the mind does not know. It is our mission that our community knows us and sees us as we truly are — a superb trauma center that rivals any in the nation in terms of patient care, research and innovation. We must be visible to all who cross our highways, not only structurally but also functionally, creating innovative models of care and prevention for our local community that can be replicated in the commonwealth and beyond to serve the global community.

Structurally this vision is manifested as a stand-alone state-of-the-art trauma center resting on four integrated pillars — an EMS simulation and training center, a center for injury prevention and advocacy, a center for international trauma system development and a center for critical care innovations and research. This structure reflects our new vision.

We have often witnessed the dissociation between the social and the clinical aspects of care, from the various risk factors that shape our behaviors to the social challenges that impact patient disposition and recidivism. This new vision stands to integrate the social and clinical aspects in all levels of care.
Trauma center collaborators

Multiple disciplines at VCU Medical Center work together to provide critical care to trauma patients.

Evans-Haynes Burn Center

The Evans-Haynes Burn Center, a section of the VCU Division of Plastic and Reconstructive Surgery, serves as a regional resource for the care of thermal injury and complex wounds of both adults and children throughout the commonwealth. The burn center, originally founded in 1947, is housed in a state-of-the-art critical care facility that contains 16 beds and admits more than 400 new patients and evaluates 1,500 outpatients annually. The center meets the strict qualifications of the American Burn Association and the American College of Surgeons and is currently the only ABA-verified burn center for both adult and pediatric burn care in Virginia.

The center provides care to patients with acute burns involving flame, scald, chemical or electrical injuries and addresses the reconstructive needs of burn survivors. Admissions to the burn center have increased by 15 percent from calendar year 2012 to 2013. During 2013 there were 417 admissions for acute burn injuries, including pediatric and adult burn patients.

The burn center staff members provide a holistic approach to burn care. The team includes physicians, nurse practitioners, registered nurses, care partners, physical and occupational therapists, registered dieticians, pharmacists, infection control nurses, social workers, care coordinators, psychologists and chaplains. The entire team meets during weekly interdisciplinary rounds to discuss each patient and address their needs, progress and care plans.

In 2012, the Evans-Haynes Burn Center offered Advanced Burn Life Support, a three-credit, 24-instructional-hour course, backed by an ASPR grant.

Community outreach is another important aspect of burn care. The Evans-Haynes Burn Center lecture series focuses on topics important to burn patient care, including pain, pruritus and wound care. The center offers lectures by the burn director tailored to pre-hospital burn care. The burn center also supports The Phoenix Society, which provides training to burn survivors or their family members who want to volunteer to help others whose lives have been touched by burn injury.

Each year, the center hosts Burn Survivor Sunday, an opportunity to recognize the extraordinary individuals whose lives have been affected by burn injuries. It is a day for survivors and their loved ones to celebrate life in a spirit of togetherness with other survivors and with those who have helped along the way. In 2013, Burn Survivor Sunday was attended by approximately 50 burn survivors as well as burn staff and regional firefighters. One patient was also chosen to be honored at the Shining Knight Gala, which supports the programs of the VCU Division of Acute Care Surgical Services.

The center’s staff supports the annual Central Virginia Burn Camp, a fun, safe and exciting summer camp for young burn survivors. The camp is staffed by nurses, firefighters, physical and occupational therapists and other volunteers. The residential camp is designed to meet the physical, social and psychological needs of children ages 7 to 17 and is designed to stimulate curiosity, leading to the exploration of ongoing care or recurring issues with other burned children. At the 2013 camp, the burn center provided one counselor and referred several children.

The staff of the Evans-Haynes Burn Center is committed to providing quality burn care and developing innovations for the future. Ongoing research includes the clinical trial “A Comparative Study of the ReCell Device and Autologous Split-thickness Meshed Skin Graft in the Treatment of Acute Burn Injuries.”

Division of Acute Care Surgical Services Staff

Trauma, Acute General Surgery and Critical Care

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Michel B. Aboutanos, M.D., M.P.H., FACS</td>
<td>Professor and chair</td>
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<tr>
<td>Rahul J. Anand, M.D., FACS</td>
<td>Assistant professor</td>
</tr>
<tr>
<td>Theresa M. Duane, M.D., FACS, FCCM</td>
<td>Professor</td>
</tr>
<tr>
<td>Paula Ferrada, M.D., FACS</td>
<td>Assistant professor</td>
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<tr>
<td>Stephanie Goldberg, M.D.</td>
<td>Assistant professor</td>
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<tr>
<td>Chris Hogan, M.D., FACEP</td>
<td>Associate professor</td>
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<tr>
<td>Sudha P. Jayaraman, M.D., M.Sc.</td>
<td>Assistant professor</td>
</tr>
<tr>
<td>Ajai K. Malhotra, M.D., FACS</td>
<td>Professor</td>
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<tr>
<td>Julie Mayglothling, M.D., FACEP, FCCM</td>
<td>Associate professor</td>
</tr>
<tr>
<td>James Whelan, M.D., FACS</td>
<td>Assistant professor</td>
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**Trauma Program**

Beth Broering, R.N., M.S.N., CEN, CCRN, CCNS, FAEN
Manager

**Nurse practitioners**

Jonathan Becraft, R.N., M.S.N., ACNP-BC
Todd Borchers, R.N., M.S., ACNP-BC
Erin Casey, R.N., M.S.N., ACNP-BC
Rachel Collins, R.N., M.S.N., ACNP-BC
Mary Anne Harvey, R.N., M.S.N., ANP-BC
Kathy Richo, R.N., M.S.N., PCCN, ACNP-BC
Renee Seaman, R.N., M.S.N., FNP-BC

**Trauma case managers**

Melanie Jacoby, R.N., B.S.N.
Rachel Poindexter, R.N.
Janie Tarrant, R.N., B.S.N.

**Trauma registry**

Mary Davies, CAISS
Trauma registrar
Kelly Guilford, R.N., CSTR
Performance improvement coordinator

**Administrative support**

Mary Beth Camacho
Division manager
Chanetta Booker
Administrative assistant
Janeth Davies
Trauma program assistant
Antoinette Little
Administrative assistant
Gail Queen
Division coordinator
Jennifer Quinney
Administrative assistant
Michelle Taylor
Administrative assistant

**Pediatric Trauma Program**

Jeffrey Haynes, M.D., FACS, FAAP
Professor and director
Kelley Rumsey, R.N., M.S., CEN, ACNP-BC, FNP-BC
Program coordinator
Amanda Drawdy
Trauma registrar

**Evans-Haynes Burn Center**

Michael Feldman, M.D.
Assistant professor and medical director
Jill Bates, R.N., B.S.N.
Manager
Dana Powell, R.N.
Verification coordinator

**Trauma and critical care research**

Martin J. Mangino, Ph.D.
Professor
Dayanjan S. Wijesinghe, Ph.D.
Assistant professor
Luke G. Wolfe, M.S.
Assistant professor
Judith S. Katzen, R.N., M.S.
Study coordinator
Jinfeng Han, R.N.
Study coordinator
Pediatric Trauma Center

The children’s trauma center at the Children’s Hospital of Richmond at VCU received national verification through the American College of Surgeons as Virginia’s first Level 1 pediatric trauma center. This recognition was the culmination of many efforts. Our mission is to provide optimal resources and outcomes for all traumatically injured children in Central Virginia and beyond and to be a leader in injury prevention, research, education and advocacy.

Enhanced educational offerings were made available to staff on the topic of pediatric trauma. Specific outreach initiatives were undertaken to provide pediatric trauma education to referring hospital emergency departments and our pre-hospital partners. Ongoing community outreach programs include the annual summer safety fair and child passenger safety seat events. We are the lead agency for Safe Kids Virginia and provide child passenger safety seat technician training across the state.

The Pediatric Trauma Program routinely collaborates with the Child Protection Team. This team consists of physicians, nurses, nurse practitioners and social workers experienced in the field of child abuse and neglect. The team evaluates, diagnoses and treats children who have been sexually or physically abused or neglected. The team works in cooperation with Child Protective Services and law enforcement to ensure the safety and well-being of our community’s children. The team is available for consultations and may be contacted through the Pediatric Emergency Department.

In an evidence-based approach, standardized protocols in the management of solid organ injury and minimizing radiation in cervical spine clearance have been continued with increasing success. New protocols were implemented in the management of minor and severe traumatic brain injuries and massive transfusion of blood products. As part of the nationwide Pediatric Brain Injury Research Network, two research studies were completed in 2013: the predictive value of admission lactates in pediatric trauma and a study of clinical predictors in abusive head trauma. Ongoing studies continue in the evaluation and management of patients with minor traumatic brain injury (including sports-related concussions), standardization of abdominal evaluation in pediatric trauma and need for additional X-rays in joints with isolated extremity fractures. These studies continue work in the efforts aimed at reducing exposure to unnecessary radiation in children.

**Clinical Care**

**In 2013, the Pediatric Trauma Program saw 476 patients.**

<table>
<thead>
<tr>
<th>Breakdown by mechanism of injury</th>
<th>Distribution by gender</th>
<th>Breakdown by age group</th>
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<tbody>
<tr>
<td>Blunt: 338</td>
<td>Male: 285</td>
<td>0-1: 123</td>
</tr>
<tr>
<td>Burn: 101</td>
<td>Female: 191</td>
<td>2-4: 90</td>
</tr>
<tr>
<td>Penetrating: 27</td>
<td></td>
<td>5-9: 120</td>
</tr>
<tr>
<td>Other: 10</td>
<td></td>
<td>10-14: 143</td>
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<tr>
<td>(includes drowning, hanging and smoke inhalation)</td>
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**Department of Emergency Medicine**

The 72-bed comprehensive Emergency Department at the medical center features a six-bay major trauma suite, with one dedicated pediatric bay, and separate rooms equipped for the resuscitation of cardiac arrest patients arriving from the field. A refrigerator located in the Resuscitation Unit maintains an immediate supply of type O blood. The department performs a full complement of both cardiac and hemodynamic monitoring. Specialized training and credentialing for nurses, EMS personnel and physicians are available, as well as training for paramedics through VCU’s credentialed Paramedic Program.
The Department of Emergency Medicine treated 93,992 patients in 2013, and is undergoing a major renovation and expansion, including the installation of two new CT scanners, one of which is the first dual-source, second-generation CT scanner in Virginia.

**Emergency medical services:** VCU emergency medicine faculty members serve as operational medical directors for all major EMS agencies in the greater Richmond area. The Richmond Ambulance Authority is one of only 10 systems in the U.S. that has received accreditation from both the National Commission on Accreditation of Ambulance Services and the National Academy of Emergency Dispatch (the "gold standard" for ambulance services).

RAA is assisted by Richmond Fire and EMS, which provides first-responder, non-transporting EMS response and hazardous rescue within the city. Both agencies, as well as VCU’s paramedic-staffed Emergency Medical Dispatch Center, fall under the medical direction of Joseph P. Ornato, M.D., professor and chair of emergency medicine at VCU Medical Center.

RAA and the VCU Department of Emergency Medicine possess extensive experience in conducting product evaluations and clinical trials. RAA serves as a major clinical test site for ZOLL Medical Corp. and has helped the company develop the AutoPulse resuscitation device technology.

The Henrico County Division of Fire, responding to 38,000 calls annually, includes 20 fire stations staffed by more than 500 highly trained and certified firefighters. All of these personnel and resources also fall under the medical direction of Ornato. The department provides medical direction for fire and rescue for all of Metro Richmond (population 1.1 million) and a number
of other agencies, including rescue squads in the Bensley Bermuda, West End, Forest View and Fort Lee areas, as well as for Med-Flight I. Harinder Dhindsa, M.D., serves as medical director of VCU Medical Center’s LifeEvac Program.

**Forensic Nurse Examiners program:** The child abuse team provides care for more than 1,000 patients in the child advocacy center and outpatient child abuse clinic, all operated under the Department of Emergency Medicine. The program, the largest of its kind in Virginia, also provides 24/7 coverage of the Emergency Department with emergency medicine forensic nurses.

**EMS outreach and disaster:** Emergency medicine faculty members are heavily involved in EMS outreach as well as local, regional and national disaster planning and management. Faculty members and nurses have been deployed several times with Virginia Disaster Medical Assistance teams to the Gulf region during the past several hurricane seasons.

**Pediatric emergency medicine division:** The pediatric emergency medicine division includes four full-time physicians and two full-time and two part-time nurse practitioners. Pediatrics faculty members provided care for approximately 18,000 patients from newborn to 18 years of age in 2013. In addition, the division is involved with the trauma surgery program in reducing recidivism in youth who are victims of violent injury and in the regional continuing medical education conference.

**Special Operations Combat Medics training:** Of special importance is the multidisciplinary Special Operations Combat Medic training program that trains almost half of the country’s SOCMs. This team from the departments of Emergency Medicine, Surgery, Anesthesiology, Obstetrics and Gynecology, and Neurosurgery, as well as Henrico County Division of Fire and EMS, has trained more than 1,000 SOCMs through 2013.

**Department of Neurosurgery**

The neurosurgery department possesses a longstanding history for excellence in traumatic brain injury research. Current TBI research includes National Institutes of Health and U.S. Department of Defense bench protocols and several clinical research trials. Faculty members Dong Sun, Ph.D., and J. Travis Parsons, Ph.D., have active funded protocols in TBI. Physician faculty members Bruce Mathern, M.D., John Ward, M.D., M.S.H.A., and R. Scott Graham, M.D., serve as lead investigators in large, multicenter TBI clinical trial and databases, as well as several other awarded TBI clinical trials.

**Department of Orthopaedic Surgery**

The orthopaedic trauma service of the Department of Orthopaedic Surgery continues to provide acute care to the critically injured of Central Virginia. While the entire department participates in immediate treatment of individual fractures at the time of injury, the orthopaedic trauma service specifically addresses pelvic
reconstruction, limb salvage, infection and treatment of malunions or nonunions, in addition to immediate fracture care.

Since 2012, members of the orthopaedic trauma service have participated in numerous local and regional teaching conferences to promote current concepts related to orthopaedic trauma. On an institutional level, the department has consolidated orthopaedic implants and materials, revised protocols to enhance uniform care and provided education to emergency department, general surgery and nursing staff.

**Department of Physical Medicine and Rehabilitation**

The Department of Physical Medicine and Rehabilitation made significant contributions in support of the research, outreach and service missions of trauma care at VCU Medical Center in 2012-13. Most notably on the research side was the announcement by the White House of a $62.2 million grant to study concussions, led by David X. Cifu, M.D., chair of the department. The study is the largest grant ever received by VCU and will involve multiple universities, military installations and veterans' hospitals. Cifu described the grant as a consortium of researchers focusing on concussions or mild brain injuries, particularly those sustained in combat, but one that will also look at those in the civilian and sports sectors. The department has consolidated orthopaedic implants and materials, revised protocols to enhance uniform care and provided education to emergency department, general surgery and nursing staff.

The department was pleased to announce the inaugural Jeff Ericksen, M.D. Musculoskeletal Lecture in 2014 to honor the contributions and leadership of Ericksen.

The department continued to receive strong support for its spinal cord injury program through generous donations from the Gerry Bertier #42 Foundation. Bertier was an All-American high school football player (as depicted in the movie "Remember the Titans") who sustained a spinal cord injury. Macon Sizemore, the director for rehabilitation services in the department, was honored for his support of the foundation's work with his induction into the Gerry Bertier #42 Foundation Hall of Fame.

The inpatient rehabilitation program continued to make program and operational improvements in throughput of the trauma continuum of care. The rehabilitation program experienced an annual record high number of discharges and an annual record low length of stay. A major factor in these improvements was the establishment of a new rehabilitation nurse liaison position to facilitate rehabilitation consults and admissions.

The physical therapy department acquired some exciting technology that can assist individuals with spinal cord injury or other neurological impairments with ambulation training. The Lokomat device is a robotic gait-training apparatus with lower extremity orthoses that allows patients to participate in functional ambulation training on a treadmill. The device has been used successfully with both inpatients and outpatients.

Maryellen Gallagher joined VCU in 2013 as manager of the speech and language pathology department. Her responsibilities include expanding the scope of coverage of speech services throughout the continuum of care for both trauma and nontrauma patients.

**Department of Radiology**

The Department of Radiology of VCU Medical Center, led by department chair Ann S. Fulcher, M.D., comprises approximately 450 employees. Of these, 35 are faculty and/or attending radiologists, all of whom are certified by the American Board of Radiology. All of the faculty members offer subspecialty expertise in trauma imaging, and six are interventional radiologists who provide the full spectrum of trauma-related interventions.

The department provides diagnostic and interventional subspecialty trauma radiology expertise 24/7. Specifically, around-the-clock subspecialty expertise is provided by radiologists in abdominal and breast imaging as well as in the areas of cardiothoracic, interventional, pediatric, musculoskeletal, neuroradiology and nuclear medicine. American Board of Radiology-certified radiologists provide on-site daily coverage in the Emergency Department from 7:30 a.m. to 11 p.m.

In addition to staff, the department supports the trauma center by maintaining state-of-the-art equipment that includes two spiral CT scanners as well as digital radiography and sonography units in the emergency medicine environment.

In 2013, the department undertook and successfully implemented a number of initiatives that enhanced support of the trauma center. A partial sampling includes:

- Adding a sixth interventional radiologist
- Expanding in-house magnetic resonance technologist coverage to 24/7 (CT and radiography services have been available 24/7 for decades.)
- Expanding in-house ultrasound technologist coverage to 24/7

The department tracks the turnaround time for all Emergency Department studies relative to benchmarks. Through October 2013, 96 percent of radiographs and 91.4 percent of CTs ordered as urgent in the Emergency Department met or exceeded the benchmark.
Trauma center facts

4,001
Total admissions CY 2013

Cases transferred to VCU Medical Center
1,034

Cause of injury:
- Fall: 801 (20%)
- Motor vehicle collision: 1,416 (35%)
- Bicycle: 90 (6%)
- Blunt assault: 147 (4%)
- Burn: 384 (10%)
- Stab and firearm: 317 (8%)
- Motor vehicle collision: 230 (6%)
- Other: 516 (13%)

Gender:
- Female: 1,334 (33%)
- Male: 2,667 (67%)

Age:
- 0-5: 6%
- 6-14: 18%
- 15-25: 24%
- 26-40: 22%
- 41-60: 13%
- >61: 6%
In the waning weeks of summer 2011, Cole Sydnor spent a sunny day with friends diving into the water of the James River. An experienced competitive swimmer, the 16-year-old stood fearless in the face of rapids that stood between him and the campsite where the group planned to have lunch.

Sydnor dove headfirst into the river. His next memory: a flash of white, his arms floating uselessly in front of him, a dark red cloud of blood around his head.

A 911 call and ambulance ride to VCU Medical Center for trauma care followed. Next came the diagnosis of a spinal cord injury that left him paralyzed from the shoulders down.

“He had one of the worst spinal fractures that I have ever seen,” says John Reavey-Cantwell, M.D., the Richard Roland Reynolds Chair in Neurosurgery and neurosurgeon who treated Sydnor. “His injury was so severe that we had to use rods, screws, a metal cage and a plate to place everything back together.”

Now a sophomore at the University of Richmond, the 19-year-old navigates each day in a wheelchair and relies heavily on his older brother, who lives with him on campus as his caretaker.

“It’s so frustrating to not be able to do little things like fix your own food,” Sydnor says. “If my spinal injury had been an inch lower, I’d have all function in my arms. On the other hand, if it had been an inch higher, I would have no function above my shoulders at all.”

Sydnor credits the team in VCU Medical Center’s trauma unit for keeping him alive that first day, when emergency care focused on clearing his lungs and keeping him breathing.

“VCU has been amazing on every level,” he says, adding that he created lifelong friendships with the staff and even hand-delivered a Christmas gift to Reavey-Cantwell.

“Cole is an amazing person,” says Reavey-Cantwell. “He has shown tremendous willpower and perseverance, first with rehabilitation, then with getting back to normal life.”

Sydnor’s care and rehabilitation enabled him to perform tasks on his own. He can feed himself, dress his upper body and work an iPad, using his thumb to type. A few times a year, he speaks with teenagers to share his story and teach them about the dangers of diving into shallow waters.

“I always wrap up with ‘Know what you’re diving into,’” he says. “My teenage mind thought there was no way I could get hurt.”

Sydnor also works to clear misconceptions about handicapped people.

“I want to educate people that yes, I may look physically different than you, but mentally I’m just like you,” he says. “I’m still the same kid I was before. I’m just in a wheelchair, that’s all.”
VCU Center for Trauma and Critical Care Education

Established in 1980 as an outreach program providing education to the volunteer EMS community in Central Virginia, today the VCU Center for Trauma and Critical Care Education offers comprehensive training programs for medical center and community care providers.

Trauma education
The center conducted an aggressive trauma education schedule for 2012-13. Advanced Trauma Life Support course needs have leveled off to approximately 100 students per year. Given those numbers, we have scheduled an additional course for 2014. Primarily, we are meeting our in-house needs regarding the increasing number of residents requiring trauma education. However, the needs of the community continue to increase. In December 2013, VCU Medical Center’s Level 1 trauma center conducted a course primarily for emergency medicine physicians and surgeons from the Richmond, Virginia, area. Pre-hospital Trauma Life Support saw the largest increase in the trauma education realm with a more than 50 percent increase in students from 2012 to 2013. This followed a 12 percent increase from the previous year. PHTLS, the premier pre-hospital trauma education course, is taught by the center as an outreach opportunity for Central Virginia’s only Level 1 trauma center. Past host agencies have included Forest View Rescue Squad, Tuckahoe Volunteer Rescue Squad, Goochland County Fire-Rescue, Hanover Fire and EMS, Richmond Volunteer Rescue Squad (formerly West End Volunteer Rescue Squad), Chesterfield Fire and EMS, Richmond Fire and Emergency Services and the EMS program at J. Sargent Reynolds Community College. We have planned our Advanced Trauma Care for Nurses, Trauma Nursing Core Course and PHTLS schedules for the year and anticipate a significant increase in those classes as well. ATCN is a course that brings nurses together with doctors during the ATLS course. The center and VCU Medical Center trauma program brought ATCN to Virginia and have helped other institutions start their programs as well. TNCC is a stand-alone nursing trauma course developed by the Emergency Nurses Association. We offer these courses for staff and community providers throughout Central Virginia.

School of Medicine
Through the center, all second-year medical students received Basic Life Support for Healthcare Provider again this year. This program, now more than 10 years old, was started to meet the needs of these medical students. The model used is a train-the-trainer approach in which select M-II students are identified to attend instructor training; then, with administrative assistance from the center, the student instructors train their own class. It has allowed the School of Medicine to provide this training in a cost-effective manner. Center faculty also participate in School of Medicine courses in which interdisciplinary groups of senior medical and nursing students participate in team exercises using high-fidelity mannequins in School of Medicine and School of Nursing simulation centers. Our participation primarily focuses on the sessions related to resuscitation cases. We plan on participating in the capstone course for graduating students by providing opportunities for Advanced Cardiac Life Support and BLS certification, which have been very popular.

Graduate medical education
We continue to provide renewal training in ACLS, Pediatric Advanced Life Support and ATLS for house staff throughout the year in departments ranging from general surgery to internal medicine, emergency medicine, pediatrics, obstetrics and gynecology, and oral surgery. We also offer training for periodontics and pediatric dentistry specialties.

Emergency medical services education
The year 2013 saw a 40 percent increase in the number of EMS students attending advanced life support programs (EMT Intermediate and Paramedic). VCU provides state-of-the-art EMS education using expert faculty from VCU Medical Center. Students spend thousands of hours in clinical rotations at the medical center honing their assessment and invasive skills under the watchful eyes of experts. In addition, during 2013 we tripled the number of EMT students who attended our program. We also took these programs into rural areas to meet the needs of often underserved populations. For more than 30 years, the center’s mission has been to provide EMS education to those who serve their communities with honor.

The center graduated students from the following emergency medical services education courses:

- EMT to Intermediate (Southside Virginia Emergency Crew, Petersburg, Virginia)
- EMT to Intermediate (Goochland County Fire-Rescue, Maidens, Virginia)
- Intermediate to Paramedic (Old Dominion Emergency Medical Service Alliance, Johnston-Willis Hospital, Richmond, Virginia)
- EMT to Paramedic (Richmond Ambulance Authority, Richmond, Virginia)
- EMT (Holly Grove Volunteer Rescue Squad, Bumpass, Virginia)
New programs include:

- EMT (Amelia Emergency Squad, Amelia, Virginia)
- EMT to Intermediate (Colonial Heights Fire and EMS, Colonial Heights, Virginia)
- EMT to Paramedic (VCU Medical Center, Richmond, Virginia)
- EMT to Intermediate (Henrico County Division of Fire, Henrico, Virginia)

Courses starting spring 2014:

- EMT to Paramedic (Old Dominion Emergency Medical Service Alliance, Johnston-Willis Hospital, Richmond, Virginia)
- Intermediate to Paramedic (Old Dominion Emergency Medical Service Alliance, Johnston-Willis Hospital, Richmond, Virginia)
- EMT (VCU Medical Center, Richmond, Virginia)

We are finalizing agreements to partner with Fairfax County Fire and Rescue (one of the largest fire and EMS systems in the country). Our plans include Intermediate to Paramedic training as well as EMT to Paramedic training.

An annual report was recently submitted to the accrediting body and was accepted. The program director submitted a CoAEMSP five-year site review report in March 2014. The site visit is anticipated November 2014.

The paramedic program is undergoing additional curriculum changes as new EMS education standards are being implemented. The VCU program underwent major revisions to the Intermediate to Paramedic bridge curriculum and a significant number of additional hours were added to meet the latest standards. These revisions are now being incorporated into the EMT to Paramedic curriculum. Overall, VCU pass rates during this transition have been positive. The newest changes revolve around competency verification with an emphasis on high-fidelity simulation. There is a proposed change in the way faculty will evaluate student competency, particularly as it relates to the psychomotor component of the national board examination. VCU has been asked to pilot the changes related to evaluation of competency in 2014 and 2015.

**Department of Corrections**

After nearly 14 months of program planning and negotiations with the Virginia Department of Corrections, a memorandum of understanding with the department was approved in October 2013. Center staff members worked feverishly to obtain equipment, design the program and prepare for the initial training program that began in January 2014. This is a three-year agreement to standardize CPR and first-aid training across all 24 facilities in Virginia as well as in the department’s east and west training academies. The goal is to provide 100 trainers with the requisite knowledge, skills and equipment and then monitor the program going forward as nearly 11,000 staff members receive training over the next year or so.

**School of Nursing**

The VCU School of Nursing has partnered with us in the past to provide the required BLS training for new and returning nursing students. We anticipate continuing the training in early spring.
Children’s Hospital of Richmond at VCU – Level 1 pediatric trauma center

Children’s Hospital of Richmond at VCU has partnered with us to provide EMS-specific pediatric education for the pre-hospital community. Using the newly revised Emergency Pediatric Care program developed by the National Association of EMTs, the center, along with CHoR faculty, has taken this very popular training program to the Henrico County Division of Fire, Tappahannock, Hanover and, most recently, to the Virginia EMS Symposium in Norfolk, Virginia. The students’ reviews from Norfolk were so positive that we have been asked to present again next year.

Education and professional development

In partnership with VCU Health System education and professional development, the center provides initial and renewal training for ACLS and PALS for all nursing services personnel. On average, nearly 1,000 health system employees attend educational offerings through the center each year.

**CTCCE staff**

Rao R. Ivatury, M.D., FACS, FCCM  
Medical director

James H. Gould Jr., R.N., EMT-P  
Director

Kenneth L. Williams, M.Div., EMT-P  
Director, Paramedic Program

Beau Bouharoun, M.B.A., EMT-P  
Coordinator, hospital and field rotations

Garret W. Lewis, EMT-P  
Coordinator, Virginia Department of Corrections training program

Margaret E. Goslin, M.B.A.  
Coordinator, operations

Jonathan A. Scheer  
Administrative assistant

Claire M. Schoen  
Receptionist/registration assistant
Injury and Violence Prevention Program

VCU health care providers are committed to putting a stop to injury and violence in Central Virginia.

The Injury and Violence Prevention Program at VCU Medical Center is a multidisciplinary coalition of health care providers dedicated to reducing and preventing injury and violence throughout Central Virginia. In 2012 and 2013, IVPP experienced significant growth, establishing a leadership role at the local, state, national and international levels in injury and violence prevention through education, research and combined hospital-community outreach efforts.

IVPP programs

Awareness, Education, Documentation
A hospitalwide injury awareness and education program for staff, patients and families, the Awareness, Education, Documentation project integrates clinical units into active educational initiatives and projects to raise injury awareness and improve documentation of risk and protective factors. In 2012 and 2013, the program drew participation from units across the entire spectrum of patient care. The following departments adopted the AED program: emergency department (adult and pediatric), burn unit, Surgical Trauma ICU, Neurosurgery ICU, main trauma inpatient units and pediatric inpatient units. IVPP summer interns created 10 new presentations that will be distributed and made available to participating floors and units.

Emerging Leaders:

a new violence prevention initiative
Emerging Leaders: East End, a pilot program and collaborative initiative between the IVPP, the Boys & Girls Clubs of Metro Richmond, the VCU Health System and the VCU Police Department, addresses the reduction of youth violence through a multifaceted approach.

This innovative pilot program was designed to prevent violence, especially among young people in the East End of Richmond, Virginia, where aggression has increased and where the Boys & Girls Clubs has a growing presence.

With generous funding from the VCU Health System for the past two years, the collaboration shares the goal of reducing the number of youths who are engaged in violence and providing exposure to careers in health care. The pilot program also aims to increase the skills that preteens and early teens living in the East End possess to succeed in life, this translates into hope and direction for their future, discouraging them from using violence as a strategy or becoming a victim of violence.

Emerging Leaders comprises at-risk youths living in the East End of Richmond who are identified through encounters in the VCU Health System’s Pediatric Emergency Department and through the Martin Luther King Jr. and Fairfield Court Boys & Girls Clubs. Approximately 400 youths — ages 12-16, living in the East End’s 23223 ZIP code and presented to the Pediatric ED — are screened to determine risk. Youths receive a brief, hospital-based intervention by a social worker or nurse to help the family and youth identify needs, explore support systems and create a plan for safety. The provision of services to youths in the Pediatric ED marks a pioneering expansion of current IVPP capacity.

Once identified, youths receive post-discharge case-management services from IVPP and are referred to the Emerging Leaders: East End program. As part of the program, the Boys & Girls Clubs provides activities to strengthen skills needed to prepare youths for success, including internship and career exposure opportunities. IVPP directs the health careers component, including opportunities to shadow health care professionals, visit units in the VCU Medical Center, learn about health care careers and be introduced to emergency management.

Emerging Leaders: East End began enrolling participants in late summer 2013, with 50 youths participating.

Project EMPOWER

Project EMPOWER is a multidisciplinary program dedicated to enhancing prevention and intervention services to individuals experiencing intimate partner violence or sexual assault.

The intimate partner violence program, a hospitalwide initiative to enhance awareness of issues surrounding intimate partner violence experienced by patients and employees, trains health care providers how to screen and assess for IPV and to provide the appropriate resources. The Project EMPOWER team works collaboratively with multiple partners from VCU’s medical and academic campuses as well as from the community.

Generous funding from the Richmond Memorial Health Foundation and the Altria Companies Employee Community Fund now supports a full-time project coordinator who trains providers and offers direct services to patients across all health system settings. She also offers referrals, case management and counseling to patients post-discharge in the community.

Project EMPOWER delivers ongoing health care provider training utilizing an evidence-based screening protocol developed by the Virginia Department of Health. The training is designed to educate providers on how to routinely inquire about current and past violence, ask direct questions, document findings, assess safety and review options and referrals. In conjunction with forensic nursing and an IPV survivor, Project EMPOWER’s coordinator trained 94 employees in 2012 and 317 employees in 2013. Additionally, an internal partnership to provide intimate partner violence training has been formed with the Department of Nursing Education’s Nurse Residency Program, a professional education program for newly hired nurses. Our Project EMPOWER trainers have been named program facilitators and the training satisfies the “cultural learning component” of the program.
In 2012 and 2013, the MCV Hospitals Auxiliary awarded substantial funds to provide much-needed financial assistance to patients and employees who have been victims of IPV or sexual assault. Working with hospital staff and community partners, the IPV crisis fund provides applicants with transportation assistance, short-term hotel accommodations and gift cards to cover food, clothing and fuel — essential items to assist them in leaving their abusers and securing safe housing. Close to 100 patients, many with young children in their households, have received assistance from the crisis fund each year.

Project EMPOWER continued a partnership with Rosemary Trible and her international Fear2Freedom nonprofit organization that raises awareness of issues regarding sexual assault through a multifaceted approach, including providing sexual assault and IPV victims in the VCU Emergency Department with a care package of clothing and personal care items. In addition to helping coordinate two universitywide Fear2Freedom events, Project EMPOWER hosts a lunch lecture for nursing and medical students each year, focusing on educating future providers on recognizing IPV in their patient populations.
Project EMPOWER has been recognized on multiple levels for program accomplishments. In 2012, Project EMPOWER had poster presentations at the Virginia Chapter of the International Association of Forensic Nurses, VCU Health System’s “The Total Woman Health Conference” and at the VCU Institute for Women’s Health Research Day “From Bench, to Bedside, to Community: Focal Topics in Women’s Health Research.” The team won the Building Interdisciplinary Bridges in Women’s Health Research Award at the latter event. Project EMPOWER gave oral presentations at the 20th Annual International Association for Forensic Nursing Scientific Assembly in Fajardo, Puerto Rico, and at the 2013 Panamerican Trauma Conference. In 2013, Project EMPOWER also received a Catalyst award in the Nexus category, given by the Virginia Sexual and Domestic Violence Action Alliance. This award honors a team that exemplifies collaboration and interdisciplinary accomplishments.

**Bridging the Gap**

Bridging the Gap is a combined hospital-community youth violence prevention program aimed at reducing the risk of re-injury of Richmond-area youths, ages 10 to 24, hospitalized for violence-related injuries including gunshot wounds, stab wounds and assault injuries. The program provides a brief intervention designed to provide emotional support to hospitalized youth, help them develop safety plans and offer referrals to community resources. Post-discharge, intensive youth and family case management services are provided by VCU Medical Center’s violence prevention coordinator, in partnership with community organizations, for six months to provide pro-social opportunities, positive role models and family and community support to break the cycle of violence.

In 2012 and 2013, funding from the Robins Foundation and the Jenkins Foundation supported the expansion of program staff, which now includes a full-time coordinator. The program focused on maintaining and increasing enrollment, augmenting staff to meet enrollment needs, increasing in-kind hospital support through the creation of volunteer groups of nursing and medical students, increasing program visibility, further developing community partnerships and developing protocols involving key hospital personnel for instituting the program as standard hospital practice.
In 2012 and 2013, the program continued to participate in the National Network on Hospital-based Violence Intervention Programs, receiving stipends for staff to attend annual conferences where they collaborate with other leaders in this field to develop further knowledge on best practices. In 2013, the program was one of three to receive a Sponsored Site Visit award from the network, allowing the team to participate in cross training with the Wraparound Project at San Francisco General Hospital Medical Center.

Bridging the Gap has served more than 100 patients and their families to date. A preliminary analysis of the program revealed the importance of hospital-based interventions but underscored the need for combined community case management services, which showed significant improvement in risk-factor reduction and hospital and community service utilization.

**Violence assessment and intervention service**

In 2012 and 2013, IVPP continued to offer an in-hospital intervention service program to all victims with intentional injuries admitted to VCU Medical Center, a Level 1 trauma center. This violence assessment and intervention service provides support needed to coordinate follow-up care, mental health care, emergency financial assistance and other resources as needed. The team works closely with hospital providers and community partners to screen for additional post-discharge needs and to offer follow-up support when needed. More than 150 patients have received this service.

In 2013, IVPP’s violence prevention initiatives were presented at the Virginia Chapter of the International Association of Forensic Nurses conference, the 2012 Panamerican Trauma Conference in Colombia and the 2013 Panamerican Trauma Conference in Chile. Also, Stephanie Goldberg, M.D., assistant professor in the Division of Acute Care Surgical Services, received the John Templeton, Jr., MD Injury Prevention Research Scholarship of the EAST Foundation. Her research will focus on the prevalence and prevention of post-traumatic stress symptoms in a violently injured civilian population.

**Get Real-Alcohol/Drug Choices and Consequences for Youth**

Get Real-Alcohol/Drug Choices and Consequences for Youth, or GR-ACY, is a youth alternative sentencing program for teens, ages 14-18, and for adults participating in adult drug court, with alcohol- and drug-related charges. GR-ACY provides an interactive 18-hour educational program promoting better choices for juveniles and adults through observation of trauma patients across the continuum of care, simulation activities, educational workshops, at-home activities and community service.

GR-ACY participants are referred from the Chesterfield Adult Drug Court, Chesterfield Juvenile and Domestic Relations Court, the city of Richmond’s Thirteenth District Court Services Unit and the Hanover County School System. Supported in 2012 and 2013 through funding from the Virginia Department of Motor Vehicles, GR-ACY served 43 participants in 2012 and 66 in 2013. It also received program funding from the Whole Foods: Nickels for Nonprofits in 2012 and MCV Hospitals Auxiliary in 2013.

Preliminary analysis of the program showed a positive impact on both participants and parents. Most participants reported that GR-ACY changed their perceptions of the potential effects of alcohol and/or drugs and all stated the component of GR-ACY with the greatest impact was the direct observation of the patients in the hospital. These findings were presented during a poster session at the 2012 Panamerican Trauma Conference and at the 2013 International Nurses Society on Addictions conference. In 2012, GR-ACY was awarded the Governor’s Transportation Safety Award in the Impaired Driving category, and Christi Adams, R.N., M.S.N., CCRN, CCNS, won the VCU Health System Magnet Nurse of the Year award for her work as the GR-ACY project leader.

**Project IMPACT – Impacting Minors’ Perception and Cognizant attitudes toward Trauma**

A collaboration with VCU Medical Center’s Trauma Program, forensic nurse examiners, pre-hospital providers and LifeEvac, Project IMPACT provides injury-prevention educational programs to high school students in Central Virginia.

Education and hands-on simulation activities — including participation in high-risk behavior scenarios and extricating a car crash victim — provide students with tools to make safe alternative choices when confronted with high-risk behaviors and situations, such as the dangers associated with driving distractions, dating, gangs, alcohol and suicide prevention.

In 2012 and 2013, Project IMPACT was offered in two local high schools with significant community participation and positive post-evaluation feedback.

**IVPP summer internship program**

In summer 2013, IVPP conducted its first summer internship program for six weeks. The class of 10, composed of VCU undergraduate students, medical students and a master’s-level social work student, participated in multiple shadowing opportunities, a trauma survivor speaker series, an injury prevention lecture series, journal discussions and group projects. Each student was paired with a faculty or staff mentor to conduct a research project related to injury and violence prevention. The internship culminated with formal presentations of group and individual projects.
International outreach
Trauma organizations work to improve the health of communities throughout the developing world.

The International Trauma System Development Program, the international component of the VCU Division of Acute Care Surgical Services, focuses on the enhancement and development of systems for the prevention, diagnosis and treatment of trauma through collaborative projects with local health ministries and existing medical and public health institutions in developing nations.

Based on the extensive international efforts of the ITSDP, VCU became the headquarters for the Panamerican Trauma Society, the leading academic trauma society and umbrella organization for 18 national trauma societies in North, Central and South America.

The goal of the PTS is to become the leading society for development and promotion of the standards and guidelines of care in the Americas for the injured patient.

In the past three years, this objective has been steadily realized with a demonstrable improvement in trauma and EMS system development, quality improvement, research, education and training.

VCU Medical Center’s Level 1 trauma center serves as the leading institution and model for the promotion and establishment of the various components of EMS system development in the region of the Americas and the Caribbean. As a by-product of such activities, VCU is currently widely recognized as a formidable international center for the advancement of trauma care in high-, middle- and low-income country settings. This has had a significant impact in our current recruitment of residents, staff and faculty, as well as in the exposure and involvement of our students, residents and staff in various global health projects.

Activities carried out since 2011 by the PTS include:

- Development of a successful International Academic Congress held in Paraguay (2011), Colombia (2012) and Chile (2013) with internationally renowned speakers representing 23 countries. VCU’s involvement has been significant and has included the participation of attending physicians, residents, nurses, students and administrative and technical support staff.

- Incorporation of medical student leadership and international administrative and training initiatives with a VCU ITSDP medical student chapter serving as a model for other international student organizations.

- Development of an International Observership Program for trauma system development. This has allowed for collaborations between various international academic institutions, VCU departments, the Richmond pre-hospital community and other U.S.-based trauma centers. Since 2011, nine international observers participated, including the chair of the Chilean Surgical Society and general surgery chair of the University of Santiago, Ana Maria Pacheco, M.D.

- Collaborative work with the VCU Center for Trauma and Critical Care Education and the Virginia Association of Volunteer Rescue Squads Inc., which led to the development of an international pre-hospital exchange program in September 2012. Four EMS leaders from four cities in Colombia participated in an extensive three-week academic and training exchange with rural and urban agencies in Virginia.

- Development and promotion of an international, Web-based trauma registry in four sites in three countries with additional requests from 11 other sites in nine additional countries.

- Development of a functional, multilingual PTS website with VCU-supported coordination and Web management.

- Development of formal collaborations with international nursing organizations and the VCU School of Nursing.

- Development of an international network and collaboration between trauma programs and injury units, including the World Health Organization, Johns Hopkins University and the International Association for Trauma and Intensive Care. In 2012, Michael B. Aboutanos, M.D., M.P.H., FACS, was invited to serve on the Trauma Data Group committee for WHO’s Global Alliance for Care of the Injured. TDG serves as a resource to the GACI with information on trauma data fields which are required for internal quality control and continuous quality improvement processes as well as for external bench marking by facilities providing trauma care around the world. In 2013, PTS became an official member of WHO’s GACI, with VCU as the headquarters.

International Trauma System Development Program and Panamerican Trauma Society staff

Rao R. Ivatury, M.D., FACS, FCCM
Executive director, Panamerican Trauma Society

Michel B. Aboutanos, M.D., M.P.H., FACS
Secretary-treasurer, Panamerican Trauma Society

Paula Ferrada, M.D., FACS
Co-chair, Committee on Education, Panamerican Trauma Society

Stephanie Goldberg, M.D.
Co-chair, Committee on Prevention, Panamerican Trauma Society

Lina V. Mata, M.D.
Coordinator, Panamerican Trauma Society Observership and Trauma Registry Program, International Trauma System Development

Sudha Jayaraman
Student adviser, International Trauma System Development Program

Gladys Soruco Shanklin, M.H.R.M.
International coordinator, Panamerican Trauma Society
Publications, presentations and research

Division of Acute Care Surgical Services

Selected articles


Department of Emergency Medicine


2013


Department of Neurosurgery
2011

2012


2013


Department of Orthopaedic Surgery
2012


2013


2013


Department of Radiology
2013


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