

FLORIDA TRAUMA SYSTEM ANNUAL REPORT

2010

Together, we save lives.

<http://fl.traumasystem.com>



A MESSAGE FROM THE STATE SURGEON GENERAL OF FLORIDA



DOH Mission Statement: To protect and promote the health of all residents and visitors in the state through organized state and community efforts, including cooperative agreements with counties.

On behalf of the Florida Department of Health and our trauma system leaders and partners, I am pleased to present to you the *2010 Florida Trauma System Annual Report*. December 2010 marked the close of our efforts to successfully implement the 2005 to 2010 Florida Trauma System Five-Year Strategic Plan. The Office of Trauma has done an outstanding job accomplishing 92 percent of the plan strategies with the assistance of the trauma system continuum-of-care partners and providers throughout the state.

Florida's trauma system is a well organized and inclusive continuum-of-care system that spans from planning, preparedness, and quality assurance to ensure Florida's residents and visitors receive timely and quality trauma services. Through collaborative research, Florida's nationally recognized trauma system continuum-of-care providers and researchers work together to partner with public health systems at the local, regional, and state levels to ensure Florida's inclusive trauma system saves the lives of those injured – from the "Golden Hour" throughout the continuum-of-care.

Florida's trauma system serves all of Florida by being prepared for bombs, burns, blasts, natural disasters, and other mass casualty events; providing life-saving trauma care 24/7, 365 days a year; and by providing ongoing prevention, education, research, and evaluation to improve trauma system performance. Since my appointment as the State Surgeon General in 2011, I have learned that every component of our trauma system continuum-of-care is essential to prevent injuries and save the lives of Florida's residents and visitors. Florida's trauma system providers and partners are unified, accountable, and prepared. They are dedicated and committed to continuously seek ways to ensure the provision of quality pre-hospital, trauma acute care, rehabilitative services, as well as community reintegration assistance are available to save lives and improve the quality of life of individuals in our state who have been traumatically injured.

In 2010, the Florida Trauma Registry continued to provide the trauma patient and quality improvement data to keep Florida in the forefront. The registry data indicates the trauma center gross discharges per year has increased from 38,744 in 2005 to 44,388 in 2010; however, the trauma mortality rate has decreased from 6.5 percent in 2002 to 4.9 percent in 2010. This decrease in trauma center mortality rate is due to the addition of three trauma centers since 2005; the continuous trauma center performance improvement activities; the implementation of the Diaphragm Pacer Program; the 268 clinical and pharmaceutical research projects; burn care, disaster management and other training and education programs for trauma system providers; and 378 evidenced-based injury prevention and community outreach programs of Florida's trauma centers, such as "Prom Night."

In 2010, the department's federal preparedness grant provided start-up and some additional sustainment funding to the Office of Trauma to implement and expand the Florida Trauma Telemedicine Network that now includes a total of seven trauma centers linked with satellite community and rural hospital emergency rooms within their respective service areas. This network provides technology to share valuable medical information between the trauma centers and the rural and community hospitals; provide trauma consultation and continuing education; as well as treat and care for trauma patients in the event of a public health incident. If adequate start-up and sustainment funding is made available in the future, the trauma system's ultimate goal is to expand this telemedicine network to provide this life-saving medical consultation and treatment for trauma patients in all communities throughout Florida.

In 2010, the Office of Trauma and the members of the Florida Trauma System Plan Advisory Committee and its nine planning teams also developed and published the new 2011-2015 Florida Trauma System Strategic Plan. The new plan was developed, utilizing the review of accomplishments and lessons learned from previous plans, and consensus building strategic planning sessions with the department leadership and representatives from the trauma system providers and partners. Over the next five years, the department and its partners will continue to focus on improving the following areas: Leadership; injury prevention and control; disaster preparedness and response planning; pre-hospital care and transport; trauma center access to care; medical rehabilitation access to care; regional system evaluation; as well as trauma registry and research.

These are only a few of the major accomplishments of the Florida Trauma System providers and partners included in this *2010 Florida Trauma System Annual Report*. The Florida Trauma System providers and partners should be applauded for their dedication and their collaborative efforts to continuously improve the quality of Florida's trauma system to ensure our residents and visitors have access to timely and quality trauma care.

Sincerely,

H. FRANK FARMER JR., MD, PhD, FACP
STATE SURGEON GENERAL

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GLOSSARY OF TERMS AND ACRONYMS

AACN	<i>Advanced Automatic Crash Notification</i>	CY	<i>Calendar Year</i>
ABA	<i>American Burn Association</i>	DEMO	<i>Division of Emergency Medical Operations</i>
ABG	<i>Arterial blood gas</i>	DOD	<i>Department of Defense</i>
ACEP	<i>American College of Emergency Physicians</i>	DOH	<i>Department of Health</i>
ACLS	<i>Advanced cardiac life support</i>	DOJ	<i>Department of Justice</i>
ACS	<i>American College of Surgeons</i>	DOT	<i>Department of Transportation</i>
AHCA	<i>Agency for Health Care Administration</i>	DVT	<i>Deep vein thrombosis</i>
ALS	<i>Advanced life support</i>	EMS	<i>Emergency medical services</i>
AHEC	<i>Area health education center</i>	EMS-C	<i>Emergency Medical Services for Children Program</i>
ARNP	<i>Advanced registered nurse practitioner</i>	EMSTARS	<i>Emergency Medical Services Tracking and Reporting System</i>
ASPR	<i>Assistant Secretary for Preparedness and Response</i>	EMT	<i>Emergency medical technicians</i>
ATLS	<i>Advanced trauma life support</i>	EMT-P	<i>Emergency medical technician paramedic</i>
BIAA	<i>Brain Injury Association of America</i>	ED	<i>Emergency department</i>
BIAF	<i>Burn Injury Association of Florida</i>	ER	<i>Emergency room</i>
BLS	<i>Basic life support</i>	ENCARE	<i>Emergency Nurses Cancel Alcohol-Related Emergencies</i>
BSCAC	<i>Brain and Spinal Cord Injury Advisory Council</i>	ENPC	<i>Emergency nursing pediatric curriculum</i>
BSCIPA	<i>Brain and Spinal Cord Injury Association</i>	F.A.C.	<i>Florida Administrative Code</i>
BSCIPC	<i>Brain and Spinal Cord Injury Center</i>	FAHSA	<i>Florida Association of Homes and Services for the Aging</i>
BSCIP	<i>Brain and Spinal Cord Injury Program</i>	FAMU	<i>Florida Agricultural and Mechanical University</i>
B.S.N.	<i>Bachelor of Science, Nursing</i>	FEMA	<i>Federal Emergency Management Agency</i>
BTLS	<i>Basic trauma life support</i>	FCOT	<i>Florida Committee on Trauma</i>
CARGO	<i>Communities Addressing Responsible Gun Ownership</i>	FHA	<i>Florida Hospital Association</i>
CATN	<i>Certified American Trauma Nurse</i>	FHCA	<i>Florida Health Care Association</i>
CCRN	<i>Certified critical care registered nurse</i>	FS	<i>Florida Statutes</i>
CDC	<i>Centers for Disease Control and Prevention</i>	FY	<i>Fiscal Year</i>
CEN	<i>Certified emergency nurse</i>	GIS	<i>Global information systems</i>
CEU	<i>Continuing education unit</i>	HB	<i>House Bill</i>
CIP	<i>Coalition on Injury Prevention</i>	HEICS	<i>Hospital Emergency Incident Command System</i>
CIREN	<i>Crash Injury Research and Engineering Network</i>	HMA	<i>Health Management Associates</i>
CME	<i>Continuing medical education</i>		
CPR	<i>Cardiopulmonary resuscitation</i>		
CVITU	<i>Cardiovascular thoracic and trauma unit</i>		

GLOSSARY OF TERMS AND ACRONYMS

HRSA	<i>Health Resources Services Administration</i>	SERC	<i>State Emergency Response Commission</i>
ICU	<i>Intensive care unit</i>	SICU	<i>Surgical intensive care unit</i>
ICISS	<i>International classification injury severity score</i>	SNF	<i>Skilled nursing facility</i>
IRB	<i>Institutional review board</i>	STSPIC	<i>State Trauma System Plan Implementation Committee</i>
ISS	<i>Injury severity score</i>	SWOT	<i>Strengths, Weaknesses, Opportunities, and Threats analysis</i>
JCAHO	<i>Joint Commission on the Accreditation of Healthcare Organizations, now called "The Joint Commission"</i>	TAC	<i>Trauma audit committee</i>
LEPC	<i>Local emergency planning commission</i>	TATRC	<i>Telemedicine and Advanced Technology Research Center</i>
MSN	<i>Master of Science, Nursing</i>	TBI	<i>Traumatic brain injury</i>
NGTR	<i>Next Generation Trauma Registry</i>	TICU	<i>Trauma intensive care unit</i>
NHTSA	<i>National Highway and Traffic Safety Administration</i>	TMC	<i>Trauma medical consultant</i>
NICU	<i>Neonatal intensive care unit</i>	TNCC	<i>Trauma nurse care curriculum</i>
NIDRR	<i>National Institute for Disability and Rehabilitation Research</i>	TPM	<i>Trauma program manager</i>
NIH	<i>National Institutes for Health</i>	TTP	<i>Trauma transport protocol</i>
NINDS	<i>National Institute of Neurological Disorders and Stroke</i>	VHA	<i>Veterans Health Administration</i>
NTDB	<i>National Trauma Data Bank</i>	WMD	<i>Weapons of mass destruction</i>
OR	<i>Operating room</i>		
OT	<i>Occupational therapy</i>		
PALS	<i>Pediatric advanced life support</i>		
PICU	<i>Pediatric intensive care unit</i>		
PSA	<i>Public service announcement</i>		
PT	<i>Physical therapy</i>		
PTLS	<i>Pediatric trauma life support</i>		
QI	<i>Quality improvement</i>		
RDSTF	<i>Regional Domestic Violence Task Force</i>		
RN	<i>Registered nurse</i>		
RPICC	<i>Regional perinatal intensive care center</i>		
SB	<i>Senate Bill</i>		

OFFICE OF TRAUMA PURPOSE AND VALUES

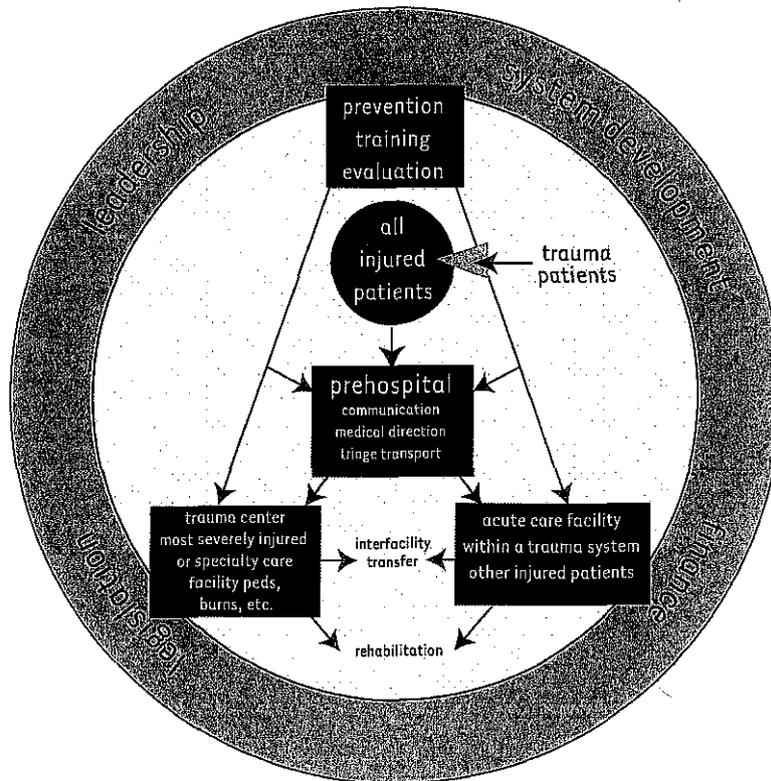
PURPOSE:

Facilitate, promote, and ensure that residents and visitors of Florida receive quality trauma care through planning, preparedness, and quality assurance.

All traumatically-injured patients in Florida will receive quality care at a trauma center within the "Golden Hour." We put the patient first – always!

VALUES:

- **Integrity:** Our guide for our actions – which incorporates our commitment to honesty, fairness, loyalty, and trustworthiness – is in the best interests of our customers and employees.
- **Commitment to Service:** We dedicate ourselves to provide services unconditionally and without partiality.
- **Respect:** We recognize and honor the contributions of one another in our daily activities and create an environment in which we appreciate and encourage diversity.
- **Excellence:** We achieve and maintain quality results and outcomes through continuous performance improvement and learning.
- **Accountability:** We take full responsibility for our behavior and performance.
- **Teamwork:** We encourage active collaboration to solve problems, make decisions, and achieve common goals.
- **Empowerment:** We create a culture that encourages people to exercise their judgment and initiative in pursuit of our goals.



OFFICE OF TRAUMA SCOPE OF SERVICES

LEGISLATIVE AND STRATEGIC PLANNING

- Access to trauma care, trauma agencies and regional and trauma service area strategic planning (ss. 395.40, 395.50, 395.401, 395.4015, and s. 395.402, *F.S.*, and Rules 64J-2.007- 2.010, *F.A.C.*)
- Trauma Transport Protocols: Pre-hospital transport of patients to trauma centers vs. non-trauma centers (s. 395.4045, *F.S.*, and Rules 64J-2.002 – 2.004, *F.A.C.*)
- Five-year strategic plan development and implementation, quarterly and annual report updates on progress and plan revisions (ss. 395.40, 395.401, 395.4015, 395.402, *F.S.*)
- Legislative Planning and Rule Promulgation (s. 395.405, *F.S.*)

PREPAREDNESS (HRSA/ASPR Grant Requirements)

The following are Office of Trauma collaborative functions with the Bureau of Preparedness and Response:

- CBRNE planning/development (Bombs, Burns, and Blast goals) and coordination with the American College of Surgeons' Standards of Care and Practices
- Disaster readiness (annual needs assessment/surge capacity)
- Disaster management education/training/drills and annual evaluation
- Hospital supplies and equipment for trauma centers and acute care hospitals to include competency skills lab, education/training, and annual evaluation
- Curriculum development and education of EMS providers and trauma and emergency room physicians and nurses through the distribution of the Burn Care, Hand Emergencies, and Rural Health DVDs and the *Burn Center* web-based training program
- ESF 8 Trauma functions
- Telemedicine Project implementation, evaluation and sustainability
- Collaboration and coordination of the Implementation of the Communications and Patient Tracking System in trauma centers

TRAUMA CENTER PAYMENTS

- Trauma Center Funding/Payments and Legislative Compliance (ss. 318.14, 318.18(15) 395.403 and 395.4036, *F.S.*, and Rule 64J-2.019 – Funding for Verified Trauma Centers, *F.A.C.*)

PREVENTION AND EDUCATION

- Monitoring and evidenced-based evaluation of injury prevention and education programs of the trauma centers (currently 215 programs) (s. 395.4025, *F.S.* and Rule 64J-2.011 - Florida Trauma Center Standards, *F.A.C.*)
- Mass Casualty Events and Mild Traumatic Brain Injury (TBI) HRSA Grant
- TBI Patient Education HRSA Grant
- TBI Strategic Plan Implementation

PREVENTION AND EDUCATION

The following are Office of Trauma collaborative functions with the Bureau of Brain and Spinal Cord Injury:

- Integrated Site Surveys of Trauma Centers
- Ventilator-Dependent Rehabilitation Program
- Diaphragmatic Pacer Program
- Pediatric Rehabilitation Program
- Spinal Cord Program/Preventive Ulcer Program

OFFICE OF TRAUMA SCOPE OF SERVICES

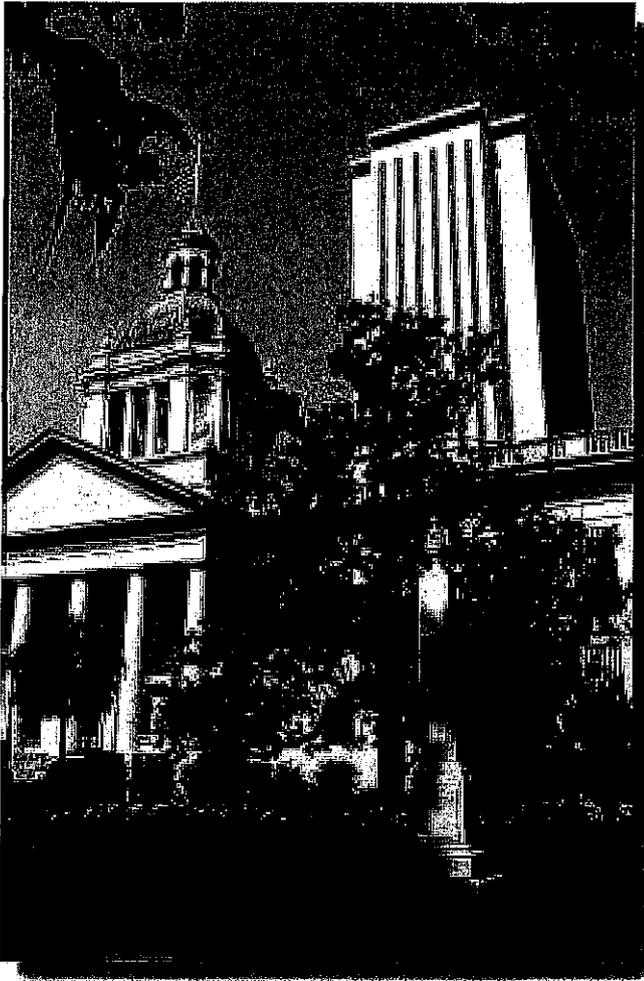
TRAUMA REGISTRY AND RESEARCH (ss. 395.402, 395.404, *F.S.*, 395.4025, *F.S.*, and Rule 64J-2.011 - Florida Trauma Center Standards, *F.A.C.*)

- Quarterly Florida Trauma Registry data collection, analysis and trending
- Oversight of trauma center research projects and studies
- Florida Trauma Registry Report annual report
- Florida Trauma Research Journal which spotlights research projects of the 22 trauma centers
- Trauma center quality indicator reporting (quarterly) ongoing technical assistance
- Annual assessments of the Florida Trauma Service Areas

PERFORMANCE IMPROVEMENT AND QUALITY ASSURANCE

- Trauma center application and "Letter of Intent" process (s. 395.4025, *F.S.*, and Rules 64J-2.011 – 2.013, *F.A.C.*)
- Trauma center requirements, standards, and trauma center site survey process (certification every seven years; site survey third and sixth years) (s. 395.4025, *F.S.*, and Rules 64J-2.011 – 2.017, *F.A.C.*)
- Integrated Brain and Spinal Cord injury and Trauma Site Survey Process
- Trauma transport protocol compliance reviews (s. 395.4045, *F.S.*, and Rules 64J-2.003 – 2.005, *F.A.C.*)
- Florida Trauma Agency Annual Five-Year Plan reviews (ss. 395.50 and 395.51, *F.S.*, and Rules 64J-2.007 and 64J-2.008, *F.A.C.*)
- Monitoring and evaluation of quality assurance activities of the trauma centers and trauma agencies (ss. 395.50, 395.51, 395.4025, *F.S.*, and Rules 64J-2.007 – 2.017, *F.A.C.*)
- End-of-Life Program (Do Not Resuscitate Orders) (ss 381.0011 and 401.45(3), *F.S.*; and Rule 64J-2.018, *F.A.C.*)
- Trauma scorecard compliance (system and programmatic indicators and measures, which include health outcomes, customer focus, workforce focus, financial, organizational effectiveness, as well as leadership and social responsibility)

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Chapter 395, Part II, and Chapter 401, *Florida Statutes* (F.S.), provides the Florida Department of Health with the authority for the oversight of all matters involving Florida's inclusive trauma system. In 2004, the Office of Trauma was established as the department's lead to plan, monitor, implement and evaluate the trauma center standards, trauma center verification site surveys, trauma center application process, the trauma center quarterly payouts of legislatively mandated funding, trauma agencies development and operation, state trauma system strategic plan, state trauma registry; the End-of-Life Program (Do Not Resuscitate Orders); and to regulate trauma transport protocols for the 272 licensed air and ground EMS providers and the four trauma agencies.

Florida's inclusive trauma system ensures a continuum-of-care for injured victims to include injury prevention programs; pre-hospital care; delivering patients to the closest trauma center; trauma care; rehabilitation; continued reintegrated services; trauma research and data collection; and the reporting of patient and quality improvement data to Florida's Trauma Registry. Most importantly, this valuable system returns Florida's injured residents and visitors back to society as productive members rather than long-

term wards of the state, and is the backbone of the state's response for mass casualty incidents.

Since 2000, when the first five-year plan was deployed, significant progress has been made to develop and improve Florida's inclusive trauma system. The Department of Health Trauma Leadership Team, Office of Trauma staff, and trauma related internal and external constituent group providers and partners continue each year to make strides forward towards better preparedness and improved patient outcomes. This can only be accomplished through a variety of collaborative resources, activities, assessments, trauma system quality assurance and improvement efforts, injury prevention, education, and research.

Section 395.40, F.S., requires the department to develop the Florida Trauma System Plan and update the plan annually. December 31, 2010 marked the final year of the second five-year Florida Trauma System Plan (2006-2010). The following is a summary of the 2010 highlights and accomplishments of Florida's inclusive trauma system from 2006 to 2010:

During 2010, the Florida Trauma System Plan Advisory Committee, established pursuant to ss. 20.43(6) and 395.40, F.S., and its nine planning teams held a series of conference calls and two face-to-face strategic planning sessions to develop and approve the new 2011-2015 Florida Trauma System Strategic Plan. The new plan was developed through a Plan-Do-Check-Act process, utilizing the 2009 SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats), lessons learned from the implementation of previous five-year plans, and input from the Florida Trauma System continuum-of-care providers and partners from the local, regional, and state levels. The department approved and published the new five-year plan in December 2010. A copy of the published 2011-2015 Florida Trauma System Strategic Plan can be obtained from the Office of Trauma's Florida Trauma System domain website at www.fl-traumasystem.com. (Click on the 2011-2015 Florida Trauma System Strategic Plan banner at the bottom of the home page.)

Throughout 2010, the Office of Trauma staff prepared quarterly action plan status reports and presented the reports to the Florida Trauma System Plan Advisory Committee and its nine planning teams for review and monitoring to ensure ongoing implementation and evaluation of the plan strategies. As of December 31, 2010 the Office of Trauma, with the assistance of its internal and external providers, partners, and constituent groups, completed 92 percent of the December 2005 to December 2010 State Trauma System Five Year Strategic Plan strategies. Eight percent of the strategies were in progress and were either repealed, revised, or incorporated into other goals and objectives in the new 2011-2015 Florida Trauma System Strategic Plan.

Currently, Florida has 22 verified trauma centers that directly provide trauma services to the residents and visitors of our state; however, there are four of the 19 trauma

EXECUTIVE SUMMARY

service areas (designated in section 395.402, *F.S.*) that are not directly served by a trauma center. Historically, the department has encouraged acute care hospitals to apply to become trauma centers through the Letter of Intent process, and has provided ongoing technical assistance to applicant hospitals. However, in the past two-three years, the department has received an increase in the number of applications for hospitals seeking to become trauma centers. In 2009, applications were received from seven hospitals, with four continuing the process towards becoming trauma centers. Throughout 2010, the Office of Trauma staff continued to provide technical assistance to applicant hospitals during the application, review, and provisional processes, culminating in a hands-on evaluation of their operations prior to determining the applicant hospital's ability to meet all of the requirements to operate as trauma centers in Florida. In July 2010, Lawnwood Regional Medical Center and Heart Institute was approved to operate as a Level II trauma center to cover trauma service area 14 (Martin, Okeechobee, and St. Lucie counties).

Each fiscal year, the Office of Trauma conducts provisional (initial certification), interim (third year after certification), renewal (sixth year after initial or renewal certifications), and focus site surveys utilizing out-of-state surveyors with the knowledge of trauma patient management as evidenced by experience in trauma care at a trauma center, approved by the governing body of the state in which they are licensed.

On December 9, 2010 the Office of Trauma held a rule development workshop on the trauma center Letter of Intent and application processes included in Rules 64J-2.012 and 2.013, *F.A.C.* The participants of this workshop commented that the Letter of Intent, the application and the extension processes and timelines were burdensome and restrictive. Since the timelines and processes are established in section 395.4025, *F.S.*, the Office of Trauma was not able to repeal the Letter of Intent process and application timelines currently in rule.

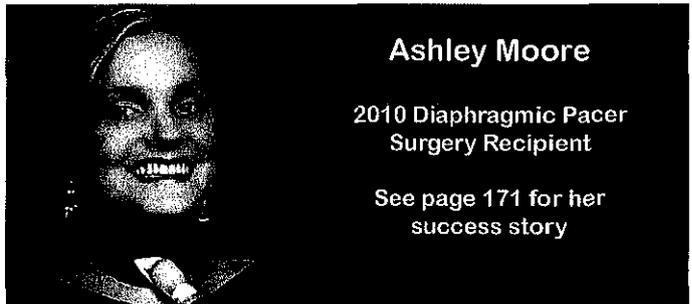
Based on the 2010 rule development workshops and through the 2011 statute and rule reviews and stakeholder input, the Office of Trauma would submit a legislative proposal for the 2012 Legislative Session to repeal the Letter of Intent process and the burdensome application and extension timelines. These statutory changes would allow the applicant hospitals seeking verification, and existing trauma centers seeking changes in verification, to submit a trauma center application at any time, once the hospital has met all the trauma center standards to operate as a provisional trauma center. More information regarding the Letter of Intent, application, and site survey processes are available in the "Trauma Center" section within this report.

The 2004 Comprehensive Assessment of the Florida Trauma System indicated that the unrecoverable costs for establishing a trauma center averages \$2.7 million or an estimated \$3.4 million in inflation-adjusted dollars for 2010. Over the years, the department has sought additional funding to maintain the current number of trauma centers

when the centers have threatened to close their doors, due to the high preparedness and maintenance costs required to run a trauma center. Maintenance of an existing center requires support for specialized equipment, trained personnel, and supplies, which must be continuously ready to receive and treat trauma patients, 24/7, 365 days per year. This commitment is on-going and unrecoverable from patient billing.

Since 2005, the Florida Legislature has provided six sources of dedicated trauma center funding through traffic fines and court fees, including the Red-Light Running Camera legislation enacted in 2010. These sources of funding have provided over \$24.4 million to the trauma centers as of December 2010. The dedicated funding provides partial reimbursement for the readiness costs of these trauma centers to ensure the continued availability and accessibility of trauma services throughout the state.

Since 2000, the Office of Trauma, the Brain and Spinal Cord Injury Program (BSCIP), and the Agency for Health Care Administration (AHCA) have been working together to seek funding for a Ventilator-Dependent Rehabilitation Program. In 2008, the Florida Legislature appropriated funding to implement the Ventilator-Dependent Rehabilitation Program Standards and the pilot program was developed at the Miami Jewish Home and Hospital for the Aged. From 2008 to present, the Office of Trauma and the BSCIP continued to work with AHCA related to the payment for the cost of the Diaphragm Pacer Surgery and equipment provided by trauma centers, and the Medicaid supplemental nursing home rate for services provided to ventilator-dependent spinal cord injured adults served by skilled nursing facilities that become DOH state-designated Ventilator-Dependent Rehabilitation programs.



Ashley Moore

2010 Diaphragmic Pacer
Surgery Recipient

See page 171 for her
success story

On March 19, 2009 and June 10, 2009, the first and second diaphragm pacer surgeries were conducted at the University of Florida in Gainesville through the collaborative efforts of DOH and AHCA. There is a one-time cost of \$50,000 to purchase and implant the pacer device. Basic care for ventilator-dependent trauma patients in trauma centers costs the state approximately \$30,000 per individual, per month. Cost estimates show that if 50 ventilator-dependent patients living in Florida's trauma centers were eligible, received the surgery and were released from the trauma centers to home, the state of Florida could save approximately \$1.5 million per month. Since the first surgery of the pilot program conducted in March 2009 to December 2010, there was a total of 12 successful pacer

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surgeries performed for adult ventilator-dependent trauma patients. Nine of these individuals have been 100 percent weaned from the ventilator and have been reintegrated into the community.

At the time of the publication of this report, 40 ventilator-dependent trauma patients still remain in Florida's trauma centers because nursing homes and assisted living facilities will not admit them and they are not able to return home. The ultimate goal for the Ventilator-Dependent Rehabilitation and the Diaphragm Pacer programs is to provide the medical, rehabilitation, and nursing home transitional services for individuals who have traumatic spinal cord injuries that are medically complex, technology dependent, and respiratory dependent, through the continuum-of-care from injury and ventilator dependency to independence in a community setting or less restrictive nursing facility. Without sufficient funding and authority, AHCA would not be able to revise the Medicaid state plan to add a supplemental nursing home rate for nursing homes to serve adults who require ventilator care and weaning.

In 2010, the Office of Trauma also added the Preventive Ulcer Program (PUP) to the trauma center standards, which requires all trauma centers to have written policies and procedures for a PUP. The December 2010 statistics indicated a 10 percent decrease in pressure ulcers of spinal cord injured patients due to the implementation of the PUP in trauma centers and designated BSCIP rehabilitation facilities.

Throughout 2010, Office of Trauma staff and the Disaster Response Planning Team leads, which consist of experts in the areas of burn care, mass casualty, trauma telemedicine, and disaster management education, continued to work on contingency planning for mass trauma as part of the development of regional emergency hospital plans for trauma centers. The Disaster Response Planning Team identified gaps in access to care, medical and surgical-surge capacity, burn care supplies and equipment, education and training, and surgical specialists, as well as other personnel. In addition, the disaster response consultants began planning for collaboration with metropolitan medical response systems, disaster medical assistance teams, and urban search and rescue teams.

Florida currently has 60 burn beds statewide in the trauma centers and burn units. The current daily occupancy rate for burn beds in Florida's trauma centers is 98-100 percent. Due to preparedness funding, the state's burn bed capacity can now surge to 910 beds in the event of a mass casualty event. From 2008 to 2010, the American College of Surgeons' Disaster Management classes were scheduled and conducted at various locations throughout the state. As of December 31, 2010 a total of 21 disaster management classes were conducted utilizing preparedness grant funds, educating approximately 490 health care providers from Florida's 22 trauma centers, and approximately 19 other hospitals. Five additional classes would be scheduled and held in 2011.

In FY 2008-2009, the Office of Trauma staff and Dr. Antonio Marttos, Jackson Memorial Hospital Ryder Level I Trauma Center, completed the implementation of Phase I of the Florida Trauma Telemedicine Project. The project was funded through a grant from the Assistant Secretary for Preparedness and Response (ASPR). Phase I connected Ryder Level I Trauma Center and Shands at the University of Florida Level I Trauma Center with respective satellite community and rural hospitals in their trauma service areas. These networks make it possible for these trauma centers to share valuable medical information, provide trauma consultation and continuing education, and treat and care for trauma patients in the event of a public health/mass casualty incident. In subsequent years, the department's federal preparedness grant continued to provide funding to expand the Florida Trauma Telemedicine Network that now includes a total of seven trauma centers linked with their respective satellite community and rural hospital emergency rooms. One of the objectives of the new Goal 3 Emergency/Disaster Preparedness and Response Plan is to seek adequate start-up and sustainment funding to expand the telemedicine network to provide this life-saving medical consultation and treatment for the trauma patients in all communities throughout Florida.

In 2010, injury prevention and community outreach activities continued to be a primary focus of Florida's trauma system and the Injury Prevention Planning Team. The trauma centers conducted 378 injury prevention programs throughout the state, including programs, such as: "Prom-Night," Prom Promise," "Shattered Dreams," and WalkSafe™. These programs are evidence-based programs that have contributed to the reduction in the trauma mortality rate in the areas of the state where these programs have been implemented. In 1998, Florida had 50 deaths due to motor-vehicle accidents, of teens on prom night. With the implementation of "Prom-Night" and similar prom night injury prevention programs, there were no deaths associated with motor vehicle accidents in 2006 through 2010.

In 2010, Florida's Level I and Pediatric trauma centers conducted 229 research projects (totaling approximately \$230 million) to improve the quality of trauma services. For more information about the injury prevention programs and research projects conducted by Florida's trauma centers, please see the "2010 Hospital Injury Prevention and Research Projects" and the "Trauma Center Reports" sections of this report.

Pursuant to section 395.402, F.S., annual evaluation of the 19 trauma service areas was completed from 2006 to 2010 by the Office of Trauma, the Florida Trauma System Plan Advisory Committee, and the four trauma agencies. This evaluation included the review from trauma center patient and quality improvement data, deficiency reports from the trauma center onsite surveys, review of the trauma transport protocols of the EMS providers and trauma agencies, trauma centers', and trauma agencies annual reports, and input from the Florida Trauma System stakeholders received during rule promulgation activities, surveys, and

EXECUTIVE SUMMARY

strategic planning meetings. Reports and studies, such as the annual Florida Injury and Surveillance Data report, the Hospital Preparedness Program report, the Physician Workforce report, and CHARTS – population and public health data reports, etc, were all included in the annual evaluations.

Throughout 2010, the Office of Trauma staff reviewed trauma transport protocols of EMS providers and the four trauma agencies, and conducted a study of the 2009 EMS modes of transport of trauma victims. This study, along with the review of the trauma transport protocols of EMS providers and trauma agencies, and EMS run reports reviewed during onsite surveys of the trauma centers, were also used to complete the 2010 annual assessment of the 19 trauma service areas pursuant to section 395.402, *F.S.* Outcome: In 2010, there were no adverse outcomes due to the transport of trauma patients to verified trauma centers.

In 2010, as part of the annual rule review process of Rule 64J-2.010, Apportionment of Trauma Centers within a Trauma Service Area, *F.A.C.*, the Office of Trauma initiated a Florida Trauma Service Area Analysis, which was conducted by Drs. Etienne Pracht and Barbara Orban, University of South Florida, School of Public Health. The study panel used the Florida hospital discharge data from the Agency for Health Care Administration to conduct a 10-year (2000-2009) retrospective analysis of nucleus and feeder counties that define Florida's trauma service areas based on rates of retention of trauma patients, defined by section 395.402(1), *F.S.*, as patients with an injury severity score of nine or greater, by county of residence. This analysis is important to identify priority counties for review of new trauma centers and the triage rate. A copy of this analysis and the 2010 analysis are available on the Florida Trauma System domain website at www.fl-traumasystem.com (Click on "Forms and Reports").

Over the past 20 years, Florida's population has grown by 44 percent, now with over 18.3 million people, not including the millions of tourists and thousands of seasonal workers. The department monitors the state's triage rate of trauma victims admitted to trauma centers. In 2009, 42 percent of patients, whose diagnosis codes met an injury severity score of nine or greater, were treated in one of Florida's trauma centers. This represents an improvement over previous years as we have gained three additional trauma centers by adding one in each of the following locations: Gainesville in 2005; Tallahassee in 2009; and Ft. Pierce in 2010. Even with this population increase and the addition of new trauma centers, there continues to be areas of the state that have limited access to trauma centers, especially by ground transport.

The results of the department's Florida Trauma System 2009 SWOT analysis of Goal 8, Regional System Evaluation, indicated areas of the state that are underserved by trauma centers and trauma agencies. The analysis exhibited the need for continued regional trauma system evaluation at the local level for both areas covered and not covered by a trauma center and/or trauma agency. This analysis also indicated the need for financial support for

the existing trauma agencies and incentives for counties or groups of counties within each regional trauma service area to form trauma agencies pursuant to s. 395.401, *F.S.*

Trauma agencies assist the department by providing county or regional trauma system evaluation and oversight at the local level. Currently, there are four trauma agencies that cover only 16 of the 67 counties in the state. One of these trauma agencies serves 13 counties; however, two of these counties are served through only the trauma agency's uniform trauma transport protocols. The lack of funding at the state and local levels has made it difficult for the department and the Association of Florida Trauma Agencies to encourage counties or health care councils to establish trauma agencies to provide regional system support and evaluation of the counties not currently served. For more information regarding trauma agencies, please see in the "Trauma Agency Annual Reports" section within this report.

Within existing resources, the Office of Trauma has continued to provide ongoing oversight from the state level for the regional trauma service areas not currently served by a trauma agency. For the department to conduct annual comprehensive assessments of the regional trauma service areas, as required by sections 395.402, 395.50 and 395.51, *F.S.*, input at the regional and/or county level is needed. This input will allow the department staff and trauma system leaders to identify best practices, gaps, opportunities for improvement, and emergency medical and trauma workforce needs, including trauma and other surgical specialists and non-surgical specialists within each trauma service area. This local input is also needed to provide information on barriers to timely and quality delivery of pre-hospital care, transport, trauma care and medical rehabilitation services in each regional trauma service area to ensure lives are saved and residents are returned to their communities as productive members of society, rather than long-term wards of the state.

In 2010, the Florida Trauma System Plan Advisory Committee, recognizing these barriers to regional planning and evaluation, identified the need for another five-year comprehensive assessment of the Florida Trauma System. This assessment would help determine the effectiveness of the existing trauma system and trauma agencies, to choose the appropriate regional structure and planning evaluation processes, and to make recommendations for revision to the Trauma Statute Chapter 395, Part II, and Trauma Rule 64J-2, *F.A.C.* The recommendation was included in Goal 8 of the new 2011-2015 Florida Trauma System Strategic Plan for the department to seek additional budget authority to conduct another comprehensive assessment. In 2011, the department would submit a legislative budget request for the 2012 Legislative Session to request additional budget authority from the trauma portion of the EMS Trust Fund to conduct the assessment.

In 2010, the Office of Trauma continued to work closely with the DOH Office of Rural Health and the trauma medical director and trauma program manager of Sacred Heart Hospital Level II Trauma Center to establish stronger

EXECUTIVE SUMMARY

collaborative efforts and resources with rural hospitals in the state by providing funding to conduct rural trauma courses at rural hospitals to train the emergency department physicians and nurses to provide trauma triage and stabilization of trauma patients for transport to trauma centers. In 2010, 16 rural trauma courses were conducted throughout the state. Additional grant funding was provided for four additional courses that would be held in 2011.

The DOH Florida Trauma Registry captures data on each trauma patient treated in Florida's trauma centers and other outcome and output quality improvement data that is utilized by the Office of Trauma and the trauma centers to identify trends, best practices, gaps, etc. The department and Florida's trauma centers' nationally known researchers use the registry's valuable data to implement and evaluate evidenced-based injury prevention programs; support the trauma center research projects to improve the quality of Florida's trauma care for all residents, and assist in the evaluation of Florida's trauma system performance at the state level. The Florida Trauma Registry's severity of injury and patient volume data is utilized to calculate the distribution methodology of the red-light running funding and other revenues allocated for payment to the trauma centers.

In 2010, the Florida Trauma Registry statewide patient data indicated that 44,388 trauma patients were treated and discharged from Florida's trauma centers, compared to 43,709 in 2009, an increase of 1.6 percent. Research supported by the U.S. Centers for Disease Control and Prevention shows that receiving care at a trauma center within one hour of a severe injury could decrease the risk of death by 25 percent versus a non-trauma center hospital (<http://www.cdc.gov/TraumaCare/>).

In 2010, most trauma patients (80 percent) were discharged from the hospital within seven days of admission and 71 percent were discharged to their homes. Patients discharged to home, home health, rehabilitation, and jail have recovered significantly, and have a good potential to return to the community as productive citizens. The fact that 80 percent of trauma patients were discharged from Florida's trauma center hospitals in 2010, with a good potential for recovery, is testimony to the effectiveness of Florida's trauma system. A hospital length of stay (LOS) of three or more days is indicative of severe injury. In 2010, 52 percent of Florida's trauma center patients had hospital LOS of three or more days. This shows that Florida's trauma system goal of delivering the most severely injured patients to trauma centers is being met.

From June 2009 to present, the Trauma Registry and Research Planning Team and the Next Generation Trauma Registry Project Team, with the assistance of experts from the DOH Division of Information Technology, continued to gather business requirements, review and identify revisions to the *Florida Trauma Registry Manual* to align data points to the National Trauma Data Standard, and prepare data requirements for the development of the web-based Next Generation Trauma Registry (NGTR). This analysis would include data points needed for trauma research and trauma

statewide and regional system performance improvement, and to enable the integration of outcome data with EMSTARS and the Brain and Spinal Cord Injury Central Registry with the NGTR.

In July 2010, the Office of Trauma issued a Request for Information (RFI), to which six trauma registry software vendors responded. On the basis of these responses, four vendors were invited to provide demonstrations of their software and technical requirements were developed for a Request for Proposal (RFP) that would be issued in January 2011 to procure a commercial off-the-shelf package via the Intent to Negotiate (ITN) process as a long-term solution for the NGTR. In 2011, the NGTR project team would finalize the Next Generation Trauma Registry business case and the project management plan for approval by the Department of Health's Division of Information Technology Governance Committee. The data integration between the NGTR, the Brain and Spinal Cord Injury Central Registry, and EMSTARS will greatly improve the department's ability to provide annual comprehensive assessments of the performance of the entire trauma system. The NGTR will also provide researchers with data to implement evidence-based injury prevention programs and research projects to improve the quality of Florida's trauma care for all residents and visitors.

Over the last nine years, significant progress and accomplishments have been made in meeting the needs of Florida's trauma victims. The mortality rate due to traumatic injuries in Florida has decreased from 6.5 percent in 2002 to 4.9 percent in 2010. This positive trend is the result of additional trauma centers established in the underserved areas; continual quality improvement and research efforts of Florida's continuum of care providers to ensure access to prompt critical care for traumatic injuries; and continuous trauma system planning, evaluation and quality assurance activities. In addition to the reduction in the mortality rate, the early trauma care provided by the Florida Trauma System has reduced healthcare costs by providing timely, effective intervention for life-threatening injury, thus reducing the risk of complications, decreasing the length of stay and readmissions, and diminishing the need for long-term care costs.

Subsequent sections of this report detail the implementation status of the legislation enacted from 2005 to 2010; the 2010 accomplishments made towards achieving the state trauma system strategic plan goals and objectives, action steps planned for 2011, and annual reports from each of the trauma centers, burn centers, and trauma agencies. This report also provides the 2010 Florida Trauma Registry data reported by trauma centers, including trends about mechanisms of injuries, as well as a host of other outreach, prevention, education, and research activities conducted by the 22 trauma centers, three burn care centers, and four trauma agencies in operation during 2010.

FLORIDA'S TRAUMA SYSTEM

Together We Save Lives...
Unified. Accountable. Prepared.

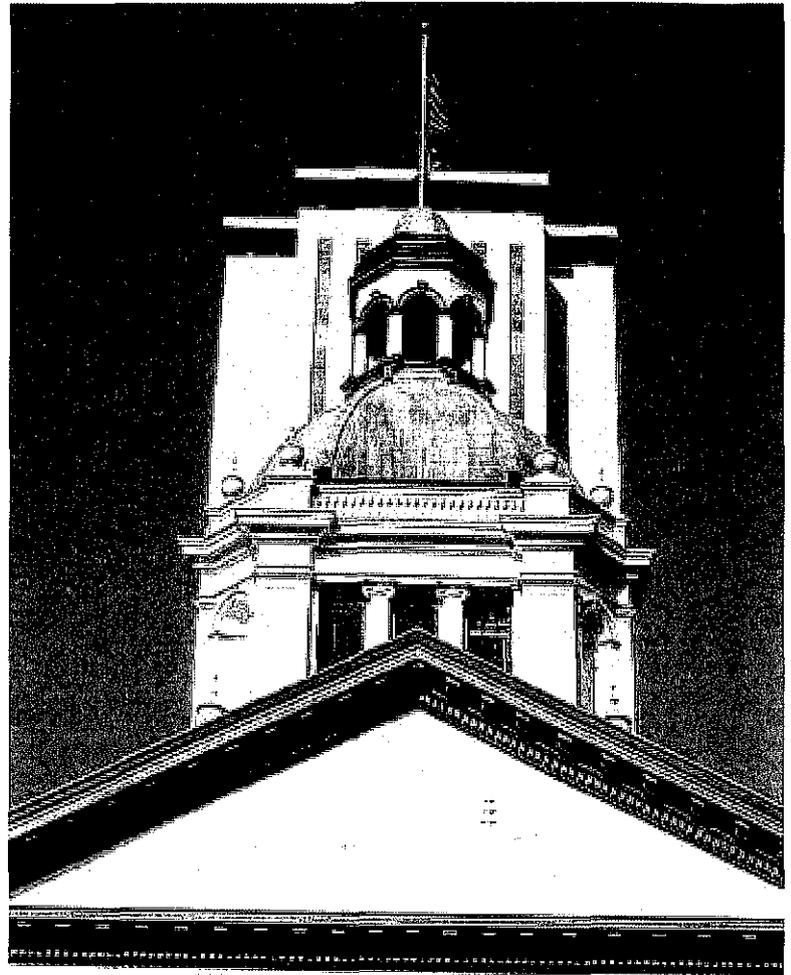
2010 LEGISLATIVE UPDATE

IMPLEMENTATION OF TRAUMA CENTER FUNDING LEGISLATION

In 2005, 2006, 2009, and 2010 the Florida Legislature took major steps towards providing dedicated funding for Florida's trauma system to ensure the continued availability and accessibility of trauma services in the state by enacting the following laws:

- Chapter 2005-164, *Laws of Florida* (Extra-Court Fines);
- Chapter 2005-194, *Laws of Florida* (Red-Light Running);
- Chapter 2006-290, *Laws of Florida* (Additional Fines-Exceeding the Speed Limit by 30 Miles Per Hour);
- Chapter 2006-296, *Laws of Florida* (Enhanced Penalty Zones);
- Chapter 2009-138, *Laws of Florida* (Passing a Stopped School Bus, Racing on Highways and Reckless Driving); and
- Chapter 2010-80, *Laws of Florida* (Red-Light Camera).

In 2006, the Office of Trauma implemented the initial Red-Light Running Legislation and promulgated Rule 64E-2.040, *F.A.C.*, Funding for Verified Trauma Centers, now 64J-2.019, *F.A.C.* This rule governs the distribution of funding for trauma centers pursuant to section 395.4036, *F.S.*, and other statutes enacted by the Florida Legislature. Rule 64J-2.019, *F.A.C.* was amended in October 2009 and December 2010 to include the new sources of revenue generated from the implementation of Chapter 2009-138 and Chapter 2010-80, *Laws of Florida*, which designated additional funding for distribution to trauma centers to reimburse trauma centers for their preparedness and maintenance costs.



As of December 31, 2010, the Office of Trauma had distributed over \$24.4 million to Florida's verified trauma centers pursuant to section 395.4036, *F.S.*

2010 LEGISLATIVE UPDATE

The following is an update on the revenue generated and distributed to Florida's trauma centers since the enactment of the above laws:

TABLE 1: DISTRIBUTIONS OF TRAUMA CENTER PAYOUTS 2006-2010					
Chapter 2005-194, Laws of Florida / House Bill 497 (Red-Light Running Civil Penalties)					
CY 2006 Payments	CY 2007 Payments	CY 2008 Payments	CY 2009 Payments	CY 2010 Payments	Total Distributed CYs 2006 – 2010
\$4,792,839.03	\$6,085,553.89	\$4,979,862.21	\$4,005,149.11	\$3,136,250.64	\$22,999,654.88
Chapter 2005-164, Laws of Florida / House Bill 1697 (Extra-Court Fines)					
CY 2006 Payments	CY 2007 Payments	CY 2008 Payments	CY 2009 Payments	CY 2010 Payments	Total Distributed CYs 2006 – 2010
\$52,529.42	\$121,039.69	\$ 287,721.22	\$225,870.25	\$204,003.46	\$891,164.04
Chapter 2006-290, Laws of Florida / House Bill 7079 (Additional Fines for Exceeding Speed Limit by 30 Miles Per Hour)					
CY 2006 Payments	CY 2007 Payments	CY 2008 Payments	CY 2009 Payments	CY 2010 Payments	Total Distributed CYs 2007 – 2010
\$-0-	\$10,296.03	\$ 14,100.70	\$11,959.14	\$4,741.67	\$41,097.54
Chapter 2006-296, Laws of Florida / House Bill 1465 (Enhanced Penalty Zones)					
CY 2006 Payments	CY 2007 Payments	CY 2008 Payments	CY 2009 Payments	CY 2010 Payments	Total Distributed CYs 2007 – 2010
\$-0-	\$4,175.87	\$ 25,018.23	\$17,325.43	11,173.84	\$57,693.37
Chapter 2009-138, Laws of Florida / House Bill 481 (Passing a Stopped School Bus, Racing on Highways and Reckless Driving)					
CY 2009 Payments		CY 2010 Payments		Total Distributed CY2010	
\$-0-		\$442,355.62		\$442,355.62	
GRAND TOTAL DISTRIBUTED CYs 2006 – 2010				\$ 24,431,965.45	

The collections generated in the last quarter of 2010 from the implementation of Chapter 2010-80, *Laws of Florida (Red-Light Camera Violation)* were not included in the table above. The 2010 collections from this legislation would be distributed to the trauma centers during the 2011 first quarterly payout to the trauma centers and will be reported in the "Legislative Update" section in the *2011 Florida Trauma System Annual Report*.

In 2010, Chapter 2006-296, *Laws of Florida*, which was codified in section 316.1893, *F.S.*, was sunset. This legislation established "Enhanced Penalty Zones" on state roads in Brevard, Duval, and Palm Beach counties that had a high fatality rate from vehicle crashes due to speeding. The first zones of the pilot program were identified and the extra \$50 court fine for a speeding violation in those designated zones became effective on May 1, 2007. Fines were assessed under this legislation from May 1, 2007 until the sunset date of the pilot program, which was June 30, 2010. The law was not re-enacted during the 2010 Legislative Session. Funds collected for this violation cited prior to June 30, 2010 continued to be remitted by the counties and deposited into the Emergency Medical Services Trust Fund after June 30, 2010. These funds were included in the fourth quarter payouts to the trauma centers that served the pilot counties, which closed-out the department's implementation of this legislation.

A breakdown of the quarterly payouts to each trauma center can be obtained from the Office of Trauma Florida Trauma System domain website at the following link:
www.fl-traumasystem.com. (Click on "Florida Trauma Center Funding and Payouts" link.)

HISTORICAL OVERVIEW FROM 1999-2010

FLORIDA TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN

During the 1999 Florida Legislative Session, the Florida Legislature directed the Department of Health to issue a five-year, state trauma system strategic plan (section 395.40, *Florida Statutes*). The department formed the State Trauma System Plan Implementation Committee to develop this master plan for improving Florida's trauma system.

In constructing the *December 2000 – December 2005 State Trauma System Five-Year Strategic Plan*, published in December 2000, the committee systematically reviewed strategies required to accomplish the state plan's objective of meeting trauma victims' needs in an inclusive trauma system. This five-year plan provided the framework, established long-term goals, and included performance benchmarks, which the Office of Trauma continues to use to improve the quality, accessibility, and availability of trauma services in Florida. The plan set a high mark for the office and all of the department's trauma system partners. As of December 2005, the Office of Trauma and its trauma system partners had met 90 percent of the goals. The Office of Trauma placed five percent of the goals on hold as a recommendation of the State Trauma System Plan Implementation Committee, carried over three percent of the goals to the next State Trauma System Five-Year Strategic Plan (December 2005-December 2010), and was not able to meet two percent of the goals due to the lack of funding.

The Office of Trauma prepared and distributed the *State Trauma System Five-Year Strategic Plan, December 2005 – December 2010* in December 2005. The process for development of this five-year plan incorporated accomplishments and lessons learned from the previous five-year plan, the *Comprehensive Assessment of the Florida Trauma System - February 1, 2005*, trauma system SWOT analysis results, and the elements of the Florida Sterling Council's "Sterling Criteria for Organizational Performance Excellence." The Florida Sterling Council based its criteria on the Malcolm Baldrige Criteria, which is nationally recognized as the excellent standards for organizational excellence, and provided a systematic approach to evaluate and improve processes and organizational performance.

The December 2005 to December 2010 plan provided a comprehensive structure for aligning resources, integrating goals, objectives, strategies, and activities to continue providing Florida with a road map to future statewide collaborative efforts within the continuum-of-care. The plan embraced stakeholders and collaborators from injury prevention, pre-hospital care, emergency medical services, acute care hospitals, trauma centers, rehabilitative facilities, trauma agencies, universities, as well as other state agencies and organizations.

In January 2006, the Office of Trauma staff and the state trauma medical director established the 2006 State Trauma System Action Plan based on the goals and objectives set in the new State Trauma System Five-Year Strategic Plan. During the first quarter of 2006, the Office of Trauma established seven trauma pillars, which represented the seven areas of expertise that would be required to deploy

the action plans and achieve the short and long-term trauma system goals and objectives. The Office of Trauma sought and hired individuals from across the state with expertise in the areas of each of the seven pillars, as trauma medical consultants, (TMCs). The TMCs assisted the Office of Trauma and the State Trauma System Plan Implementation Committee in strategic and action planning, deployment of the implementation concepts of the Florida Trauma System Five-Year Strategic Plan, and measuring and sustaining accomplishments.

In 2007, the Office of Trauma charged the TMCs with assisting in building stronger collaborative relationships with our advisory groups and community partners to seek stakeholder input to ensure that Florida's trauma system is meeting customers' expectations, as well as their requirements. In late 2007, the Office of Trauma formed strategic planning teams and assigned responsibility for the planning and oversight of the implementation of the specific trauma system plan goals and objectives based on the seven pillars of expertise.

In 2008, the Office of Trauma designated the TMCs as planning team leads. In 2009, the director of the Division of Emergency Medical Operations renamed and organized the State Trauma System Plan Implementation Committee to form the Florida Trauma System Plan Advisory Committee pursuant to section 395.40 and 20.43, *F.S.* The planning teams were also reorganized to better align with the state plan goals. The membership was revised to ensure representatives from Florida's trauma system continuum-of-care providers and partners needed to complete the plan goals, objectives and strategies, and to build stronger unification, accountability, and preparedness. The purpose of this committee is to serve in an advisory capacity to the department in the successful development, implementation, and evaluation of the new 2011-2015 Florida Trauma System Five-Year Strategic Plan to improve the performance of Florida's trauma system.

In 2009 and 2010, the Office of Trauma, the Florida Trauma System Plan Advisory Committee and the nine planning teams held face-to-face statewide meetings and conference calls to conduct the 2009 SWOT analysis; review the accomplishments each quarter on the progress made towards the implementation of the annual action plans; and to develop, approve, and publish the new *2011-2015 Florida Trauma System Strategic Plan*.

During the 2010 Legislative Session, the Florida Legislature passed House Bill 5311 (Chapter 2010-80, *Laws of Florida*), which revised section 20.43, *F.S.*, removing the authority of a division director to establish advisory bodies within the Department of Health. The authority currently lies only with the State Surgeon General. In 2011, the new State Surgeon General would repeal the Florida Trauma System Plan Advisory Committee and recreate the new Florida Trauma System Plan Advisory Council to implement the newly created five-year plan.

HISTORICAL OVERVIEW FROM 1999-2010

FLORIDA TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN

December 2010 marked the end of the fifth year of the *December 2005 – December 2010 Florida Trauma System Strategic Plan*. As of December 31, 2010, the Office of Trauma, the Florida Trauma System Plan Advisory Committee, Planning Teams, and the Florida Trauma System continuum-of-care providers and partners had completed 92 percent of the strategies, and eight percent of the strategies that were in progress were either repealed or were revised and carried over to the new five-year plan. The *December 2005-December 2010 State Trauma System Five-Year Strategic Plan*, and the *2011-2015 Florida Trauma System Strategic Plan* are located on the Office of Trauma's Florida Trauma System domain website at www.fl-traumasystem.com, click on "Strategic Planning." The new plan can also be obtained at the bottom of the home page by clicking on the plan banner.

The annual updates from December 2006 to December 31, 2010 on each of the goals and objectives of the new plan can be found in the "2010 Florida Trauma System Five-Year Strategic Plan Update" section within this report.



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Battalion Chief
Indian River County Fire Rescue
Vero Beach, Florida

Carl Schulman, III, MD, MSPH,
FACS
Trauma Research
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Jackson Memorial Hospital
Ryder Level I Trauma Center
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Trauma Medical Director, Trauma
Prevention
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Lakeland, Florida

Jane Streit, PhD
Senior Psychologist
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Trauma Program Manager
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Pediatric Surgeon, College of Medicine/
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Shands-Jacksonville TraumaOne
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NCEE
Director, Chief Operating Officer
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Bartel F. Turk, MD
Trauma Surgeon
Trauma Surgery and Critical Care
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Barbara Uzenoff, RN, MPH, BA,
BS
Chair, Association of Florida Trauma
Agencies
Trauma Coordinator, Hillsborough
County Trauma Agency
Tampa, Florida

Lisa Vanderwerf-Hourigan,
Director Office of Injury Prevention
Department of Health
Tallahassee, Florida

Michele Ziglar, RN, MSN
Trauma Program Manager
Shands at the University of Florida,
Level I Trauma Center
Gainesville, Florida

2009-2011 TRAUMA PLANNING TEAMS AND LEADS

GOAL 1: - Leadership

Purpose:

Oversee all matters regarding planning, implementation, and evaluation of Florida's inclusive trauma system.

Leads:

Jean L. Kline, RN, BSN, MPH, Former Director, Division of Emergency Medical Operations
Susan McDevitt, RN, MS, MBA, FACHCA, Former Director, Office of Trauma

GOAL 2: - Injury Prevention

Purpose:

Injury prevention and control – state-coordinated system for reducing injury-related morbidity and mortality

Lead:

Olumide Sobowale, MD, FACS

GOAL 3: - Disaster Preparedness and Response

Purpose:

Ensure Florida's trauma system is prepared to respond to emergency and disaster situations in coordination with state disaster plans and testing.

Lead:

John Armstrong, MD, FACS
Mass Casualty Planning: Mauricio Lynn, MD, FACS
Disaster Management Training: Eric Frykberg, MD, FACS
Burn Care and Training: David Mazingo, MD, FACS

GOAL 4: - Pre-Hospital Care and Transport

Purpose:

Establish and evaluate guidelines specific to pre-hospital care, triage, and transport of trauma patients that result in timely and safe delivery of trauma care.

Co-Leads:

Laurie Romig, MD, Vice Chair of the Florida Trauma System Plan Advisory Committee
Andrew Kerwin, MD, FACS
Joseph Nelson, MD, EMS Medical Director

GOAL 5: - Trauma Center Access to Care

Purpose:

Establish a statewide network of trauma centers, meeting minimum state standards for operation and provision of quality trauma care, in coordination with all other trauma system participants.

Co-Leads:

Dr. Patricia Byers, MD, FACS
Dr. Ernest Block, MD, MBA, EMT-P, FACS, FCCM

GOAL 6: - Rehabilitation

Purpose:

Improved medical rehabilitation outcome for trauma patients

Co-Leads:

Gillian Hotz, PhD
Cynthia Beaulieu, PhD
John Kuluz, PhD

GOAL 7: - Quality Improvement

Purpose:

To establish a statewide system evaluation, quality management, and performance improvement process.

Co-Leads:

Michelle Ziglar, RN, MSN
Lianne Brown, RN, BSN, MBA, (FY 2010-2011)

GOAL 8: - Regional System Evaluation

Purpose:

Regional System Evaluation, Communications Systems and Regional Medical Specialist Approaches – Establishment of Regional Centers of Excellence

Co-Leads:

Rodney Durham, MD, FACS, Chair of the Florida Trauma System Plan Advisory Committee
Karanbir Gill, MD, FACS, Chair of the Florida Committee on Trauma
Lawrence Lottenberg, MD, FACS
Winston Richards, MD, FACS

GOAL 9: - Florida Trauma Registry and Research

Purpose:

Design and implementation of the Next Generation Trauma Registry with a more responsive, uniform streamlined data set, and electronic collection process, which is more readily integrated with quality assurance processes and other data sets. Statewide public health surveillance and research agenda for trauma system evaluation and improved outcomes

Registry Co-Leads:

Joseph Tepas, III, MD, FACS
Andrew Mikulaschek, MD, FACS

Research Lead:

Carl Schulman, MD, MSPH, FACS
Andrew Kerwin, MD, FACS

Registry Consultants:

Barbara Orban, PhD
Etienne Pracht, PhD
Pam Pieper, PhD

FLORIDA TRAUMA SYSTEM CUSTOMERS, PARTNERS AND COLLABORATORS

The following is a list of the Florida Trauma System customers, partners, and collaborators that assist the department in the development, implementation, and evaluation of the Florida Trauma System Strategic Plan objectives and strategies.

CUSTOMERS:

- Florida's Trauma Patients and Other Florida Residents and Visitors
- Acute Care Hospitals (Emergency Department Physicians and Nurses)
- Emergency Medical Services Providers (272)
- Trauma Agencies: (Broward County, Hillsborough County, North Central Florida, and Palm Beach County)
- Trauma Centers (22) / Burn Care Centers (4): (Trauma Medical Directors, Burn Center Directors, Trauma Program Managers, Trauma Surgeons, Trauma Nurses, Trauma Registrars, Specialty Physicians)

INTERNAL PARTNERS AND COLLABORATORS:

- Medical Quality Assurance (Board of Nursing and Board of Medicine)
- Brain and Spinal Cord Injury Program
- Bureau of Emergency Medical Services
- Bureau of Preparedness and Response
- Department of Health, Institution Review Board
- Office of Injury Prevention
- Office of Rural Health
- Office of Local Health Councils
- Florida County Health Departments Injury Prevention Coordinators

NATIONAL AND FEDERAL PARTNERS:

- American Burn Association
- American College of Surgeons
- American Trauma Society
- American Association of the Surgery of Trauma
- U.S. Centers for Disease Control and Prevention
- U.S. Department of Health and Human Services
- National Institutes of Health
- Society of Trauma Nurses
- Robert Wood Johnson

FLORIDA PARTNERS, COLLABORATORS, AND CONSTITUENCY GROUPS

- Agency for Health Care Administration
- Agency for Persons with Disabilities
- Air Medical Constituency Group
- Area Health Education and other Learning Resource Centers
- Association of Florida Trauma Agencies
- Association of Florida Trauma Coordinators
- Brain Injury Association of Florida
- Brain and Spinal Cord Injury Advisory Council
- Burn Care Task Force
- Department of Children and Families
- Department of Elder Affairs
- Department of Highway Safety and Motor Vehicles
- Department of Management Services
- Department of Transportation
- Designated Brain and Spinal Cord Injury Facilities

- Division of Emergency Management
- Domestic Security Oversight Committee
- Emergency Medical Review Committee
- Emergency Medical Services Advisory Council and Committees
- Emergency Medical Services Directors Constituency Group
- Emergency Medical Services for Children Advisory Council
- Emergency Medical Services Quality Managers Association
- Emergency Nurses Association, Florida Chapter
- Florida Chapter of Air & Surface Transport Nurses Association
- Florida Nurses Constituency Group
- Florida A & M University, School of Public Health
- Florida Aeromedical Association
- Florida Alliance for Assistive Services and Technology
- Florida Association of EMS Directors
- Florida Association of EMS Educators
- Florida Association of Homes and Hospitals for the Aged
- Florida Association of Rural EMS Providers, Inc.
- Florida Committee on Trauma
- Florida Chapter of the American College of Surgeons
- Florida Health Care Association
- Florida Hospital Association
- Florida Injury Prevention Advisory Council and Goal Teams
- Florida Legislature
- Florida Washington Office
- Florida Pediatric Association
- Florida Pharmacy Association
- Florida Trauma System Plan Advisory Committee
- Florida State University School of Nursing
- Florida State University Research Committee
- Governor's Office
- Local Health Councils/Health Care Districts
- Miami Project to Cure Paralysis
- Public Health and Medical: Strategic Planning Oversight Committee (SPOT)
- Public Information, Education and Resources (PIER) for EMS Program
- Regional Domestic Security Task Forces
- Rural Health Networks
- Safekids Coalitions
- Skin Care Task Force
- Statewide Office of Injury Prevention
- Statewide Working Group (Preparedness)
- Trauma Registry Task Force
- University of Florida, Research Committee
- University of Miami, Research Committee
- University of South Florida, Research Committee
- University of South Florida, School of Public Health

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

The following is the Office of Trauma's final status report on the initiatives, accomplishments, and progress made on each of the strategic planning goals, objectives, and strategies included in the 2005-2010 State Trauma System Five-Year Strategic Plan:

1 Goal 01: Leadership

Have a viable active state lead agency with the authority, responsibility, and resources to plan, implement, and evaluate an inclusive trauma system for Florida.

In July 2006, the Department of Health designated the Office of Trauma as the lead office with responsibility to implement and maintain a comprehensive trauma system. The Office of Trauma staff, strategic planning teams, and stakeholder constituency groups conduct ongoing annual reviews and evaluation of the five-year plan objectives. The trauma rules, standards, policies, and procedures are reviewed and revised if applicable in accordance with any statutory or programmatic changes.

OBJECTIVE 1A:

Designate the Office of Trauma within the Department of Health as the lead office with responsibility to implement and maintain a comprehensive trauma system.

STRATEGY 1A1:

Annually review Chapter 395, Part II, Florida Statutes, (F.S.), and Rule 64J-2, Florida Administrative Code (F.A.C.) (formerly 64E-2, F.A.C.), for revisions and make recommendations for change – completed in 2006, 2007, 2008, 2009, and 2010, with some rule promulgation activities pending that were carried over to the 2011-2012 Action Plan.

OUTCOMES AND OUTPUTS:

The Office of Trauma, the trauma planning teams and the Association of Florida Trauma Agencies (AFTA) reviewed Chapter 395, Part II, F.S., in July 2006; July 2007; January, April, and July 2008; January and June 2009; and June 2010. There were no statutory revisions noted from these reviews. The Office of Trauma staff and applicable planning teams reviewed Chapter 64J-2 rules in 2007, 2008, 2009 and 2010. Below are the outcomes from these reviews. Some of the rule activities that were initiated in 2008 were still in progress as of December 31, 2010 and would be carried over to the new 2011-2015 Florida Trauma System Strategic Plan and the FY 2011-2012 Action Plan.

- **Rules 64J-2.002-2.005, F.A.C., Relating to Pre-hospital, Trauma Transport Protocols and the Adult and Pediatric Trauma Scorecard Methodologies:** Due to the number of rule promulgation and strategic planning activities initiated in 2009 and 2010, the review of these rules was postponed to the 2011-2015 Florida Trauma System Five-Year Strategic Plan. In late 2010, the Trauma Triage Work Group was formed from the membership of the newly created Goal 4 Pre-Hospital and Transport Planning Team to review the new CDC Trauma Field Triage Criteria, conduct a comparison of the new CDC criteria with Florida's existing criteria, and make recommendations for needed updates to the adult trauma scorecard methodology and the pediatric trauma scorecard methodology. The work group would report its findings to the Office of Trauma in early 2011. See the Goal 4 update within this report for more details regarding the activities of this work group.

2011 Action Step: In 2011-2012, the Office of Trauma staff will work closely with the Goal 4 Pre-Hospital and Transport Planning Team, the Bureau of EMS, and the Legislative Committee of the EMS Advisory Council to review the findings from the Triage Work Group, rules, manuals, and guidelines relating to pre-hospital, transport, and field triage of trauma patients to identify the need for revisions.

- **Rule 64J-2.006, F.A.C. – Trauma Registry Manual:** The annual reviews of Rule 64J-2, F.A.C., and the *Florida Trauma Registry Manual* were completed in 2007 and the need for revisions to the manual was identified. In late 2007 and 2008, the Office of Trauma completed rule promulgation activities and revisions to the *Florida Trauma Registry Manual* and 64J-2.006, F.A.C. were adopted effective July 2008.

In 2009, the Florida Trauma Registry staff began to evaluate the trauma center quarterly patient and QI data submitted each quarter based on the new registry data requirements that became effective in July 2008. The implementation of the new requirements was also reviewed during the onsite surveys of the trauma centers in 2009 and 2010. This evaluation showed that the July 2008 trauma registry data requirements had been fully implemented statewide.

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

In August 2009, as part of the information gathering and business requirements analysis of the current *Florida Trauma Registry Manual* to develop the Next Generation Trauma Registry, the Florida Trauma Registry staff, and the Trauma Registry Project Team began to review the *Florida Trauma Registry Manual* data collection and submission requirements.

In 2010, the Trauma Registry Project Team continued to gather data and input from the registry user group to complete an analysis of values entered into each of the 125 mandatory data fields in the Florida Trauma Registry. This analysis of the Florida Trauma Registry and Quality Improvement data fields would be completed in 2011 with the assistance of the Quality Improvement and the Trauma Registry Data User Groups. The Office of Trauma rule staff would begin rule promulgation activities in 2011 to incorporate by reference the revised *Florida Trauma Registry Manual* in Rule 64J-2.006, F.A.C.

The new data fields adopted through the rule promulgation process will be utilized to design the Next Generation Trauma Registry. For more information regarding the Next Generation Trauma Registry Project, please see Goal 9 within this section of the annual report.

2011 ACTION STEPS:

- ▶ Complete the analysis of the QI and the trauma registry data fields in the state trauma registry utilizing the input from the QI and registry data user groups; and
- ▶ Conduct rule development workshops to incorporate by reference the revised *Florida Trauma Registry Manual* in Rule 64J-2.006, F.A.C.

- **Rules 64J-2.007 – 2.009, F.A.C. – Relating to Trauma Agencies:** In late 2007, the State Trauma System Plan Implementation Committee and the Office of Trauma requested the Association of Florida Trauma Agencies to review rules applicable to the trauma agencies and to submit suggested revisions to the Office of Trauma in 2008. The Office of Trauma held rule development workshops in 2008 and the rule promulgation process was completed with the adoption of the revisions to the rules related to trauma agencies effective March 25, 2009. In 2010, the trauma agencies implemented the revisions in the trauma agency plan and new evaluation requirements. The results of the trauma agency evaluations are included in the trauma agency reports section within this report.

In 2008 and again in 2010, the Association of Florida Trauma Agencies reviewed rules 64J-2.002 - 2.005, F.A.C., relating to the trauma agencies' uniform trauma transport protocols (TTPs) and identified the need for revisions. These revisions will be considered during the 2011-2012 review of these rules.

2011 ACTION STEPS:

- ▶ Ensure the five-year plan updates of the following agencies are submitted, reviewed and approved during 2011-2012:

Broward County Trauma Agency
Hillsborough County Trauma Agency
North Central Florida Trauma Agency
Palm Beach County Trauma Agency

- ▶ In 2011, representatives from the trauma agencies will be invited to future meetings regarding the rule reviews of the trauma pre-hospital and transport protocols related rules, which impact the trauma agencies oversight of pre-hospital care and the uniform trauma transport protocols.

Rule 64J-2.010, F.A.C. - Apportionment of Trauma Centers in a Trauma Service Area: During the January 23, 2008 Florida Trauma System Plan Implementation Committee Meeting, the members discussed the feasibility of establishing trauma regions along the lines of the seven domestic security task force regions. The committee members agreed that it would not be feasible to convert the trauma service areas into the seven domestic security task force regions, because these regions were established for the purpose of domestic security planning, not trauma system operations. The members also identified that conversion to the domestic security task force regions would split the service area of trauma centers between two regions.

The members of the State Trauma System Plan Implementation Committee agreed to form a task force to review the current trauma service areas and the current apportionment of trauma centers within the 19 trauma service areas. The purpose of the review was to determine if a regional reorganization and reapportionment of trauma center positions and county assignments within the 19 trauma service areas is needed. During the June 28, 2008 State Trauma System Plan Implementation Committee Meeting, the members continued the discussion of the regional structure

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

and determined that no statutory revisions to section 395.401 and section 395.402, *F.S.*, should be made to revise the assignment of the trauma service areas until the department could complete another comprehensive assessment of the Florida Trauma System. The committee suggested that the Office of Trauma begin rule development activities to gain stakeholder input to assist the department and the Goal 8 Planning Team to determine if the reapportionment of the trauma center positions within a trauma service area is needed.

Currently, there are 19 trauma service areas identified in section 395.402, *F.S.* This statute requires the department to allocate by rule the number of trauma centers needed for each trauma service area. The statute also requires the department to conduct an annual assessment of the trauma service areas and assignment of the 67 counties to the trauma service areas based on specific criteria to identify the need for reapportionment of trauma center positions. County assignments to the 19 trauma service areas are made for the purpose of developing regional systems to ensure timely and quality access to trauma care for the residents and visitors of Florida. The department has the statutory authority to review the assignment of the 67 counties to the 19 trauma service areas; however, the department does not have the authority in statute to revise the county assignments to the 19 trauma service areas established in section 395.402, *F.S.*, which are utilized in the apportionment of trauma centers in Rule 64J-2.010, *F.A.C.* Revisions to the county assignments can only be made by the Florida Legislature.

In accordance with section 395.401, *F.S.*, the state has four trauma agencies that provide trauma system planning and evaluation at the local or regional levels. These trauma agencies cover only 16 of the 67 counties (one trauma agency serves 13 counties; however, at the time of this report, two of these counties were served only through the trauma agency's uniform trauma transport protocols). See the "Trauma Agency" section within this report for more information about the operations of Florida's trauma agencies and Goal 8 within this section of the report for more information regarding the evaluation of the 67 counties assigned to the 19 trauma service areas.

Pursuant to section 395.402, *F.S.*, and based on the requests from the committee and from a trauma stakeholder, in 2008 and 2009, the Office of Trauma held four rule development workshops, one in Naples, three in Ft. Walton Beach, to seek input from the trauma system partners and the general public on the need for revisions to the apportionment of the trauma center positions for all 19 trauma service areas. The 2008 workshop participants confirmed the need for a trauma center in Trauma Service Area 2, which is currently not directly served by a trauma center, and the need for an additional trauma center to cover Okaloosa and Walton counties in Trauma Service Area 1. Prior to 2008, there had been three Level II trauma centers, all located in Pensacola, Escambia County, which covered Escambia, Santa Rosa, Okaloosa and Walton counties.

A request was made for the Office of Trauma to conduct a study to determine the need for an additional trauma center position to cover Okaloosa and Walton counties. The study was completed and published in early 2009 and the results were presented during the 2009 rule development workshops. A rule hearing was held on June 11, 2009 in Ft. Walton Beach, Florida. Based on a request for an additional study by participants, the Office of Trauma decided to withdraw the Notice of Rulemaking. Between September and December 2009, the Office of Trauma and the Bureau of EMS staff conducted an additional study of the EMS transport times in Trauma Service Area 1 to the Pensacola trauma centers to determine if there is justification for an additional trauma center in TSA 1 to cover Okaloosa and Walton counties. The study was completed in early January 2010 and was presented during a rule development workshop held on February 10, 2010 in Crestview, Florida. The workshop participants provided comments during and after the workshop.

The Office of Trauma staff and legal counsel reviewed the comments received from the five workshops and one hearing, and held briefings with the department's leadership from February to September 2010. The department leadership made the decision to move forward with the Notice of Proposed Rulemaking based on guidance from legal counsel. A hearing was noticed and held on October 13, 2010 and comments were received. A second hearing was scheduled for February 16, 2011 in Pensacola, Florida to provide stakeholders in Pensacola the opportunity to participate in person at the second hearing to provide comments on the impact of adding an additional trauma center position in their trauma service area.

In 2010, in addition to the rule promulgation activities and other trauma service area evaluations, the Office of Trauma contracted with Drs. Barbara Orban and Etienne Pracht, University of South Florida, to conduct a retrospective analysis of nucleus and feeder counties that define Florida's 19 trauma service areas based on rates of retention of trauma patients, defined by section 395.402(1), *F.S.*, as patients with an injury severity score of nine or greater, by county of residence. This study was conducted using Florida hospital discharge data from the AHCA. This analysis was important to identify priority counties for review of new trauma centers in the trauma service areas. The study was completed in August 2010 and submitted to the Office of Trauma. The Office of Trauma staff, the Division of Emergency Medical Operations director and legal counsel reviewed the report and made recommendations for revisions on November 1, 2010. The final report would be published and distributed to stakeholders in early 2011. The report is available on the Office of Trauma's Florida Trauma System domain website at www.fl-traumasystem.com. (Click on the link "Forms and Reports.")

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

Since the Florida Trauma System Plan Advisory Committee agreed that the seven domestic security task force regions would not serve for trauma system operations, during the 2010 strategic planning sessions, the committee proposed the department seek approval from the Governor and the Legislature for additional budget authority to conduct another comprehensive assessment of the Florida Trauma System. The Committee recommended that the purpose of the assessment would be to determine the current effectiveness of Florida's trauma system, identify the appropriate regional structure for the Florida Trauma System operations, and to determine the appropriate planning and evaluation strategies (See Goal 8 of the 2011-2015 Florida Trauma System Strategic Plan. The new plan can be obtained at the Office of Trauma's Florida Trauma System domain website at the following link: www.fl-traumasystem.com. (Click on the Florida Trauma System Strategic Plan banner at the bottom of the home page.)

2011 ACTION STEPS:

- ▶ The rule promulgation activities for 64J-2.010, F.A.C. that began in 2008 through 2010 were carried over to the action plan for 2011. However, the rule hearing scheduled for February 16, 2011 would be cancelled and the department would withdraw this rulemaking until the completion of the department's 2011 statute and rule reviews.
 - ▶ Seek approval to conduct the recommended Florida Trauma System Special Study to obtain an evidenced based methodology to determine the location of trauma centers until another comprehensive assessment of Florida's trauma system could be conducted;
 - ▶ Seek additional budget authority to utilize the EMS Trust Fund revenues to conduct another comprehensive assessment of Florida's Trauma System; and
 - ▶ Continue to conduct the annual assessments of the 19 trauma service area in 2011 utilizing the 2010 AHCA discharge data and the 2010 Census data.
- **Rules 64J-2.011 – 2.017, F.A.C.** and the *Florida Trauma Center Standards, DOH Pamphlet 150-9*. Annual reviews of these rules and trauma standards *DOH Pamphlet 150-9*, which is incorporated by reference in Rule 64J-2.011, F.A.C., were conducted in 2007, 2008, 2009, and 2010 by the Office of Trauma and the Trauma Center Planning Team. These annual reviews were based on the American College of Surgeons' Guidelines and needs identified by the Florida Trauma System Plan Advisory Committee (Formerly the State Trauma System Plan Implementation Committee), Florida Committee on Trauma, and other trauma related constituency groups.

Based on the 2007 review, the Office of Trauma completed rule promulgation processes to revise the *Florida Trauma Center Standards, DOH Pamphlet 150-9*, incorporated by in Rule 64J-2.011, F.A.C., which became effective in March 2008. During the 2009, and 2010 trauma center interim and renewal site surveys, the Office of Trauma staff evaluated the trauma centers surveyed based on the January 2008 *Florida Trauma Center Standards, DOH Pamphlet 150-9* to ensure the new standards are implemented in all of the trauma centers.

The 2008 and 2009 annual reviews identified the following proposed revisions to the *Florida Trauma Center Standards, DOH Pamphlet 150-9*:

- Include a standard for vascular surgeon coverage in the specialty staffing requirements of the Level I, II, and Pediatric trauma centers. This standard has been recommended by the American College of Surgeons.
- Include the Florida Preventive Ulcer Program Standards for all Level I, II, and Pediatric trauma centers to prevent secondary complications for spinal cord injury patients from decubitus ulcers, which develop in inpatient and outpatient settings. These standards were developed by the Shands-Jacksonville Trauma Center staff and approved by the Office of Trauma, the Florida Trauma System Plan Advisory Committee, and the Brain and Spinal Cord Injury Advisory Council for implementation in trauma centers, transitional units, as well as nursing homes for spinal cord injury patients.
- Include a mentoring program standard to ensure that new trauma program staff matched with veteran trauma personnel to provide education and guidance. This standard has been suggested to ensure succession planning and continuous education for new trauma center personnel.

In 2010, the Office of Trauma completed rule promulgation activities to add the Preventive Ulcer Program Standards and the quality improvement indicator to track the outcomes of referrals to the Diaphragm Pacer Program to the *Florida Trauma Center Standards, DOH Pamphlet 150-9*. The revised pamphlet was incorporated by reference to Rule 64J-2.011, F.A.C. on April 20, 2010.

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

On June 29, 2010, the Trauma Center Planning Team held a meeting in Orlando in conjunction with the Florida Trauma System Plan Advisory Committee meeting. The team revisited the specialty and non-specialty on-call requirements. Based on the team's recommendation, the Office of Trauma held two rule development workshops, August 17 and December 9, 2010.

On December 9, 2010, a rule development workshop was conducted to seek input from stakeholders on the trauma center application process. The participants recommended the deletion of the burdensome Letter of Intent and application process timeframes in these rules; however, it was identified that these timeframes are mandated by section 395.4025, F.S., and repeal of the letter of intent process and application timeframes would require statutory revisions.

2011 ACTION STEPS:

- ▶ The Office of Trauma site survey teams will begin evaluating the trauma centers during the 2011 surveys to ensure compliance with the new 2010 standards;
- ▶ Based on the December 9, 2010 rule development workshop, the Office of Trauma staff will review of the Letter of Intent and the trauma center application processes with legal counsel to propose statutory revisions to section 395.4025, F.S. to remove the burdensome Letter of Intent and trauma center application timeframes during the 2012 Florida Legislative Session; and
- ▶ The Office of Trauma staff and the Trauma Center Planning Team will revisit the need for revisions to the specialty and non-specialty physician on-call requirements during the comprehensive review of the *Florida Trauma Center Standards, DOH Pamphlet 150-9* after the new American College of Surgeons' Guidebook has been released in late early 2012.

Rule 64J-2.019, F.A.C. - Funding for Verified Trauma Centers: In 2009, the Florida Legislature enacted and the Governor signed into law HB 481 (Chapter 2009-163), which provided additional funding for trauma centers from the collection of fines assessed for passing a school bus loading and unloading children, racing on highways, and reckless driving. This new funding source was incorporated and adopted in this rule in October 2009. The implementation of this law was completed with the distribution of these funds in the December 2009 payout to the trauma centers.

In 2010, the Florida Legislature enacted and the Governor signed into law HB 325 (Chapter 2010-80), which provided additional funding for trauma centers from the collection of fines assessed for violation of the Red-Light Running Law detected from the use of traffic infraction detection devices. Rule 64J-2.019, F.A.C., was revised to add the additional trauma center revenue generated from the enactment of this law for inclusion in the quarterly trauma center payouts, and to sunset the reference to the "Enhanced Penalty Zone" legislation, section 316.1893, F.S. The law that was enacted to create the "Enhanced Penalty Zone" pilot project sunset on June 30, 2010. The effective date of the revisions to this rule was December 22, 2010.

2011 ACTION STEP:

- ▶ Continue the distribution of the funds generated from the six legislatively mandated funding sources. (See the "Legislative Update" section within this report for a summary of the collections and distribution of these funds.)

OBJECTIVE 1B:

Develop and implement a statewide multidisciplinary trauma system committee, with membership to include the entities listed in Chapter 395, F.S., including the Board of Medicine and the Board of Nursing, to provide overall guidance to trauma system planning.

STRATEGY 1B1:

Implement and evaluate the status of the State Trauma System Five-Year Strategic Plan goals and objectives – completed in 2006, 2007, 2008, 2009, and 2010.

OUTCOMES AND OUTPUTS:

- The following is a report provides the percentage of strategies completed since the publication and deployment of the December 2005 - December 2010 State Trauma System Strategic Plan:
 - 2006: 27%
 - 2007: 42%
 - 2008: 72%
 - 2009: 90%
 - 2010: 92%

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

December 31, 2010 closed-out the December 2005 – December 2010 plan. The Office of Trauma, the Florida Trauma System Plan Advisory Committee, and its nine planning teams, providers and partners completed 92 percent of the objectives and strategies. Eight percent of the strategies were in progress and were carried over to the 2011 Action Plan due to funding implications, the need for further stakeholder and partner input, and the completion of another comprehensive assessment of the Florida Trauma System as proposed in the Goal 8 objectives and strategies included in the 2011-2015 Florida Trauma System Strategic Plan.

- From January 2006 to December 2010, the Florida Trauma System Plan Advisory Committee (formerly the State Trauma System Plan Implementation Committee) and the planning teams held meetings or conference calls on a quarterly basis to develop, implement, and evaluate the plan activities and accomplishments. A copy of the meeting summaries of these meetings and conference calls can be obtained from the Office of Trauma.

Each year, the Office of Trauma director, division director and/or unit managers also participate in meetings of the Florida Committee on Trauma (FCOT), Association of Florida Trauma Agencies (AFTA), Association of the Florida Trauma Coordinators (AFTC), Florida Health Care Association (FHCA), Florida Association of Homes and Services for the Aging (FAHSA), the EMS Advisory Council, Emergency Medical Services for Children Advisory Council, BSCIP Advisory Council groups, the Injury Prevention Advisory Council, and respective constituent groups to provide updates on the implementation of the strategic plan strategies, projects, and initiatives. The Office of Trauma and the division director are members of the Strategic Plan Oversight Committee of the Bureau of Preparedness and Response. Disaster related trauma system projects included in the strategic plan are reported at these meetings.

- In January 2009, the Division of Emergency Medical Operations division director approved the re-establishment of the plan implementation committee; titled the new committee as the Florida Trauma System Plan Advisory Committee; revised the focus of the committee; established the new membership from providers and agencies actively participating in the Florida Trauma System continuum-of-care pursuant to sections 20.43 and 395.40, F.S. The committee appointments were finalized in June 2009.
- The Florida Trauma System Plan Advisory Committee held a conference call on August 20, 2009 to provide an orientation to the new members and to begin making plans to develop the 2009 Florida Trauma System SWOT analysis survey, which will be utilized by the planning teams to develop the next five-year plan. During this conference call the planning teams were restructured to abolish the Deployment Planning Team and establish three new planning teams: Trauma Center Access to Care; Pre-Hospital and Transport; and Quality Improvement. The Registry and the Research Planning Teams were combined. Each team was assigned a specific goal for development and implementation of the next five-year plan.
- Between September and November 2009, the Office of Trauma strategic planner developed, implemented and analyzed the 2009 Trauma System SWOT analysis, with the assistance of trauma planning team leads and Office of Trauma staff. In December 2009, the results of the 2009 Florida Trauma System SWOT analysis were distributed to the planning teams for review and preparation for conference calls to be held in early 2010 to begin the development of the next five-year strategic plan.
- The Office of Trauma and the nine planning teams held strategic planning conference calls in early 2010 to develop the 2010 Action Plan for each goal to close-out the current five-year plan, implement the remaining strategies of the current plan, and to draft the 2011-2015 Florida Trauma System Strategic Plan.
- In February 2010, the Florida Trauma System Plan Advisory Committee held a face-to-face strategic planning session to include representatives from each of the continuum-of-care providers, agencies and organizations involved in the Florida Trauma System. The participants provided input to refine and ensure the draft plan was inclusive and integrated with other state, regional, and local strategic plans related to the trauma system.
- In June 2010, the Florida Trauma System Plan Advisory Committee held a face-to-face meeting and approved the final draft with minor revisions for presentation to the department's leadership for approval and publication. In November 2010, the plan was approved for publication and the published plan was distributed to stakeholders in December 2010.

More information specific to the activities of each of the planning teams and the advisory council relative to the assigned goals can be found within each of the Goal Updates sections within this section of this report.

2011 ACTION STEP:

- ▶ Continue to hold planning team conference calls and the Florida Trauma System Plan Advisory Committee meetings to complete the term of the committee's membership, which would expire on June 30, 2011.

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

In 2011, a new Florida Trauma System Plan Advisory Council would be created by the new State Surgeon General, and members appointed to complete the implementation and evaluation of the new 2011-2015 Florida Trauma System Strategic Plan.

STRATEGY 1B2:

Quarterly monitor the State Trauma System Five-Year Strategic Plan goals and objectives for compliance – completed in 2006, 2007, 2008, 2009, and 2010.

OUTCOMES AND OUTPUTS:

- The quarter monitoring of the strategic plan goals, objectives and strategies were completed from 2006 to 2010 by the Florida Trauma System Plan Advisory Committee and its nine planning teams through the preparation and review of semi-annual action plan status reports. These status reports included summaries of the activities and accomplishments of the implementation of the strategies for each of the goals included in the 2006-2010 Florida Trauma System Strategic Plan, as well as barriers to the implementation of these strategies and annual action steps. These reports were distributed to constituency groups that represent each trauma system continuum-of-care providers and partners.
- The *2009 Florida Trauma System Annual Report* was completed and distributed to stakeholders. This report provides an annual update on the 2009 planning and implementation activities of the Office of Trauma and the Florida Trauma System Plan Advisory Committee and its nine planning teams for each of the goals included in the 2006-2010 Florida Trauma System Strategic Plan and action plans for 2010.
- The Florida Trauma System Plan Advisory Committee and its nine planning teams developed and approved the 2011-2015 Florida Trauma System Plan with the input and recommendations of the Florida Trauma System constituency groups that included representation of the continuum-of-care provider and partners. The new plan was distributed in December 2010.

The following are the new Goal 1 objectives:

- The Office of Trauma within the Department of Health is the lead office with responsibility to implement and maintain a comprehensive trauma system;
- Maintain a statewide multi-disciplinary trauma system advisory committee, with representatives from the continuum-of-care providers and partners to provide overall guidance to trauma system planning and improvement;
- Develop guidelines, standards, and rules to clearly define Florida's inclusive trauma system consistent with *Florida Statutes*, and to ensure and enforce compliance by Florida Trauma System providers; and
- Develop and seek adequate and permanent/recurring funding for all components of Florida's inclusive trauma system (local, regional, and state).

For more information regarding the Goal 1 objectives and strategies, a copy of the 2011-2015 Florida Trauma System Strategic Plan is available from the Office of Trauma's Florida Trauma System domain website at the following link www.fl-traumasystem.com. (Scroll down to the Plan Banner at the bottom of the home page.)

2011 ACTION STEPS:

- ▶ Finalize the development of the 2011-2012 Goal Action Plans for each goal and begin the implementation of the new strategies by continuing to conduct quarterly conference calls and/or meetings;
- ▶ Continue to monitor the progress made; evaluate the strategies to identify areas for opportunities for improvement, gaps, and barriers to the successful completion of the plan strategies; and make recommendations for revisions of the strategies to update the annual action plans;
- ▶ Develop and publish the 2010 Florida Trauma System Plan Annual Report for distribution to department leadership, the Governor, Legislature, and Florida Trauma System continuum-of-care providers, partners, and stakeholders; and

OBJECTIVE 1C:

Develop coordinated guidelines, standards, and rules that clearly define trauma system standards, consistent with Florida Statutes to ensure and enforce compliance

STRATEGY 1C1:

The Department of Health Standards implemented/evaluated based on American College of Surgeons' Guidelines - December 2006; Chapter 395, Part II, F.S.; and Chapter 64J-2, F.A.C. - completed annually from 2006 to 2010.

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OUTCOMES AND OUTPUTS:

- The Office of Trauma staff and the planning teams continued to conduct annual reviews of Chapter 395, F.S., Part II, and Chapter 64J-2, F.A.C., in 2010 to ensure and enforce regulatory compliance – see status of Objective 1A above.
- The Office of Trauma staff continued to refine and monitor the Office of Trauma Sterling Scorecard indicators from 2007 to 2010 on a quarterly and annual basis, for implementation, compliance, and evaluation to determine outcomes and opportunities for improvement.
- The Office of Trauma Site Survey and Florida Trauma Registry Unit staff continued ongoing evaluation of *Florida Trauma Center Standards, DOH Pamphlet 150-9* through the site surveys and quarterly data reports submitted to the Florida Trauma Registry from 2006 to 2010. In 2010, the following site surveys were completed:

Trauma Center	Level	Date of Survey
St. Mary's Medical Center	Pediatric	February 2010
Delray Medical Center	Pediatric	February 2010
Lawnwood Regional Medical Center	Level II	March 2010
North Broward Medical Center	Level II	May 2010
Lee Memorial Hospital	Level II	December 2010

Application Process Update: The following hospitals withdrew their applications that were submitted in April 2009:

Bay Medical Center (withdrawn 9/20/2010)
 University of Miami Hospital (withdrawn 4/13/2010)
 Ft. Walton Beach Medical Center (withdrawn 7/29/2010)

The acute care hospitals listed below submitted an application to apply for Level II trauma center verification by the April 1, 2010 deadline and requested extensions of 18-months pursuant to Rule 64J-2.013, Extension of Application Period, F.A.C. The 18-month extensions will expire on October 1, 2011. During 2010, the Office of Trauma provided ongoing technical assistance to the following hospitals:

Orange Park Medical Center, Orange Park
 Blake Medical Center, Bradenton
 Kendall Regional Medical Center, Miami
 Regional Medical Center Bayonet Point, Bayonet Point

Letter of Intent Process Update: Annually, through the letter of intent process, the Office of Trauma encourages acute care hospitals to apply to operate as a trauma center to expand life-saving trauma services into the underserved areas of the state. During the 2010 Letter of Intent process, the following acute care hospitals submitted a Letter of Intent, DOH Form 1840 to apply to become a verified trauma center by April 1, 2011, and would be granted an 18-month extension in May 2011:

Bay Medical Center, Panama City - Seeking Level II Verification
 Ft. Walton Beach Medical Center, Ft. Walton – Seeking Level II Verification
 Delray Medical Center, West Palm Beach - Seeking Level I Verification
 St. Mary's Medical Center, Delray Beach – Seeking Level I Verification

For more information on the application and site survey processes is available on the Office of Trauma's Florida Trauma System domain website under "Trauma Center" at www.fl-traumasystem.com.

- From 2006 to 2010, the Office of Trauma staff continued to review the trauma transport protocols for emergency medical services (EMS) providers during the licensure renewal process. In 2010, 200 trauma transport protocols were

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FIVE-YEAR STRATEGIC PLAN UPDATE

reviewed and demonstrated 100 percent compliance with rules 64J-2.002-2.005, F.A.C. – Pre-hospital Requirements for Trauma Care, Trauma Transport Protocols, Adult and Pediatric Trauma Scorecard Triage Criteria, and Inter-Facility Transfer Guidelines. There were no adverse outcomes reported.

2011 ACTION STEPS:

- ▶ Continue to conduct reviews of Chapter 395, F.S., Part II, Rule 64J-2, F.A.C., and the Office of Trauma Sterling Scorecard indicators to identify outcomes, gaps, and opportunities for improvement;
- ▶ Continue to conduct reviews of compliance of the *Florida Trauma Center Standards, DOH Pamphlet 150-9*, trauma registry data requirements, and the trauma transport protocols to identify needed revisions; and
- ▶ See Strategy 1A1 above for additional action steps related to rule promulgation activities in 2011.

OBJECTIVE 1D:

Develop and seek adequate funding for Florida's trauma system.

STRATEGY 1D1:

Full implementation of Chapter 2005-194, Laws of Florida, (HB 497- Red-Light Running Civil Penalties) and Chapter 2005-164, Laws of Florida, (HB 1697- Civil Penalties assessed upon persons required to appear before a designated official for traffic violations resulting in death and serious bodily injury) - full implementation completed in 2006 with ongoing quarterly monitoring and reporting of revenues each year.

HB 497 and HB 1697 (Red-Light Running and related court fines) provided the first dedicated funding for the Florida Trauma System. As the result of the passage of these bills, the Office of Trauma drafted 64E-2.040, F.A.C. (currently 64J-2.019, F.A.C.), Funding for Verified Trauma Centers, in 2005 and the rule became effective in April 2006. The new rule set the trauma center funding distribution methodology, which the Office of Trauma utilized for the distribution of state funding to the trauma centers from June 2006 through December 2010.

OUTCOMES AND OUTPUTS:

The Florida Trauma Registry staff and the business manager ensured that the quarterly payouts were processed in a timely manner with 100 percent compliance with the distribution methodology in accordance with Rule 64J-2.019, F.A.C., section 395.4036, F.S., and other trauma center funding statutes enacted by the Florida Legislature. See the "Legislative Update" section within this report for more information regarding the distribution of the six sources of trauma center funding mandated by the Florida Legislature.

2011 ACTION STEP:

- ▶ Continue to monitor the revenue generated from traffic and court related fines designated for distribution to trauma centers ensure the quarterly payouts are distributed pursuant to rule and statutes.

STRATEGY 1D2:

Full implementation of Laws of Florida Chapter 2006-192 (HB 7141), Chapter 2006-296 (HB 1465), and Chapter 2006-290 (HB 7079), which were passed by the Florida Legislatures to provide trauma center funding and to revise the distribution methodologies established in 2005 to enhance Florida's inclusive trauma system.

These laws were implemented in 2007 with ongoing quarterly distributions of the funds collected to the trauma centers. The Office of Trauma staff conducts quarterly monitoring and reporting of revenues each year.

STRATEGY 1D3:

Implement HB 481 (Chapter 2009-138 - Highway Safety Act) – This law was passed in 2009 with ongoing distribution of these funds collected each quarter to the trauma centers and quarterly monitoring and reporting of revenues each year.

The trauma centers received the initial funding payout from the implementation of this legislation during the January 2010 trauma center payouts. See the "Legislative Update" section within this report for more information regarding the distribution of this and the other sources of trauma center funding mandated by the Florida Legislature.

OBJECTIVE 1E:

Develop adequate, permanent/recurring funding for all components of local and regional trauma agencies, trauma centers, and the Department of Health – completed with continued efforts annually to seek additional funding to improve Florida's inclusive trauma system.

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The 2004 Comprehensive Assessment of the Florida Trauma System confirmed the observations in other states that demonstrate achieving the survival advantage for patients treated in a trauma center, does not occur instantly upon opening a trauma center. Progressive improvement of outcomes occurs over the first three-years after the center begins its work. The study indicated that the unrecoverable costs for establishing a trauma center averages \$2.7 million or an estimated \$3.4 million in inflation-adjusted dollars for 2010. Maintenance of an existing center requires support for specialized equipment, trained personnel, and supplies, which must be continuously ready to receive and treat trauma patients, 24-hours a day, seven-days a week, 365 days a year. The study also verified the annual uncompensated cost of care and preparedness was \$80.3 million or slightly more than \$4 million per trauma center per year. The actual uncompensated costs vary per trauma center due to volume, size, and location of each center. With an average of 3.5 percent inflation to costs per year, the 2010 estimated cost is approximately \$5.6 million for each of the current 22 trauma centers (as of July 2010) or about \$123.8 million statewide. This commitment is ongoing and unrecoverable from patient billings.

In 2005, the Florida Legislature enacted the Red-Light Running Legislation, which funds trauma centers, was fully implemented in 2006. Since 2005, the Legislature has enacted five additional funding sources to ensure the continued availability and accessibility of trauma services throughout the state. From the inception of these funding sources to December 31, 2010 the Office of Trauma has distributed over \$24.4 million to Florida's trauma centers from the revenue generated from the implementation of the Red-Light Running Legislation fines and other traffic and court related fines established through legislation enacted by the Florida Legislature. This funding only partially provides the financial support to ensure the continued availability and accessibility of trauma centers in the state. The addition of trauma centers in underserved areas of the state further dilutes the amount of revenues available for each of the existing trauma centers. A breakdown on the distribution of the funds generated, from each of the six funding sources, can be found within the "Legislative Update" section within this report, and also on the Office of Trauma's Florida Trauma System domain website at the www.fl-traumasystem.com. (Click on the link to "Trauma Center Funding Sources and Payouts" web page.)



Trauma agencies provide trauma system evaluation and oversight of the trauma system at the local level. Due to the decline in county revenues, there is also a continued funding need to maintain the existing four trauma agencies (Hillsborough County Trauma Agency, Broward County Trauma Agency, Palm Beach County Trauma Agencies, and North Central Florida Trauma Agency (regional agency covering 13 counties). Currently, only 16 of the 67 counties in the state are served by a trauma agency. The lack of funding at the local level has made it difficult for the department and the Association of Florida Trauma Agencies to encourage the establishment of regional or county trauma agencies to serve the counties not currently served by trauma agencies.

The Office of Trauma and the Florida Trauma System Plan Advisory Committee has identified the need for regional system evaluation in the areas of the state covered or not covered by a trauma agency. Input at the local level is needed to determine the status of the regional trauma service areas and the need for additional trauma centers and other trauma related services in each area throughout the state as required in sections 395.402, 395.50, and 395.51, *F.S.*

For more information regarding regional trauma system evaluation, see the Goal 8 Regional System Evaluation outcomes and outputs within this section of the report.

STRATEGY 1E-1:

Implement Objective 1E - completed with continued efforts to seek additional funding to improve Florida's inclusive trauma system.

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OUTCOMES OUTPUTS:

- In 2010, the department continued to seek additional funding for the trauma centers and trauma agencies to ensure the continued preparedness, availability and accessibility of trauma services and oversight at the local level throughout the state, and to provide incentives for the establishment of additional trauma centers and trauma agencies in underserved areas of the state.
- In 2010, the Office of Trauma Leadership and the Florida Trauma System Plan Advisory Committee continued to monitor the six sources of trauma center funding.
- The Red-Light Running enforced by the use of traffic infraction devices legislation was filed during the 2008, 2009, and 2010 Florida legislative sessions, which included allocation of the funds collected for Florida's trauma centers. This legislation was enacted by the 2010 Florida Legislature and signed into law by the Governor in May 2010 (Chapter 2010-80, *Laws of Florida*). In December 2010, Rule 64J-2.019, F.A.C., was amended to add this additional funding source to the quarterly distribution of funding to the trauma centers.

2011 ACTION STEP:

- ▶ The Office of Trauma and constituency groups will continue to monitor current trauma center funding and seek additional funding sources and partnerships to fund the trauma continuum-of-care services.

2

Goal 02: Injury Prevention and Control

To have a state trauma system that is an active partner in a state-coordinated system for reducing injury related morbidity and mortality.

OBJECTIVE 2A:

Develop and implement strategies for trauma system participants to contribute to primary prevention and research activities for injury prevention effectively.

STRATEGY 2A1:

Annually review trauma centers' injury prevention programs for identification of primary prevention – completed annually from 2006 to 2010.

All trauma centers are required to conduct injury prevention outreach programs within their communities to comply with Standard XVII of the state's *Florida Trauma Center Standards, DOH Pamphlet 150-9*. These programs consist primarily of educational activities and events designed to raise community awareness of traumatic injuries, and the personal safety measures that one can take to prevent these injuries from occurring.

OUTCOMES AND OUTPUTS:

- Annual reviews were completed from 2006 to 2010 and the injury prevention programs were catalogued. In 2010, the trauma centers conducted approximately 378 injury prevention programs, including Safekids Coalition activities, throughout the state.
- During the 2007 review, the Florida Trauma Registry manager and the Prevention Planning Team also determined through their SWOT analysis that the trauma centers are conducting many prevention and outreach programs; however, the centers had not tested many of these programs for effectiveness.
- From 2008 to 2010, the Office of Trauma Registry staff and the Injury Prevention Planning Team reviewed the data from the injury prevention programs reported by the trauma centers to determine best practices and evidence-based programs for statewide implementation. In 2010, the Office of Trauma intern classified each of the 2009 injury prevention effort as an "activity," "project," or "program," based on level of intensity and frequency of the injury prevention effort, to enable accurate evaluation of effectiveness and outcomes. A list of the 2009 injury prevention activities, projects and programs is available on the Office of Trauma "Injury Prevention" web page on the Office of Trauma's Florida Trauma System domain website at the following link: www.fl-traumasystem.com.

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2011 ACTION STEP:

- ▶ The Prevention Planning Team will continue to review and classify the injury prevention and outreach programs conducted by the trauma centers and data trends to identify evidence-based programs that can be implemented statewide.

A more in-depth analysis of these and other injury prevention and outreach programs is included in the "2010 Hospital Injury Prevention and Research Projects" section and the individual trauma center sections within this annual report.

STRATEGY 2A2-1:

Develop data release policy and procedures, data-use agreement, and data request template to enable release of the Florida Trauma Registry data to third parties for the purposes of acute injury care research and evaluation. This strategy was completed in 2010 with ongoing evaluation and improvement of the data release approval process.

OUTCOMES AND OUTPUTS:

- Based on the 2008 Research SWOT analysis and action plan, on June 3, 2009, the Research Planning Team members and registry staff met with the DOH attorneys and the DOH Institution Review Board (IRB) administrator to review and receive the department's approval of the registry data request form and use agreement. The forms were approved with minor revisions.
- Research Project Update: Florida's Level I and Pediatric trauma centers are required to conduct research projects to improve the delivery of trauma care and evaluate trauma system performance. In 2010, these trauma centers conducted 229 research projects totaling approximately \$230 million. More information about these projects is available in the "Trauma Center Reports" section and the "2010 Injury Prevention and Research" section within this annual report.
- In May 2010, the Office of Trauma created the following web pages:

Research Projects: <http://doh.state.fl.us/demo/Trauma/ResearchProjects.htm>; and
Research Data Requests: <http://doh.state.fl.us/demo/Trauma/registry.htm#>

This strategy was completed in 2009. In 2010, the registry staff and planning team members approved the draft data release policy and procedures, data-use agreement and data request template for implementation. However, in 2010 the raw data submitted by the trauma centers must be standardized before the data can be released for third-party research and evaluation. This strategy was carried over to the 2011-2015 Florida Trauma System Strategic Plan and was moved to Goal 9 Trauma Registry and Research. The registry staff and the Next Generation Trauma Registry Project Team began the standardization of the raw data in late 2010 and would continue the standardization in 2011. Once the registry staff completes the standardization of the raw data and validates the raw data submitted by the trauma centers after the standardization is implemented, the trauma center raw data can be released to third parties for the purposes of acute injury care research and evaluation upon review and approval of the research data request by the DOH Institutional Review Board.

2011 ACTION STEPS:

- ▶ Continue to analyze and catalog the trauma research projects conducted by the trauma centers to identify and evaluate outcomes, best practices, and opportunities for improvement in trauma service delivery and publish the projects in the 2011 Florida Trauma System Plan Annual Report and on the Office of Trauma website;
- ▶ Complete the standardization of the raw data submitted by the trauma centers;
- ▶ Finalize the trauma registry data release policy and procedures and begin rule development to enable release of Florida Trauma Registry data to third parties for the purposes of acute injury care research and evaluation;
- ▶ Implement rule, and policies and procedures; and
- ▶ Continue to meet with the DOH IRB to implement and refine the processes to review and approve requests of trauma registry data for ad hoc research projects by the DOH IRB and the Office of Trauma's ad hoc research review team to ensure all deliberations and proceedings will be conducted in compliance with sections 395.404 and 395.405, F.S.

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STRATEGY 2A3:

Coordinate with the Office of Injury Prevention to design a population-based surveillance system – completed in 2006, 2007, 2008, 2009, and 2010.

Section 401.243, F.S., designates the Office of Injury Prevention within the DOH as the lead program for statewide injury prevention activities, including data collection and surveillance.

OUTCOMES AND OUTPUTS:

From 2006 to 2010, the Florida Trauma Registry manager and the Prevention Planning Team leads continued to work closely with the Office of Injury Prevention to help support Goal Team 6 (Data) of the 2004-2008 Florida Injury Prevention Strategic Plan and the implementation of the population-based surveillance system. The Office of Trauma staff utilizes the Office of Injury Prevention's Florida Injury Data annual reports and the Florida Trauma Registry injury severity and mode of injury data and vital statistic population data to complete the annual assessments mandated in section 395.402(3)(j), F.S., of the trauma service areas to determine areas within the state that need additional injury prevention and education.

STRATEGY 2A3-1:

Work to accomplish a surveillance tool to identify hot spots (fact sheets). The fact sheets were completed in 2009 and are utilized annually to evaluate the types of injuries occurring within the state's trauma service areas.

OUTCOMES AND OUTPUTS:

- In 2008, the Office of Injury Prevention epidemiologist, with input from the Injury Prevention Strategic Plan Goal Team 6 members, prepared fact sheets with 2006-2007 data, which will meet the annual data reporting requirement of the U.S. Centers for Disease Control and Injury Prevention, Public Health Injury Surveillance, and the Prevention Program Cooperative Agreement Grant. This data includes drowning, falls, fires, firearms, homicide/assault, motor vehicle crashes, poisoning, suicide/suicide attempts, and traumatic brain injuries.
- The surveillance tool fact sheets were distributed at the spring 2009 Florida Injury Prevention Advisory Council and Goal Teams' meetings. More information regarding injury surveillance and injury prevention activities are posted on the following the DOH websites:

Office of Injury Prevention: <http://www.doh.state.fl.us/DEMO/InjuryPrevention/index.html>; and Office of Trauma: <http://doh.state.fl.us/demo/Trauma/InjuryPrevention.htm>

2011 ACTION STEP:

- ▶ The Office of Trauma will continue to assist the Office of Injury Prevention with injury surveillance to identify hot spots throughout the state and will work closely with the trauma centers and injury prevention coalitions in those areas to ensure additional injury prevention and education programs are conducted to reduce the number of injuries.

STRATEGY 2A3-2:

Work with the Florida Trauma Registry to capture relevant data (enable the release of Florida Trauma Registry data for the purpose of injury surveillance and research) –completed in 2006, 2007, 2008, 2009, and in 2010 with ongoing annual analysis of relevant Florida Trauma Registry data for the proposes of injury surveillance, trauma research, as well as to evaluate the effectiveness of the trauma service areas as mandated in section 395.402, F.S.

OUTCOMES AND OUTPUTS:

See Strategies 2A1 and 2A2 above.

OBJECTIVE 2B:

Participate in the development and implementation of the Florida Injury Prevention Strategic Plan, and make relevant linkages to the Florida Trauma System Strategic Plan - completed.

STRATEGY 2B1:

Attend the twice-yearly meetings of the Florida Injury Prevention Advisory Council and the Injury Prevention Strategic Plan Goal Teams' meetings – completed annually from 2007 to 2010.

OUTCOMES AND OUTPUTS:

- From 2007 to 2010, Office of Trauma staff and the Prevention Planning Team leads continued to attend and participate in the advisory council meetings and are active in the strategic planning efforts of the Office of Injury Prevention and the council.

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- During the May and October 2009 advisory council meetings, goal team member appointments were finalized and members began working on the implementation of the goals of the 2009-2013 Florida Injury Prevention Strategic Plan.
- The Trauma Prevention Planning Team members brought to the attention of the council the barriers to the implementation of the brief alcohol screening intervention in trauma centers. The advisory council agreed to assist with the implementation of this intervention.
- The Trauma Prevention Planning Team agreed to assist the Florida Injury Prevention Advisory Council's Goal Team 2 in the completion of a statewide injury prevention inventory that classifies the state's injury prevention initiatives as activities, projects, or programs. This classification scheme is necessary for the valid evaluation of the effectiveness of these initiatives. In 2010, this classification was utilized to evaluate the 2009 trauma center injury prevention initiatives. (See the Office of Trauma Florida Trauma System domain website at www.fl-traumasystem.com. Click on "Injury Prevention" to view the classification of the 2009 trauma center injury prevention activities, projects, or programs.)
- In 2009, the director of the Office of Injury Prevention was asked to serve as a liaison to the Florida Trauma System Plan Advisory Committee and the Prevention Planning Team to assist in the development of the 2010 Action Plan for the Prevention Planning Team and the next Florida Trauma System Strategic Plan. The director of the Office of Injury Prevention participates in trauma system plan conference calls and meetings to ensure both plans are well integrated and improve collaborative efforts and resources to reduce costs and improve the mortality rate due to traumatic injuries.
- From January to June 2010, the Prevention Planning Team held conference calls to draft and refine Goal 2 of the next five-year Trauma System Strategic Plan. In June 2010, the Florida Trauma System Plan Advisory Committee approved the following Goal 2 objectives for inclusion in the 2011-2015 Florida Trauma System Strategic Plan:
 - Promote a statewide, trauma system-based program of evidenced-based primary injury prevention activities and projects;
 - Coordinate the implementation of this goal with the 2009-2013 Florida Injury Prevention Strategic Plan; and
 - Facilitate opportunities to link trauma centers with other state and local agencies to collaborate on primary injury prevention efforts.

More information regarding the Goal 2 strategies for the above goals can be found in the 2011-2015 Florida Trauma System Strategic Plan located on the bottom of the home page of the Office of Trauma's Florida Trauma System domain website at: www.fl-traumasystem.com.

2011 ACTION STEPS:

- ▶ Continue to participate in the Florida Injury Prevention Advisory Council and Goal Teams' meetings to assist with the implementation of the 2009-2013 Florida Injury Prevention Strategic Plan to ensure continued collaborative efforts to integrate and implement primary injury prevention efforts throughout the state; and
- ▶ Begin the implementation of the Goal 2 strategies included in the new 2011-2015 Florida Trauma System Strategic Plan.

OBJECTIVE 2C:

Promote the use of successful injury prevention strategies to local community leaders and encourage community partnerships.

STRATEGY 2C1:

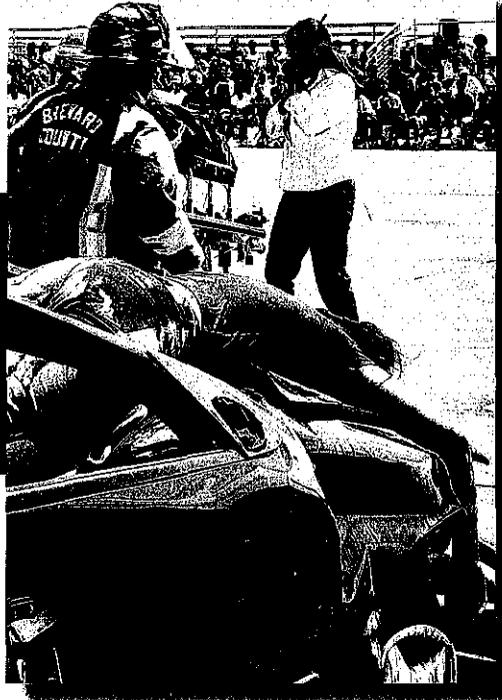
Encourage community partnerships to work collaboratively to reduce and prevent injuries – completed annually with ongoing collaborative efforts with the trauma centers and the injury prevention coalitions throughout the state.

OUTCOMES AND OUTPUTS:

- From 2006 to 2010, the Office of Trauma staff continued to encourage community partnerships with the Bureau of EMS, the Office of Injury Prevention, the Brain and Spinal Cord Injury Program, county health departments, trauma centers, trauma agencies, EMS providers, Florida Hospital Association, and other associations and organizations, to collaborate with injury prevention activities to reduce and prevent injuries.
- Also annually from 2006-2010, the Office of Trauma director and staff shared the trauma center injury prevention programs and outcomes such as "Prom Night," Shattered Dreams," "Prom-Promise," and WalkSafe™ with state, regional, and local community partners during quarterly and semi-annual constituency group and advisory council meetings to encourage collaboration of efforts and resources to reduce and prevent injuries in the state. The following are the outcomes from some of our trauma centers' evidence-based injury prevention programs:

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“Prom Night,” “Shattered Dreams,” and “Prom-Promise”: In 2010, the trauma centers continued to conduct these prevention programs in conjunction with the school districts and law enforcement in their service area. Outcome: In 1998, there were 50 deaths statewide on prom night. With the implementation of the evidence-based prom night programs by trauma centers in collaboration schools, law enforcement, and traffic-safety teams, there were no deaths on prom night from vehicle crashes in the areas where these programs were implemented from 2006 to 2010.



The WalkSafe™ Program is a school-based pediatric pedestrian safety education program developed by the University of Miami/Miller School of Medicine. In 2010, the WalkSafe™ curriculum was taught in 100 percent of Miami-Dade County's public elementary schools, and reached more than 155,000 elementary school students in 10 different counties. Since the WalkSafe™ Program's inception in 2001, the total number of pedestrian-hit-by-car injuries for children ages 0-14 has decreased by 43 percent in Miami-Dade County (source: Florida Department of Highway Safety and Motor Vehicles crash data).

- The trauma centers and the Office of Trauma staff are involved in the motorcycle safety, falls prevention, and suicide prevention coalitions from 2006-2010. Several trauma centers are involved with their local Safekids coalitions.
- The county health department directors/administrators and the injury prevention liaisons from the county health departments were invited and attended the opening sessions of the trauma center site surveys conducted in 2009-2010 in their service area. During these sessions, information concerning the injury prevention programs and outcomes were shared and the county health departments were encouraged to participate in future trauma center injury prevention activities.
- In June 2009, the membership of the Florida Trauma System Plan Advisory Committee was revised to include representation from the following agencies to encourage collaborative efforts: Department of Children and Families, Department of Transportation, Department of Highway Safety and Motor Vehicles, Department of Elder Affairs, Office of Injury Prevention, and EMS for Children.
- From 2009 – 2010, the DOH and the Florida Department of Children and Families partnered to collaborate on areas such as prevention and in efforts to design effective mental health and substance abuse interventions delivered in trauma centers. The partnership also included data collection of trauma secondary to such incidents as suicide attempts, impaired driving due to substance abuse, and significant injuries associated with abuse and domestic violence.

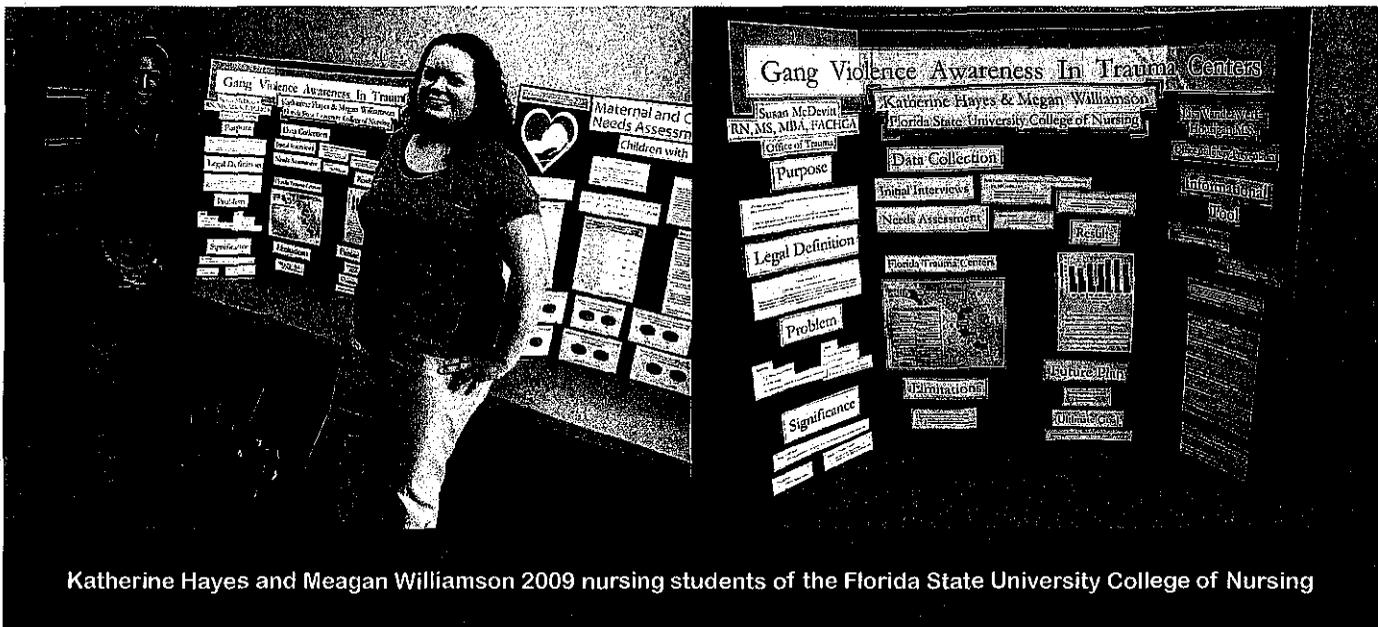
2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

A conference call was held in September 2009 to discuss collaboration between the DOH and DCF on an alcohol use and suicide risk assessment tool to be used in Florida's Level I trauma centers to be funded by a grant from the National Institute of Mental Health. The Office of Trauma provided letters of support for the grant application submitted by Dr. Brian Celso, principal investigator from the University of Florida Health Science Center in Jacksonville, and TraumaOne at Shands Jacksonville.

These collaborative efforts and projects between the DOH, Department of Children and Families, and the trauma centers were carried over to the 2011 Action Plan.

- **Gang Violence Project:** In 2010, the director of the DOH Minority Health, Monica Hayes identified the need to work with the Office of Trauma in identifying areas throughout the state that are high risk for gang violence. This endeavor will include building on the gang violence project that the FSU nursing students completed in 2009. These students completed a needs assessment, survey instrument tool and literature review. In 2010, documentation of the literature was placed on the Office of Trauma's Florida Trauma System domain website home page at the following link: www.ft-traumasystem.com. (Click on "Injury Prevention" or "Gang Violence.")

Six Florida's trauma centers have developed and implemented gang violence and/or violence prevention programs in their local areas. This consisted of educational programs reaching middle school and high school students. An evaluation methodology is being developed to demonstrate the community impact.



Katherine Hayes and Meagan Williamson 2009 nursing students of the Florida State University College of Nursing

Also in 2010, in addition to the partnership regarding gang violence, the Office of Trauma has agreed to work as collaborative partners with the DOH, Office of Minority Health to assist in the development of partnerships with faith and community-based programs, college and university entities, professional associations, law enforcement, and other agency partners. This partnership will bring together government, health care providers, and institutions of higher learning with a common goal – to eliminate disparities in health care. This coordination between the Office of Trauma and the Office of Minority Health will include the development of training and educational materials to educate communities on gang violence and the signs and symptoms of traumatic injuries.

On October 9, 2010, Dr. Hayes provided an acknowledgement of partnership to implement the pilot plan on gang violence to address the reality of increasing gang violence and the resulting consequences to communities, workforce, educational, and the healthcare delivery systems. The pilot was designed to:

- Conduct a model that includes components infused with cultural and linguistic competency;
- Provide training in cultural and linguistic competency for all involved in the pilot;

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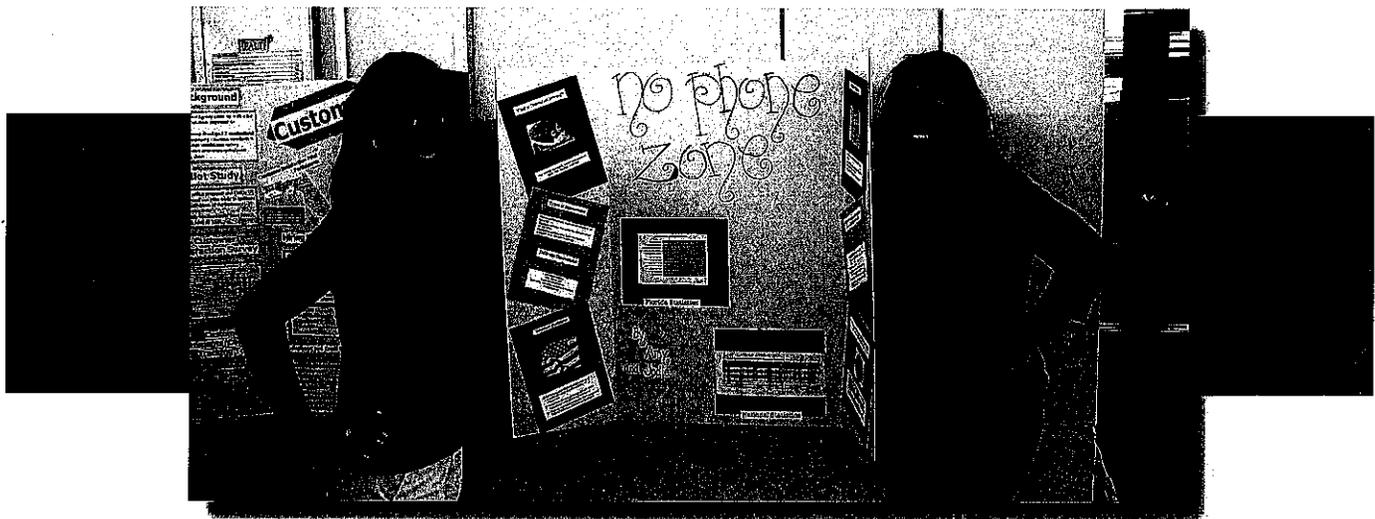
- Enhance curriculum for elementary and middle school students to include: positive self-esteem, good decision-making, self-control, and anger management;
- Coordinate faith and community-based work with parents of school children to support and promote sound parenting practices; and
- Coordinate efforts between trauma center personnel and the community in response to gang violence; and develop internships for masters level social work students to provide support for clinical staff of the trauma centers on evening and weekend hours to facilitate the patient, parental, and community interface.
- Distracted Driving Prevention and Literature: In 2010, two FSU student nurses completed their rotation with the Office of Trauma and the Office of Injury Prevention. One of their assignments was to complete a literature research on the different types and effects of distracted driving. These students discovered that distracted driving is serious and life-threatening, not just for the driver, but for their passengers, other drivers and pedestrians. The Centers for Disease Control and Prevention (CDC) analysis examined the frequency of two major types of distractions—cell phone use and texting. The findings include:

25 percent of drivers in the United States report that they talk on their cell phone “regularly” or “fairly often” while driving;

Nearly 40 percent of U.S. drivers, ages 18 to 29, report that they talk on their cell phone “regularly” or “fairly often” while driving; and

More than a quarter of U.S. drivers ages 18 to 29 report texting or e-mailing “regularly” or “fairly often” while driving.

(Source: CDC’s Distracted Driving in the United States and Europe web page: <http://www.cdc.gov/features/dsDistractedDriving/?source=govdelivery>)



*Amy Freedman and Jodie Pindulic
2010 nursing students of the Florida State University College of Nursing*

A pilot trauma center will be identified and the program implemented in FY 2012-2013. Once the initial pilot is implemented, the ultimate goal is to replicate the pilot in other trauma centers throughout the state to decrease incidents of traumatic injuries due to gang violence and the resulting disruption of lives and community.

- Community-Based Programs and Partnerships: In addition to the partnership regarding gang violence, the Office of Trauma has agreed to work as a collaborative partner with the DOH Office of Minority Health to assist in the development of partnerships with faith and community-based programs, college and university entities, professional associations, law enforcement, and other agency partners. This partnership will bring together government, healthcare providers, and institutions of higher learning with a common goal – to eliminate disparities in health care. This coordination between the Office of Minority Health and the Office of Trauma staff will include the development of training and educational materials to educate communities on signs and symptoms of trauma. This project was carried forward to the new 2011-2015 Florida Trauma System Strategic Plan Goal 2.

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- **Senior Falls Prevention:** In February 2009, the Prevention Planning Team Lead and the Office of Trauma epidemiologist attended the *Senior Falls Prevention Conference* sponsored by the Miami Area Geriatric Education Center of the University of Miami and presented data on senior falls in South Florida on behalf of the Office of Prevention's injury epidemiologist. On National Falls Prevention Awareness Day, September 22, 2010, the Department of Health, Office of Injury Prevention and the Department of Elder Affairs, Elder Rights Bureau presented a live satellite broadcast and webinar titled "The Basics of Senior Falls Prevention for Health Professionals." All trauma center program personnel were encouraged to view the broadcast and webinar.
- **Trauma Awareness Day:** On April 6, 2009, the Office of Trauma in conjunction with the Florida Hospital Association and the Florida Committee on Trauma sponsored a Trauma Awareness Day Event at the Capitol to provide information about Florida's trauma system continuum-of-care providers and to promote Trauma Awareness Day and Injury Prevention activities of Florida's trauma centers. Fact sheets and other information concerning injury prevention were distributed to the public participating in the event. A CD of the press conference and interviews with each of the trauma system continuum-of-care providers was produced to show the importance of each component of Florida's inclusive trauma system. These CDs were distributed to the trauma centers for use in educating their district's legislators, other county and community leaders, and the general public regarding the trauma system. A copy of the CD can be obtained from the Office of Trauma.

Throughout the month of May 2010, the verified and provisional trauma centers and EMS providers conducted Trauma Awareness and EMS Week events and injury prevention activities to educate the public on traumatic injuries and to celebrate trauma survivors. The Florida Committee on Trauma, the Office of Trauma, and the State Surgeon General designated May 19, 2010 as "Trauma Awareness Day" and recognized the dedication of trauma center personnel throughout the state who provide trauma services 24/7/365 to Florida's residents and visitors.

In late 2010 and early 2011, the Office of Trauma, the Florida Committee on Trauma, and the trauma centers began to plan for the May events to celebrate National Trauma Month, Trauma Awareness Day (May 18, 2011), National Emergency Medical Services Week (May 15 – May 21, 2011), and the Emergency Medical Services for Children Awareness Day (May 18, 2011).

- **Florida Department of Transportation Motorcycle Safety Grant:** In April 2009, the Office of Trauma's epidemiologist attended the Florida Motorcycle Safety Coalition meeting at the Florida Department of Transportation (FDOT) headquarters in Tallahassee to facilitate linkages with trauma centers and FDOT in the fulfillment of Strategy 4 ("Partner with emergency services and trauma centers to provide public education on motorcycle safety"), of the Florida Motorcycle Strategic Safety Plan.

In 2010, the Office of Trauma received a \$107,000 grant from the FDOT for a statewide motorcycle safety education project through Florida's trauma centers. Dr. Patricia Byers, trauma surgeon and researcher from the University of Miami/Jackson Memorial Hospital Ryder Level I Trauma Center, and Susan McDevitt, Director of the Office of Trauma, finalized the deliverables of Phase I of the grant in August 2010.

In September 2010, the Office of Trauma received notification from the FDOT that a \$250,000 continuation grant for the Motorcycle Education and Injury Prevention Program, Phase II had been approved. This grant develops improved training materials for trauma center and emergency room staff, as well as training materials for EMTs/paramedics regarding improved care techniques for motorcycle accident injury patients in the field. Additional researching of motorcycle injuries by use of trauma registry data and zip code location will help pin point highest risk geographic areas, and assist in concentrating new motorcycle injury prevention materials in areas with high motorcycle accident rates. As of December 31, 2010 the grant deliverables were in 100 percent compliance.

2011 ACTION STEPS:

- ▶ Continue to support and encourage state and community partnerships in the state's injury prevention and outreach activities;
- ▶ Continue to sponsor and participate in Trauma Awareness Month, Trauma Awareness Day, National EMS Week, National Falls Prevention Awareness, and EMS for Children Day activities at the local and state level to promote trauma awareness and injury prevention;
- ▶ Continue to invite injury prevention liaisons from the county health departments to attend the trauma center site surveys and encourage the partnerships with their trauma centers to reduce injuries in their service areas; and
- ▶ Continue to work with the DOH Office of Minority Health to implement the gang violence pilot program with one of

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the state's trauma centers in FY 2011-2012.

STRATEGY 2C2:

Explore the feasibility of making appropriate injury prevention curricula available to childcare – completed and ongoing efforts.

OUTCOMES AND OUTPUTS:

- The WalkSafe™ Program, directed by Dr. Gillian Hotz, is an elementary school based pedestrian injury prevention program developed in 2001 at the University of Miami, Jackson Memorial Hospital /Ryder Level I Trauma Center, and funded by grants from the FDOT, "Safe Routes to School," Florida Emergency Medical Services, the Children's Trust, FedEx, Miami Project to Cure Paralysis and the Brain Injury Association of Florida.

Since Miami-Dade County has one of the highest number of pedestrians hit by cars in the state of Florida, the WalkSafe™ Program originated the "5-E Program (Education, Engineering, Enforcement, Evaluation and Encouragement), but it is primarily an educational program with classroom curriculum, and recommending engineering modifications and enforcement in order to reduce pediatric pedestrian injuries. The WalkSafe™ Program Team is responsible for educational and behavioral evaluations and all partners are encouraged to promote the program. In order to decrease the number of children hit by motor vehicles, an interagency community oriented task force was established. The Miami-Dade WalkSafe™ Program partners include Miami-Dade County Public Schools, Miami-Dade County Public Works Department, Miami-Dade County School Board, City of Miami and Metro-Dade police departments, the Metropolitan Planning Office, "SafeKids," and the Injury Free Coalition.

There have been many study phases performed. The findings revealed that children who received the WalkSafe™ Program curriculum, showed significant safety knowledge improvement in post test scores then children that did not receive the program. The children who received the program were able to retain the safety behaviors for three months following the intervention.

In 2007, Dr. Gillian Hotz, Coordinator of the Miami-Dade WalkSafe™ Program, received a \$150,000 "Safe Routes to School" grant from the FDOT and an additional \$240,000 grant from the DOH Bureau of EMS and FedEx, to pilot the expansion of this program to nine additional high-risk Florida counties, in collaboration with school districts, law enforcement, FDOT engineers, and trauma centers in these counties.

From 2008 to 2010, Dr. Hotz and the study team worked closely with the school districts and the trauma centers to implement the WalkSafe™ Program in Broward, Palm Beach, Lee, Polk, Orange, Duval, Escambia, and Santa Rosa counties.

In 2010, the WalkSafe™ curriculum was taught in 100 percent of Miami-Dade County's public elementary schools; in addition, reached more than 155,000 elementary school students in 10 different counties. Since the WalkSafe™ Program's inception in 2001, the total number of pedestrian-hit-by-car injuries for children ages 0-14 has decreased by 43 percent in Miami-Dade County (source: Florida Department of Highway Safety and Motor Vehicles crash data).

In 2009, the membership of the new Florida Trauma System Plan Advisory Committee was revised and members were appointed in June 2009 to include representation from the EMS for Children Program and the Florida Department of Children and Families to encourage collaborative efforts to ensure emphasis on injury prevention curricula to address child abuse, teen alcohol and drug abuse, teen suicide, and gang violence.

2011 ACTION STEP:

- ▶ The Office of Trauma staff and the Prevention Planning Team will continue to work with the trauma centers, the Office of Injury Prevention and local coalitions to explore more partnerships and the feasibility of making appropriate injury prevention curricula available to child-care facilities and schools.

STRATEGY 2C3:

Encourage community partnerships to work collaboratively with the Department of Elder Affairs (DOEA) to reduce and prevent injury of elders – completed annually from 2007 to 2010 with ongoing activities with DOEA.

OUTCOMES AND OUTPUTS:

- In 2010, The Office of Trauma and trauma system stakeholders statewide continued to support the ongoing formation of state and local falls prevention coalitions coordinated by the DOEA and the Office of Injury Prevention that began in 2009.
- According to 2010 data reported to the Florida Trauma Registry, Florida's trauma centers treated a total of 12,863

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patients for fall-related injuries in 2010, making it the leading cause of injury treated in Florida's trauma centers

- In 2007, Dr. Carl Schulman, Researcher for the University of Miami Jackson Memorial Hospital/Ryder Level I Trauma Center and Office of Trauma research consultant, obtained funding from the FDOT to create and pilot a pedestrian safety program for elderly pedestrians in Miami-Dade County. The project team modeled the pilot after the WalkSafe™ Program. From 2008 to 2010, the Prevention and Research Planning Teams monitored and evaluated the progress of this pilot project for possible statewide implementation to reduce and prevent injuries statewide among the elderly. For more information regarding this pilot project, see the University of Miami Jackson Memorial Hospital Ryder Level I Trauma Center section of this annual report.

Dr. Schulman has also completed a study funded by the Robert Wood Johnson Foundation to study the problem of elderly pedestrian injury. The primary purpose of this project was to identify risk factors that will lead to the development and implementation of effective prevention strategies to reduce the risk of pedestrian injury in this vulnerable population. For more information regarding this study, see the University of Miami Jackson Memorial Hospital Ryder Level I Trauma Center section of this annual report.

- From 2008 to 2010, the Office of Trauma director and the trauma epidemiologist attended the annual Senior Falls Prevention Seminar co-sponsored by the Office of Injury Prevention and the DOEA. On September 22, 2010, the Office of Injury Prevention and DOEA's Communities for a Lifetime Bureau held the National Falls Prevention Awareness Day broadcast and webinar for health care professionals. This broadcast, held at the WFSU-TV studios in Tallahassee via satellite and webcast to a national audience, provided important information to health care professionals to raise their awareness of the need to educate their senior patients about preventing falls.

2011 ACTION STEP:

- ▶ Continue to support the ongoing development of falls prevention coalitions, "WalkSafe," and other evidence-based injury prevention programs and research to reduce and prevent injuries statewide among the elderly.

OBJECTIVE 2D:

Assure that there are appropriate trauma public awareness and injury prevention programs.

STRATEGY 2D1:

Include in the trauma website ongoing links to injury prevention appropriate information – completed annually from 2006 to 2010.

OUTCOMES AND OUTPUTS:

- Annually, the Office of Trauma reviews the trauma centers' annual reports to ensure injury prevention and trauma public awareness activities are conducted each year by the trauma centers. Also, through the trauma center site survey process, these programs are reviewed and evaluated by the out-of-state site surveyors and the Office of Trauma staff to ensure ongoing compliance of the Injury Prevention trauma center standard.
- From 2007 to 2010, links to injury prevention appropriate information was posted on the "Injury Prevention" webpage on the Office of Trauma's Florida Trauma System domain website at the following link www.fl-traumasystem.com.
- From 2008 to 2010, "Traumacomm," a weekly snapshot of Florida's trauma system information and resources, including injury prevention articles, training and other events, was distributed. The Office of Trauma created the list service to enhance communication with Florida's residents and our state and federal stakeholders and partners. Subscribers to the list service receive automatic e-mails each week that consist of current state events, news, notices, trainings, conferences, best practices, and updates from the Office of Trauma and the Florida Trauma System, as well as national news related to trauma. The service allows subscribers to submit news items, notices, articles, etc., for posting in the weekly e-mails. To subscribe to this weekly link visit: http://www7.doh.state.fl.us/mailman/listinfo/office_of_trauma.
- In 2009 and 2010, the Florida Trauma System Fact Sheet and CD, prepared during the April 6, 2009 Trauma Awareness Day Event at the Capitol, were used as educational tools and are available from the Office of Trauma. Each year, Trauma Awareness Day activities and information, including the Florida Trauma System Fact Sheet, are posted on the home page of the Office of Trauma's Florida Trauma System domain website at www.fl-traumasystem.com. (The Trauma Awareness Day banner is located at the bottom of the home page.)

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2011 ACTION STEPS:

- ▶ Continue to monitor and evaluate the trauma center injury prevention and trauma awareness activities annually;
- ▶ Continue to promote trauma awareness activities on the Office of Trauma's domain website; and
- ▶ Continue to build collaborative partnerships with other state agencies and trauma centers to increase trauma public awareness and injury prevention programs throughout the state.

STRATEGY 2D2:

Provide injury prevention training education to injury prevention workforce. (Goal 4 of the Florida Injury Prevention Strategic Plan: Increase state-of-the-art knowledge and skills in the injury prevention workforce) – completed from 2006 to 2010.

OUTCOME AND OUTPUTS:

The Fifth Annual Injury Prevention 101 Course was held April 27, 2010 at the WFSU-TV studios in Tallahassee and broadcast statewide via the DOH's Distance Learning Satellite Network. Approximately 400 individuals statewide registered to view the course. The course has been recorded on CD-ROM for distribution and is available from the Office of Injury Prevention.

2011 ACTION STEPS:

- ▶ Continue to encourage the trauma program managers, registrars, and trauma injury prevention and outreach coordinators to attend the annual Injury Prevention 101 Course; and
- ▶ Consider adapting the Injury Prevention 101 Course to meet the needs of trauma centers and explore putting training requirements into *Florida Trauma Center Standards, DOH Pamphlet 150-9*.

STRATEGY 2D3:

Encourage the public/private sector to support injury prevention training and education – completed from 2007 to 2010.

OUTCOMES AND OUTPUTS:

- From 2007 to 2010, the Office of Trauma and the Trauma Prevention Planning Team leads continued to:
 - Encourage the public/private sector to support injury prevention training and education at the state, regional and local levels;
 - Invite county health department leadership and injury prevention coordinators to the initial session of trauma center site surveys in their service areas to encourage county health department staff collaboration and support of injury prevention training and education in local schools and other community organizations; and
 - Provide updates on trauma center injury prevention programs, outcomes, training, and education during quarterly and semi-annual meetings of the Florida Trauma System continuum-of-care providers and partners, and encourages them to support community injury prevention training and education opportunities provided by the trauma centers, the Office of Injury Prevention, other state agencies, local coalitions and other community organizations.
- From 2009 to 2010, the Office of Trauma continued to include injury prevention news and training opportunities offered by the DOH and other state agencies, coalitions and community organizations in the state in the weekly Traumacomm newsletter. The injury prevention training and education opportunities are also posted on the Office of Trauma's Injury Prevention web page.

2011 ACTION STEP:

- ▶ Continue to work with the Office of Injury Prevention, the Brain and Spinal Cord Injury Program, trauma centers, trauma agencies, county health departments, and other trauma-related constituency groups and partners to encourage support of injury prevention training and education at the state, regional or local levels.



Goal 03:
Emergency/Disaster Preparedness Plan

To have a trauma system prepared to respond to emergency and disaster situations in coordination with state, regional and local disaster plans.

OBJECTIVE 3A:

Establish coordinated emergency and disaster planning criteria for all participants in Florida's trauma system – completed with ongoing review and refinement.

STRATEGY 3A1:

Implement and evaluate bombs, burns, and blast hospital plan – completed in 2006, 2007, 2008, 2009, and 2010 with ongoing evaluation and refinement annually.

OUTCOMES AND OUTPUTS:

- From 2006 to 2010, the Office of Trauma continued to use the expertise of the Trauma Disaster and Response Planning Team leads and members in contingency planning for mass trauma or burn casualties as part of the development for regional emergency hospital plans, and planning for collaboration with metropolitan medical response systems, disaster medical assistance teams, and urban search and rescue teams.

In 2010, lead by Dr. John Armstrong, the planning team held conference calls to review the 2009 SWOT analysis results and to prepare the draft of Goal 3 for the 2011-2015 Florida Trauma System Strategic Plan and the members participated in the February 25, 2010 Strategic Planning Session to further refine the Goal 3 objectives and strategies. During the June 2010 Florida Trauma System Plan Advisory Committee Meeting, the advisory committee approved the Goal 3 objectives and strategies for implementation.

- In 2009, roles and responsibilities continued to be identified for ESF-8 partners of AHCA, Florida Health Care Association, the Florida Association of Homes and Services for the Aging, and the Florida Hospital Association, and standards of care, which were approved as written in September 2005, implemented in December 2005, and reviewed in June 2006, August 2007, May and October 2008, May and October 2009, and December 2010. Outcome: Annually, the Office of Trauma director reviews the roles and responsibilities to identify changes in the ESF-8 partners' roles and responsibilities for re-entry of patients after evacuation for hospitals, skilled nursing facilities, group and support homes, and assisted living facilities.
- From 2008 to 2010, the ESF-8 Manual was reviewed, revised, and distributed to the trauma program managers with updates from crisis stabilization units, persons with disabilities group and support homes, as well as intermediate care facilities for the developmentally disabled.
- *Mass Casualty Incident (MCI) Plan:*
 - In 2008, the draft MCI Plan was developed by the Trauma Disaster Response Planning Team MCI Plan lead, Dr. Mauricio Lynn, including timelines, with input from the Office of Trauma director and the planning team members. The MCI plan was reviewed and discussed during the Florida Committee on Trauma and the committee approved the plan as written on July 9, 2008. During the third and fourth quarters of 2008, the Office of Trauma and the Disaster Planning Team leads held conference calls to draft an action plan, including timelines for implementation.
 - The basic MCI plan and action plan was reviewed and approved on January 28, 2009 by the State Trauma System Plan Implementation Committee. On March 16, 2009, the Disaster Response Planning Team leads participate in a conference call with the directors and staff of the DOH, Office of Public Health Preparedness, the Office of Emergency Medical Operations, and the Office of Trauma to discuss and further refine the Mass Casualty Incident Plan and action plan. This review identified further refinement and scaling of the MCI plan to various size facilities was needed.
 - In 2010, the Office of Trauma staff continued to seek ASPR funding to refine and scaling of the MCI plan to various size facilities and to implement disaster drills to test the plan, and evaluate the plan for further refinement. This funding was on the approved list of projects; however, no funding was made available.

Goal 03: Emergency/Disaster Preparedness Plan



PHOTO COMPLIMENTS OF MIAMI-DADE FIRE RESCUE

The Jackson Memorial Hospital/Ryder Trauma Center Telemedicine Network was utilized during the 2010 Haiti earthquake disaster to provide critical life saving trauma consultation to medical providers providing and medical care and trauma triage of injured individuals, some who were transported to the Jackson Memorial Hospital Ryder Level I Trauma Center for care.

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2011 ACTION STEPS:

- ▶ Continue to seek ASPR funding to continue to refine and scaling of the MCI plan to various size facilities and to implement disaster drills to test the plan, and evaluate the plan for further refinement; and
 - ▶ The Office of Trauma and the Goal 3 Planning Team will work closely with the Bureau of Preparedness and Response to develop planning tools, guidelines, exercises, and draft objectives for hospitals and trauma centers to utilize for drills to test their plans.
- *Disaster/Trauma Telemedicine Project:* Phase I of the project was initiated in 2008. The DOH Office of Trauma received \$200,000 ASPR Grant to establish a trauma telemedicine network. The purpose of the network was to connect Florida's trauma centers with satellite community or rural hospitals to share valuable medical information, consultation, trauma continuing education, and treat and care for trauma patients in the event of a public health incident. The ultimate goal of this project is to expand these networks in all of the 19 trauma service areas of the state.

Phase I: Initiated in 2008 and implemented in 2009. In FY 2008-2009, under the leadership of the project manager, Dr. Antonio Marttos, University of Miami/Jackson Memorial Hospital Ryder Level I Trauma Center, the Florida Trauma Telemedicine Network Phase I was implemented to link two Level I trauma centers (Ryder Trauma Center and Shands at the University of Florida in Gainesville), with community and rural hospital emergency rooms in each of their respective trauma service areas.

The grant contracts were executed and full educational and consultation tests of the Florida Trauma Teleconference Project system was completed in 2009 by Jackson Memorial Hospital/Ryder Trauma Center and Shands-Gainesville at the University of Florida. Shands-Gainesville is now performing telemedicine between their trauma center and a rural hospital emergency room in Live Oak, Florida. Jackson Memorial Hospital Ryder Level I Trauma Center is performing trauma telemedicine with a high volume emergency room facility in the northern part of Miami-Dade County (Jackson North), the Keys Hospital in Key West, and Walter Reed Hospital. The Jackson Memorial Hospital/Ryder Trauma Center Telemedicine Network was utilized during the 2010 Haiti earthquake disaster to provide critical life saving trauma consultation to medical providers providing and medical care and trauma triage of injured individuals, some who were transported to the Jackson Memorial Hospital Ryder Level I Trauma Center for care.

Phase II: In 2009, the Office of Trauma, working closely with Dr. Antonio Marttos and the Office of Public Health Preparedness, was approved and funded by the Public Health Preparedness for a \$391,000 grant to expand the program to include Orlando Regional Medical Center, Sacred Heart Hospital, and Tampa General Hospital as participating trauma telemedicine centers in FY 2009-2010. Phase II primarily will have a rural/satellite facility participating with each of these trauma centers, and possibly allow for the addition of another rural facility to each participating pilot trauma centers established in Phase I. This grant also provides some limited sustainment funds for the current participating facilities.

Phase III: The director of the Office of Trauma and the state trauma medical director attended the Strategic Planning Oversight Team Meeting in March 2010 and requested \$200,000 for Phase III of the Florida Trauma Telemedicine Project, which included sustainment funds, as well as operational funding for coordination of the project. The Office of Public Health Preparedness (now the Bureau of Preparedness and Response) submitted the Hospital Preparedness Program Cooperative Agreement Application for FY 2010-11 to ASPR on May 21, 2010. The application included the request for \$300,000 to expand telemedicine to additional trauma centers and rural hospitals.

The Phase III request for the FY 2010-11 preparedness grant to continue the expansion of the Florida Trauma Telemedicine Network was approved at a higher amount of over \$630,000. This funding allowed the Office of Trauma to bring on Holmes Regional Medical Level II Trauma Center, Lee Memorial Level II Trauma Center, and Tallahassee Memorial Level II Trauma Center, with at least one distant/rural facility connected to each, plus providing modest sustainment funds to current mini-hubs and funds to add at least one more distant/rural facility at most of the current mini-hubs.

Phase IV: The Phase IV request for the FY 2011-12 Florida Trauma Telemedicine Network project was prepared by the Office of Trauma staff and the Florida Trauma Telemedicine lead. The original submission included both sustainment funds for the current system with expansion to two additional trauma centers and two additional rural/distant emergency facilities. However, given the reduction in overall funds for all projects, the Florida Trauma Telemedicine Network was required to restrict this funding cycle to sustainment funding amounts only at the system locations which are currently in place. Additionally, the telemedicine project was incorporated into an overall hospital preparedness contract for the trauma centers involved.

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2011 ACTION STEPS:

- ▶ Continue to evaluate the operation of the telemedicine facilities included in the Florida Trauma Telemedicine Network for opportunities for improvement and expand the network as funding is made available.
- ▶ Conduct a multiple trauma center interconnected use of the Florida Trauma Telemedicine Network to demonstrate the capability during a mass casualty incident exercise.

STRATEGY 3A2:

Review/revise gap analysis plan for surge (trauma burns), work force, and supplies annually – completed from 2006 to 2010 with annual revisions and refinement.

OUTCOMES AND OUTPUTS:

- **Gap analysis:** The gap analysis plan for surge, manpower, and supplies was reviewed from 2006 to 2010 by the Office of Trauma staff and the Disaster Response and Preparedness Planning Team, as part of the annual assessment of the Florida Trauma System required by section 395.402(3)(e) and (i), F.S., and the department's Hospital Preparedness Program. The department's Physicians' Workforce annual report is also utilized to determine inventories of available trauma care resources and gaps in professional medical staff. These annual analyses were used to plan for bed capacity to prepare in the event of a hurricane or other mass casualty incidents and to validate the apportionment of trauma center positions within each trauma service area. For more information regarding the annual gap analysis can be found in the Florida Department of Health Hospital Preparedness Program annual report, which is available from the Bureau of Preparedness and Response.

Burn Care and Burn Capacity Grants (2003-2010).

Accomplishments:

- In 2010, Florida had 22 trauma centers (including Pediatric trauma centers), and three burn units, (one trauma center is no longer certified by the American Burn Association) that total 60 beds statewide.
- In 2010, the burn bed occupancy rate was 98-100 percent daily. In an emergency this number of burn bed capacity was increased (including beds in trauma centers) as follows:

2004:	270
2005:	880
2006:	880
2007:	880
2008:	880
2009:	910
2010:	910

- As of December 31, 2010, 22 trauma centers and 272 EMS providers have received a burn care curriculum, 21 burn care contracts for supplies and education have been executed, and the inventory of supplies was completed for 22 trauma centers and three burn care centers.
- Program evaluation was implemented in November 2004 and continued from 2005 to 2010.

The following is more detail on the grant activities for the distribution of supplies and equipment to trauma centers and non-trauma center hospitals:

- **2006-2008 HRSA Hospital Preparedness Grant recipient of \$20 million for Trauma and Burn Care:** The FYs 2006-2007 and 2007-2008 HRSA grant was implemented for non-trauma center hospitals. The Burn Care Task Force approved 30 non-trauma center acute care hospitals based on population; number of licensed acute care beds; JCAHO survey; AHCA inspections; and results of a survey for licensure, life safety, risk management, and complaints. The following is a breakdown of burn care dollars to be received by non-trauma acute care hospitals.
- **Trauma Carts:** Developed based on the ATLS guidelines for the ability to surge to 50 patients per center. A total of \$800,000 was allocated at \$26,998.80 per community non-trauma center acute care hospital.

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- **Burn Care Supplies and Equipment:** The list of burn care supplies and equipment was approved by the Burn Care Task Force, and chair. The advisory committee allocated \$4.7 million for burn supplies and equipment and burns training. Of this, \$3,600,000 is being allocated for burn care supplies and equipment. Each community non-trauma center acute care hospital received an offer of \$120,000. Most accepted and the burn care supplies and equipment are now in place.

The contract managers from the division's Administrative Services Unit continue to monitor the burn care supplies and equipment and trauma crash carts. The monitoring began in December 2009 and is ongoing. Annual Status: The burn care task force reviewed and made recommendations for the 2010-2011 burn care supplies and medications to the Hospital Surge Committee effective June 1, 2010. This request was implemented in October 2010.

- **Operating Room Supplies and Equipment (2008 through 2010):** \$5.3 million was given to the Level I trauma centers and Sacred Heart Level II Trauma Center for operating room supplies and equipment to improve surge capacity in the event of bombs, burns, blast, or other mass casualty incidents. The release of the 2010 program funding provided another \$3 million to provide enhanced operating room supplies in order to improve surge capacity at Level II and Pediatric trauma centers in preparation for a mass casualty event. These supplies and equipment would be in place at the participating centers by the end of FY 2010-2011.

See new Strategies 3D for activities regarding Medical Surge Capacity, which was added in 2008 update of Goal 3 in the December 2005-December 2010 Florida Trauma System Plan.

STRATEGY 3A3:

Review/revise education/training competencies for the care of trauma patients in the event of bombs, burns, blast, or other mass casualty incidents – completed in 2006 with ongoing annual reviews from 2007 to 2010.

OUTCOMES AND OUTPUTS:

- In 2006, the project team completed and distributed the Bombs, Burns, and Blast, 2nd ed, DVD to train hospital and pre-hospital personnel. As of December 2009, the trauma centers and 60 non-trauma centers have used this DVD to train approximately 48,000 EMTs and paramedics, and 26,000 healthcare providers. The American Burn Association, American College of Surgeons, U.S. Department of Health and Human Services, and HRSA approved this DVD as the national education and training model.
- **HRSA - Phase II Burn Grant for Physician Training:** In 2007, the Office of Trauma continued implementation of the *Burn Care CD* second edition. The Office of Trauma awarded a \$1.57 million HRSA grant to the University of Florida, to develop a unique training program for physicians and other trauma center personnel in the advanced techniques of burn care and new skin grafting techniques. In 2008, the advanced training program was completed, peer reviewed and the deliverables were accepted.
- **HRSA - Phase III Burn Care Grant (\$585,000):** The operational burns advanced education program was approved initially for the FY 2007-2008 HRSA grant program. The web-based training program was completed in 2008 by the DOH and the University of Florida/360ed project team (lead by Dr. David Mazingo), and is known as *Burn Center*. This video game is a medically accurate, Internet, interactive six-eight hour presentation with up to 40 different patient scenarios, which upon completion can earn continuing medical education units for trauma surgeons and continuing education units for trauma nurses. The *Burn Center* game simulates surgical procedures specific to injuries received from bombs, burns, and blasts incidents. The web-based training program went active in mid-October 2008 for web-beta testing. Since the release of the *Burn Center* video game in mid-October 2008 to December 2010, over 260 trauma physicians, residents/fellows, and trauma nurses have completed the training. The program was made available to other physicians and out-of-state trauma personnel via a fee process through the University of Florida. The University of Florida under the agreement with the DOH provided access to a limited number of new trauma surgeons and new trauma nurses in 2010 at no charge. Additionally, the program is now available to other physicians. Out-of-state trauma personnel pay through a fee process to the University of Florida to access the training. Additionally, a tailored version developed and presented for EMTs and paramedics over the next two years is a goal in the project.

In 2010, funding was granted to reactivate the Burn Care Task Force and redevelop the *Burn Care CD* in 2011 to also include training on crush injuries. The project began in late 2010 with Dr. David Mazingo at the University of Florida, Gainesville serving as lead subject matter expert working with the Burn Care Task Force and other trauma physicians to determine changes and new material to add to a revised edition of the CD. This project would be completed in the summer of 2011.

2010 STATE TRAUMA SYSTEM

FIVE-YEAR STRATEGIC PLAN UPDATE

- **Protocol for Utilization of Tourniquets:** Dr. John Armstrong, Disaster Response Planning Team Lead developed a draft protocol for use in the trauma centers and for EMS providers for the proper utilization of a tourniquet. He presented the protocol in the joint Systems and Disaster Planning Teams' Meeting, and also at the January 28, 2009 EMS Medical Directors Meeting for review and comments. The comments and suggested revisions were incorporated to improve the protocol. The revised draft protocol was presented to the EMS Advisory Council during the October 2009 council meeting. In January 2010, the protocol was approved by the EMS Advisory Council for implementation. Education and training was implemented and is ongoing.
- **Mass Casualty Traumatic Brain Injury DVD:** At the March 2010 Strategic Planning Oversight Team Meeting, a request for \$105,000 in funding was requested to update the Mass Casualty TBI DVD and poster to include blast injuries. As of December 2010, this project was underway with Dr. Patrick Jacobs, University of Florida at Gainesville, serving as the lead subject matter expert. This project would be completed in the summer of 2011.

OBJECTIVE 3B:

Establish emergency/disaster response plans to assure trauma system readiness for all components of the trauma system.

STRATEGY 3B1:

Review the Office of Trauma's disaster response plans with emphasis on the American College of Surgeons' and American Burn Association's Guidelines - completed in 2008, with ongoing reviews annually.

OUTCOMES AND OUTPUTS:

- In 2007, the Office of Trauma director and the Trauma Disaster Response Planning Team worked with the Office of Public Health Preparedness and the Regional Domestic Security Task Forces (RDSTFs) to place a trauma surgeon and trauma program manager on each of the RDSTF groups. In 2008 and 2009, Dr. Patricia Byers serves as a member of the Strategic Planning Oversight Team (SPOT) of the Office of Public Health Preparedness to represent trauma centers.
- In January 2008, the *Florida Trauma Centers Standards, DOH Pamphlet 150-9* was revised to add a standard for Disaster Response and Management: Standard XIX for Level II and Standard XX for Level I and Pediatrics. This standard requires all trauma centers to meet the disaster-related requirements in section 395.1055(1)(c), *F.S.*; AHCA Comprehensive Emergency Management Plan, Chapter 59-A-3.078, *F.A.C.*; and the Joint Commission on Accreditation of Healthcare Organizations (JACHO) standards. The revised standards were incorporated by reference in Rule 64J-2.011, *F.A.C.*, effective March 2008. The Office of Trauma evaluated the trauma centers' compliance with the 2008 Disaster Response and Management Standard during the 2009 and 2010 site survey process and all trauma centers surveyed were in 100 percent compliance.
- From 2006 to 2010, the Office of Trauma staff reviewed its Disaster/COOP plans to ensure compliance with the department's standard operating guidelines in preparation for the hurricane season each year.

2011 ACTION STEPS:

- ▶ Continue to ensure trauma center representation on the Regional Domestic Security Task Forces and the Medical Surge Capability Team;
- ▶ Continue to evaluate the trauma center's compliance with the Disaster Response and Management Standard; and
- ▶ Continue to update Office of Trauma Disaster/COOP Plan to prepare for 2011 hurricane season or other disaster events.

STRATEGY 3B2:

Review plans and develop core competencies for clinical care based on the American College of Surgeons' and American Burn Association Guidelines – completed annually from 2007 to 2010.

OUTCOMES AND OUTPUTS:

- In 2006, the core competencies for trauma centers for clinical care based on the revised American College of Surgeons' and American Burn Association's Guidelines were implemented and were reviewed from 2007 to 2010 during the trauma center site survey process.
- **Trauma Disaster Management Training:** In late 2007, the Trauma Disaster Response Planning Team leads developed the Trauma Disaster Management Training Course based on the American College of Surgeons' Disaster Management

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

Training for Physicians and Nurses. Each course is limited to only 30-40 participants and lasts a full day. It includes a comprehensive syllabus, resource CD, and the two-part "Burn Mass Casualty" CD set made available through the Florida Committee on Trauma. The Florida Chapter of the American College of Surgeons sponsored continuing education units (CEUs) for this course. The aim is to first provide this course for all trauma centers and then expand to the regional hospitals as the state leaders become instructors. This initiative is the first step in developing a comprehensive standard approach to disaster preparedness and competencies for clinical care in Florida's trauma centers and regional hospitals.

In 2008, through preparedness grant funding, \$110,000 was awarded to the Office of Trauma for education and training on disaster preparedness, triage, resuscitation, and treatment for trauma surgeons and nurses and emergency room physicians and nurses. From 2008 to 2010, the disaster management courses were scheduled and conducted at various locations throughout the state.

As of December 31, 2010 a total of 18 American College of Surgeons' Disaster Management classes were conducted using preparedness grant funds, educating approximately 450 health care providers from the 22 trauma centers and approximately 19 other hospitals.

The preparedness grant application was funded for 2011 to include the requested \$59,000 for face-to-face courses and \$121,000 to work with the American College of Surgeons' Chicago office to develop an electronic version of the course. However, since that time, the American College of Surgeons has decided to fund the development of an electronic version, without the funding from the state of Florida. Therefore, a request has been made to the Bureau of Preparedness and Response, to withdraw \$100,000 from this grant for redirection to other priority grants and to keep \$20,000 for possible additional face-to-face courses late in FY 2011 and to test the American College of Surgeons' electronic course if it is completed before the end of the FY 2011-2012. There were five courses planned for 2011 at the following locations: Tampa (2); Pensacola; Jacksonville; and Tallahassee.

2011 ACTION STEPS:

- ▶ Seek funding to continue the American College of Surgeons' Disaster Management Training courses annually and hold classes if funding is identified;
- ▶ Evaluate trauma center personnel competency through trauma center drills and lessons learned during the site survey process; and
- ▶ Work closely with the Office of Public Health Preparedness to develop standards of care and trauma center surge-capacity plans that align with consensus standards and integrate with pre-hospital triage and treatment and hospital plans. The Trauma Disaster Response Planning Team will design the plans to enhance and improve medical facilities' ability to function as an integrated collaborative network on the local, regional, state, and interstate levels.

OBJECTIVE 3C:

Encourage active trauma system participant involvement in local, regional, and state disaster preparedness planning.

STRATEGY 3C1:

Develop and test integrated disaster drills for the continuum-of-care completed with ongoing drills annually.

OUTCOMES AND OUTPUTS:

- From 2006 through 2010, Florida's trauma centers continued to conduct internal disaster drills in accordance with the standards required by the Joint Commission on the Accreditation of Healthcare Organizations, now called, "The Joint Commission."
- During 2008, 2009, and 2010, Office of Trauma and the Trauma Disaster Response Planning Team leads continued to work with the trauma centers, the Office of Public Health Preparedness, and the Division of Emergency Operations for participation in local, regional, and state disaster preparedness planning, as well as support and encourage the development and implementation of integrated disaster drills for the continuum-of-care.

2011 ACTION STEP:

- ▶ The Office of Trauma and the Trauma Disaster Response Planning Team will continue to work with the internal and external stakeholders to assist with the development of integrated disaster drills.

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OBJECTIVE 3D:

Medical Surge: Injured or ill from the events receive rapid and appropriate care. (New strategy added in 2008) – The strategies for this objective were in progress as of December 31, 2010. This objective and strategies were carried over to the new 2011-2015 Florida Trauma System Strategic Plan.

At the request of the Office of Public Health Preparedness, this new strategy was approved by the State Trauma System Plan Implementation Committee during the May 19, 2008 committee conference call. The addition of this strategy will ensure linkages and collaboration between the State Trauma System Five-Year Strategic Plan goals and the goals of the Public Health and Medical Plan. The following are the strategies developed through the collaborative efforts between the Office of Trauma and the Bureau of Preparedness and Response (formerly the Office of Public Health Preparedness) from 2008 to 2010 on the implementation of this objective:

STRATEGY 3D1:

Work closely with the Bureau of Preparedness and Response (formerly the Office of Preparedness and Response) and the Bureau of EMS to ensure hospital plans for surge capacity align to consensus standards and integrate with pre-hospital triage and treatment and emergency management plans. Plans should enhance and improve medical facilities' ability to function as an integrated collaborative network on all local, regional, state, and interstate levels – completed with ongoing evaluation and refinement annually to ensure integration, of plans.

OUTCOMES AND OUTPUTS:

- *ICU and Operating Room Supplies and Equipment for Surge (2006-2007 and 2008-2009):* \$5.3 million has been awarded to the Level I trauma centers and Sacred Heart Level II Trauma Center for operating room supplies and equipment to improve surge capacity in the event of a bombs, burns, or blasts incident. The release of the 2009 program funding provided another \$3 million to provide enhanced operating room supplies in order to improve surge capacity at Level II and Pediatric trauma centers in the event of bombs, burns, or blast incidents. In 2009, twenty-one trauma centers received \$252,000 for ICU surge capacity. Trauma carts were provided for the ability to surge to 50 patients per center and were in place for FY 2009-2010.
- *Mass Casualty Incident (MCI) Plan:* The basic MCI plan and action plan, which included plans for medical surge, was reviewed and approved on January 28, 2009 by the State Trauma System Plan Implementation Committee.
- *Communications and Patient Trauma System:* In 2008, Dr. Joseph Tepas served on the Office of Public Health Preparedness' ITN Evaluation Committee to ensure that the needs of the trauma centers are considered in the ITN award. In late 2008, the department awarded a contract to EMSsystems to develop and implement the Office Public Health Preparedness' Communications and Patient Tracking System (CPTS) within Florida. This system will provide the trauma centers, EMS providers, and acute care hospitals the capability to conduct real time monitoring of bed and personnel capacity in the event of a bomb, burn, or blast incident, as well as for use with day-to-day operations.

In early 2009, the Office of Public Health Preparedness and EMSsystems executed the contract and began implementation of the new CPTC. Representatives from EMSsystems demonstrated the EMResource and EMTrack components of the new system during the June 28, 2009 Florida Trauma System Plan Advisory Committee meeting and other EMS Advisory Council constituency group meetings. The Regional Domestic Security Task Forces were designated as the lead and point of contact to implement the system. The implementation of the system was rolled out in July 2009 by the Regional Domestic Security Task Forces and EMSsystems staff. By December 2009, seven of the trauma centers had installed the system and were working with the regional points of contacts to train users.

Throughout 2010, the Office of Trauma continued to partner with the CPTS project manager of the Bureau of Preparedness and Response (formerly the Office of Public Health Preparedness) to encourage the trauma centers not currently using the system to contact the lead in their domestic security region to implement the system in their centers. As of February 2011, there would be 17 of the 22 trauma centers that have installed the CPTS. Twelve of these trauma centers have users identified for EMResource and five for EMTrack that have received training and have begun to utilize the system. The department's goal is to implement this system in all trauma centers to be used not only during disaster events, but also for daily operations to track bed capacity, trauma transports by EMS providers, diversions, and the inter-facility transfers of trauma patients.

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Domestic Security Regions	Trauma Centers/Level	EMResource Users Per Center	EMTrack Users Per Center
Region 1	None		
Region 2	Tallahassee Memorial Hospital (II)	0	0
Region 3	None		
Region 4	All Children's Hospital (Ped)	18	18
	Bayfront Medical Center (II and Ped)	11	11
	Lakeland Regional Medical Center (II)	10	10
	Tampa General Hospital (I)	23	23
Region 5	Orlando Regional Medical Center (I)	0	0
	Halifax Medical Center (II)	0	0
	Holmes Regional Medical Center (II)	0	0
	Lawnwood Regional Medical Center (II)	0	0
Region 6	Lee Memorial Hospital (II)	23	1
Region 7	St. Mary's Hospital (II)	1	0
	Delray Medical Center (II)	1	0
	Broward General (I)	2	0
	Memorial Regional Hospital (I)	3	0
	North Broward Medical Center (I)	1	0
	Jackson Memorial Hospital/Ryder (I)	1	0
	Miami Children's Hospital (Ped)	1	0

2011 ACTION STEPS:

- ▶ Continue to seek ASPR funding to ensure trauma centers and non-trauma centers have supplies and equipment for ICUs and operating rooms to surge in the event of bombs, burns, blasts, or other mass casualty incidents;
- ▶ Continue to seek ASPR funding to continue to refine and scaling of the MCI plan, which includes medical surge, to various size facilities and to implement disaster drills to test the plan, and evaluate the plan; and
- ▶ Develop an implementation plan to encourage the remaining trauma centers to agree to install the CPTS and begin day-to-day operations of the EMResource and EMTrack to ensure these facilities are prepared to operate these components for day to-day operations in the event of a mass casualty event.

STRATEGY 3D2:

Work closely with the Office of Public Health Preparedness and EMS to develop and implement evidence-based, ethically vetted consensus standards of care for mass casualty and catastrophic events – in progress and carried over to 2011 Action Plan.

OUTCOMES AND OUTPUTS:

- In 2009, the Office of Trauma sought additional representation and liaisons from the Bureau of EMS, Office of Public Health Preparedness, and the EMS Advisory Council to serve on the Florida Trauma System Plan Advisory Committee and the Disaster Response Planning Team to assist with the development and implementation of the standards of care for mass casualty and catastrophic events. The appointments were made in mid-June 2009.
- As the first steps in the development and implementation of evidenced-based, ethically vetted consensus standards of care for mass casualty and catastrophic events, the Office of Trauma assigned the review of the pre-hospital and transport rules and the new CDC Trauma Field Triage Criteria to the newly created Pre-Hospital and Transport Planning Team and the Trauma Field Triage Work Group. The work group held a series of meetings in 2010 and would provide the report of findings to the Pre-Hospital and Transport Planning Team in early 2011. The review of the pre-hospital and transport rules and the development of standards of care for mass casualty and catastrophic events were carried over to the 2011 Action Plan.

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

2011 ACTION STEP:

- ▶ This strategy will be carried over to the 2011-2015 Florida Trauma System Strategic Plan to obtain input and consensus from the trauma centers, EMS providers, acute care hospitals, emergency management and other continuum-of-care partners, agencies and constituency groups to develop these standards of care for mass casualty and catastrophic events.

During 2010, the Goal 3 Disaster Planning Team held conference calls and two strategic planning meetings with the Florida Trauma System Plan Advisory Committee to draft and approve the Goal 3 objectives and strategies included in the new 2011-2015 Florida Trauma System Strategic Plan. Below are the objectives included in the new Goal 3:

- Establish coordinated emergency and disaster planning criteria for all participants in Florida's trauma system;
- Establish, implement, and evaluate emergency/disaster response plans to assure trauma system readiness for all components of the trauma system;
- Encourage active trauma system participant involvement in local, regional, and state disaster preparedness planning;
- Medical Surge: Ensure injured or ill from the event receive rapid and appropriate continuum-of-care trauma services after the initial phase of the disaster through recovery; and
- Establish Trauma Telemedicine Networks in all trauma service regions to link rural and community hospitals with Florida's trauma centers to prepare for bombs, burns, blasts, and other mass casualty events.

More information about the new Goal 3 objectives and strategies included in the 2011-2015 Florida Trauma System Strategic Plan can be found on the Office of Trauma Florida Trauma System domain website at www.fl-traumasystem.com. (Click on the plan banner at the bottom of the home page.)

4

Goal 04: Pre-Hospital Care: Transport

In coordination with the goals of the Emergency Medical Services Strategic Plan, to establish guidelines specific to the transport of trauma patients that result in timely and safe delivery of trauma care.

OBJECTIVE 4A:

Develop a partnership between trauma centers, emergency medical services providers, and acute care hospitals.

STRATEGY 4A1:

Review data integration needs with emergency medical services providers related to the "Golden Hour," communications, pre-hospital triage, and transportation – in progress and carried over to the 2011 Action Plan.

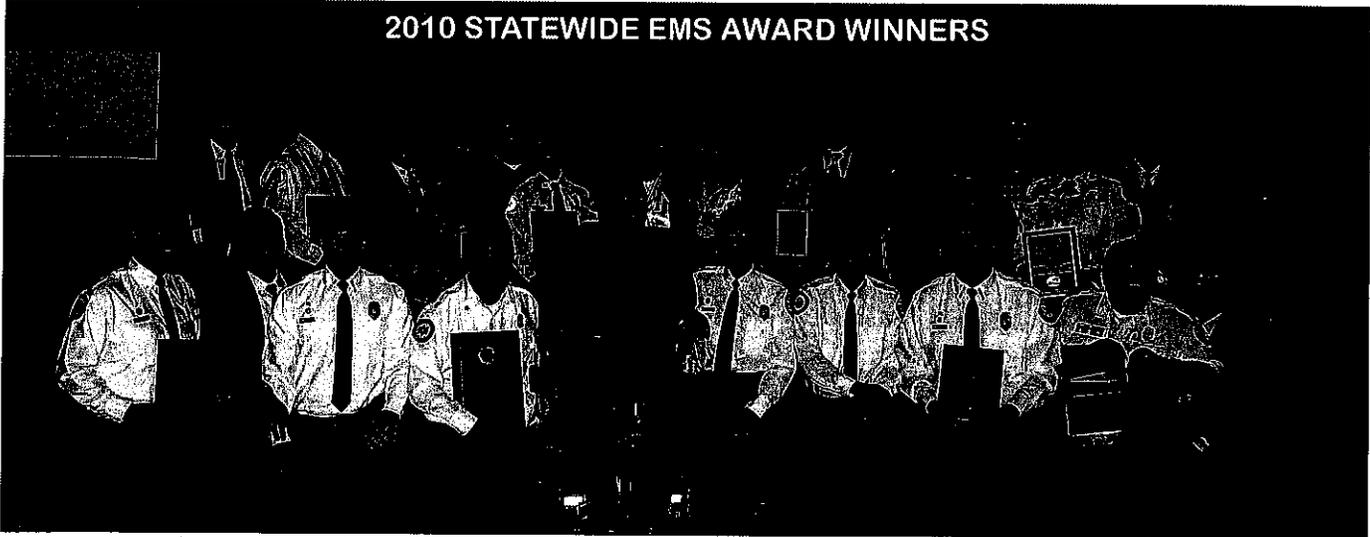
OUTCOMES AND OUTPUTS:

- In 2006, the Emergency Medical Services Tracking and Reporting System (EMSTARS) project was initiated by the Bureau of EMS, with emphasis on communications, pre-hospital triage, and transportation. In 2007, the Bureau of EMS, EMSTARS project team began the pilot project with EMS provider agencies in collecting incident level data that, in the future, will be able to link to the Florida Trauma Registry to enhance the EMS portion of the registry data collection. This activity will be an important step towards integration of EMS data and Florida Trauma Registry data.
- From 2008 to 2010, the Bureau of EMS continued to implement the EMSTARS project. By the end of FY 2010-2011, there would be approximately 131 agencies submitting data to EMSTARS, which represents 48 percent of the Florida licensed EMS agencies. The long-range goal for data submission is 85 percent by July 2012.
- From 2008 to 2010, the Office of Trauma staff continued to meet with EMSTARS project manager and the EMSTARS project team to plan for data integration and discuss linkages between the Florida Trauma Registry and EMSTARS to interface these two systems.

2011 ACTION STEP:

- ▶ The Office of Trauma will continue to partner with the EMSTARS project team to continue to gather requirements and data elements to interface the Next Generation Trauma Registry with the EMSTARS database. For additional information regarding the Next Generation Trauma Registry, see the Goal 9 Update within this section of this report.

2010 STATEWIDE EMS AWARD WINNERS



EMS PROVIDER OF THE YEAR:

This award honors an EMS Provider which assumed a leadership role in EMS by achievement in areas of quality assurance/improvement, patient care, public access, medical control, disaster preparedness, public education and/or training in Florida. The winner must have successfully implemented a program or initiative that supports the fulfillment of the Florida EMS Strategic Plan.
Winner: Leon County EMS Emergency Medical

TECHNICIAN (EMT) OF THE YEAR:

This award honors an EMT whose job responsibility is direct patient care and who has demonstrated independent initiative in the areas of quality assurance/improvement, patient care, public access, medical control, disaster preparedness, public education and/or training, and support, involvement and dedication to their EMS community and profession.
Winner: Dave Selbach, Sunstar Paramedics

PARAMEDIC OF THE YEAR:

This award honors a paramedic whose job responsibility is direct patient care and who has demonstrated independent initiative in the areas of quality assurance/improvement, patient care, public access, medical control, disaster preparedness, public education and/or training, and support, involvement and dedication to their EMS community and profession.
Winner: Stephen Suarez, Leon County EMS

EMS NURSE OF THE YEAR:

This award honors a nurse who has assumed a leadership role in EMS and has demonstrated independent initiative in one or more of the following areas: education, clinical care, community service, or disaster management.
Winner: John Price, R.N., EMT-P, Air Methods

FLORIDA EMS DISASTER PREPAREDNESS AND RESPONSE AWARD

This award honors an individual who has demonstrated exceptional proficiency in developing response plans,

made significant contributions to help prepare Florida for health and medical responses to significant emergencies or disasters, and has demonstrated leadership and initiative in the areas of emergency medical preparedness, education and response.

Winner: Lou E. Romig, M.D., FAAP, FACEP

LARRY S. JORDAN EMS HALL OF FAME:

This award honors an individual for lifetime achievement in the field of emergency medical services.
Winner: Revis Robert "Robby" Brown, Jr., Posthumously

MARILYN CROOK EMS PIONEER:

This award honors an individual for their efforts to advance the EMS profession through their visionary leadership, innovation, promotion of best practices by building internal and external partnerships, and successful implementation of a program or initiative that supports the fulfillment of the Florida EMS Strategic Plan.
Winner: Tom Quillin, Leon County EMS

EMS INJURY PREVENTION:

This award honors an EMS professional who has demonstrated outstanding initiative and promoted best practices to prevent injuries, in at least one area of injury prevention, such as motor vehicle safety, drowning, falls, burn prevention, and others.
Winner: Captain Deanna Chapman, Lake Sumter EMS

RAYMOND H. ALEXANDER, MD, EMS MEDICAL DIRECTOR OF THE YEAR:

This award honors a physician who serves as a medical director for a Basic Life Support, Advanced Life Support or Air Service. The winner must demonstrate excellence in the areas of quality assurance/improvement and medical control, in addition to the promotion and utilization of new medical trends and technologies.
Winner: Bradley J. Elias, M.D., Air Methods

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EMS DISPATCHER OF THE YEAR:

This award honors a dispatcher for outstanding effort in processing a Florida medical emergency call.

Winner: Carrie Allard, Orange County Fire Rescue

EMS EDUCATOR OF THE YEAR:

This award honors an EMS instructor or course coordinator who has made a positive contribution to EMS education in Florida and has successfully implemented a program or initiative that supports the fulfillment of the Florida EMS Strategic Plan.

Winner: Jane Bedford, Nature Coast EMS

FLORIDA STATE EMERGENCY MEDICAL SERVICES FOR CHILDREN (EMSC) HEROES AWARD:

This award honors a health care professional or organization for outstanding achievement in the care of ill or injured children (18 years of age or younger) in at least one of these areas: education, clinical care, community service or disaster management. The winner must successfully implement a program or initiative that supports the fulfillment of the Florida EMS Strategic Plan.

Winner: Phyllis Hendry, M.D., University of Florida, Health Science Center in Jacksonville

FRIEND TO EMS AWARD:

This award honors an individual (or organization) that is not employed with an EMS organization, but has successfully enhanced EMS through their partnership or promotion of EMS activities, such as preparedness, injury prevention, or other initiatives identified in the Florida EMS Strategic Plan.

Winner: Robert W. Ashley, Putnam County EMS

VIDEO OF THE YEAR

Honors a video by an individual or organization that best depicts this year's EMS Week Theme, "EMS: Anytime. Anywhere. We'll Be There."

Winner: Florida Association of Rural EMS (FAREMS)

PHOTO OF THE YEAR:

Honors a photograph by an individual or organization that best depicts this year's EMS Week Theme, "EMS: Anytime. Anywhere. We'll Be There."

Winner: Nature Coast EMS

EMS MEMORIAL:

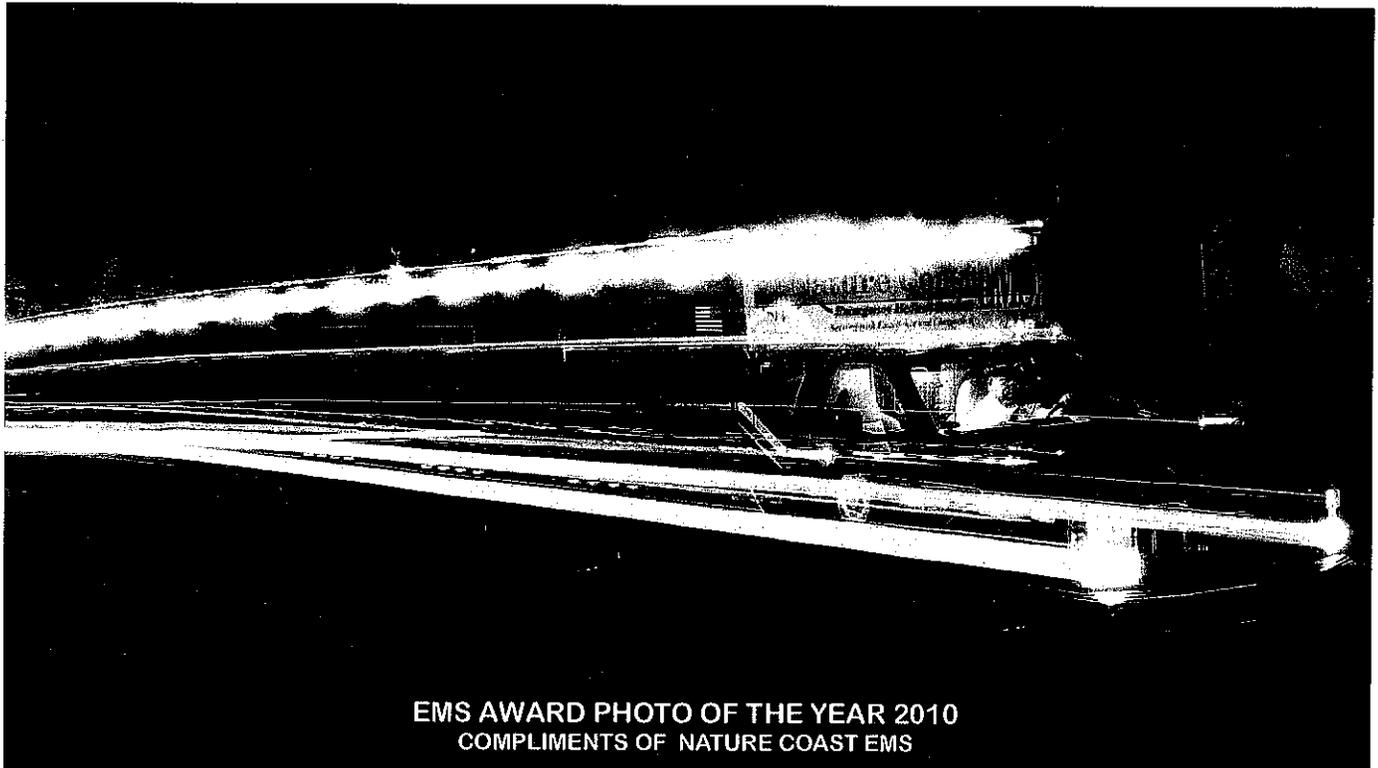
Dedicated to those in Florida EMS who have lost their lives in the line of duty.

2010 Inductees:

Captain Chad Allen Reed, Sr., EMT
Dixie County Sheriff's Department
September 24, 1976 ~ January 14, 2010

Captain David Deland, Sr., EMT-P
Lake-Sumter EMS
February 19, 1964 ~ November 6, 2009

For additional information about Florida's EMS Program, visit the Florida Department of Health web site at <http://www.fl-ems.com>. To partner in the awards event, contact Wesley Houtz at the Emergency Medicine Learning & Resource Center at 1-800-766-6335, ext. 12 or whoutz@emlrc.org.



EMS AWARD PHOTO OF THE YEAR 2010
COMPLIMENTS OF NATURE COAST EMS

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

STRATEGY 4A2:

Develop data points and collect data on the transport of trauma patients – completed identification of data points and collecting partial data from EMSTARS to assist with the analysis of trauma system performance.

OUTCOMES AND OUTPUTS:

- In 2006, AHCA released emergency department data on the transport of trauma patients.
- From 2007 to 2010, the Office of Trauma continued to work with AHCA on emergency department data on trauma transport of patients.
- In 2008, due to budget reductions, the Office of Trauma postponed the Information Technology Governance Project for the Next Generation Trauma Registry web-based system until funding could be arranged to implement the project.
- In 2009, the Office of Trauma director designated existing budget to begin the business requirements for the development of the Next Generation Trauma Registry web-based system with the approval of the director of the Division of Emergency Medical Operations. The Trauma Registry Project Team worked closely with representatives from the DOH Division of Information Technology and EMSTARS Project Team members to begin gathering information and data requirements for integration of trauma transport data into the next Florida Trauma Registry. For more information regarding the Next Generation Trauma Registry Project, See Goal 9.
- In 2009, the Florida Trauma Registry managers and the EMSTARS Project staff used data available in EMSTARS and data provided directly from EMS providers in Trauma Service Area 1 to conduct an analysis of the EMS transport times and locations as part information gathering to implement rule promulgation activities for Rule 64J-2.010, F.A.C. In 2010, this analysis was completed as part of the annual review of all 19 Trauma Service Areas pursuant to section 395.402 (3)(d) and (h), F.S.

2011 ACTION STEP:

- ▶ Continue to work with the EMSTARS Project Team on the data points to ensure successful collection of trauma transport data and the integration of EMSTARS with the Next Generation Trauma Registry.

The ultimate outcome of this objective is the successful integration of the pre-hospital and trauma transport data of EMSTARS, the trauma center patient and outcome data included in the Florida Trauma Registry and the rehabilitation and community reintegration outcome data of Brain and Spinal Cord Injury Program's Central Registry. The completion of the data integration between these registries would enable the Department of Health to track the progress of trauma patient and service outcomes, as well as the effectiveness of services provided from the scene of injury through the continuum-of-care to community reintegration.

OBJECTIVE 4B:

Evaluate the effectiveness of the adult and pediatric trauma triage criteria with regard to determination of appropriate destinations.

STRATEGY 4B1:

Implement findings from the U.S. Department of Health and Human Services, HRSA Triage Research Grant – completed in 2006 with annual reviews thereafter.

OUTCOMES AND OUTPUTS:

- In 2006, the U.S. Department of Health and Human Services, HRSA Triage Research Grant was evaluated based on Rules 64J-2.003, 2.004, and 2.005, F.A.C., Pre-Hospital Trauma Triage Criteria and Inter-Facility Transfer Guidelines.
- During the July 2007 State Trauma System Plan Implementation Committee Meeting, the members identified the need for review of the elderly triage criteria. The committee chair asked the president of the Association of Florida Trauma Agencies to review the three-year study, with which she assisted the Office of Trauma with data collection, and present her findings to the committee in 2008.
- The Association of Florida Trauma Agencies met in April and July 2008 and reviewed the F.A.C. rules applicable to the trauma agencies, including pre-hospital, trauma scorecard methodology (adult and pediatric), and trauma transport protocols. The representatives from the trauma agencies reviewed and proposed revisions to those sections of 64J-2, F.A.C., and to add a trauma scorecard methodology for the elderly.

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

- During the January 28, 2009 Florida Trauma System Plan Advisory Committee, the president of the Association of Florida Trauma Agencies presented the proposed revisions to the pre-hospital, trauma scorecard methodologies, and the trauma transport protocols. Due to the need for EMS provider input, the Florida Trauma System Plan Advisory Committee postponed rule development on the proposed revisions to establish a workgroup to review the field triage criteria for presentation to the Florida Trauma System Plan Advisory Committee and the EMS Advisory Council for approval prior to moving forward with rule development to revise the current criteria.
- In August 2009, the Florida Trauma System Plan Advisory Committee membership agreed to establish a Goal 4 Pre-hospital and Transport Planning Team to advise the Office of Trauma on the development of Goal 4 in the 2011-2015 Florida Trauma System Strategic Plan. In 2010, the Pre-hospital and Transport Planning Team held a series of conference calls and drafted the new Goal 4 objectives and strategies for inclusion in the 2011-2015 Florida Trauma System Strategic Plan. The proposed Goal 4 was approved by the Florida Trauma System Plan Advisory Committee in June 2010.
- In 2010, the Pre-hospital and Transport Planning Team took the lead to establish a special work group to begin the evaluation of Florida's current and CDC's new trauma field triage criteria to determine the effectiveness and to make recommendations for revisions to Florida's current trauma field triage criteria. The Trauma Field Triage Work Group held a series of meetings in 2010 and would finalize the review of the CDC field triage criteria and provide a report of its findings to the Office of Trauma in early 2011.

2011 ACTION STEP:

- ▶ Finalize the review of the CDC trauma field triage criteria and complete a comparison analysis with Florida's current trauma triage criteria to identify the need for revisions.

STRATEGY 4B2:

Develop educational training for rural providers with the U.S. Department of Health and Human Services, Health Resources and Services Administration 2005 grant funds – completed in 2006.

OUTCOMES AND OUTPUTS:

- In 2006, the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), known now as the Assistant Secretary for Preparedness and Response (ASPR) Rural Providers Trauma Triage Grant allowed the development and implementation of a one-hour DVD for rural emergency medical services providers, which HRSA recognized as a national model in 2007. In 2006, the Office of Trauma was in 100 percent grant compliance; however, due to the 2005 and 2006 hurricane seasons, the DOH was granted an extension on the final close-out of the grant and closed the grant out the grant in March 2007. The DVD was distributed to the EMS providers within Florida. The DVD was also distributed to and was adopted by 52 states and territories as a national model.
- In 2008, HRSA developed and implemented a survey to evaluate the effectiveness of the rural triage DVD training for rural providers. Approximately 70 percent of providers surveyed responded and 90 percent of respondents indicated the course objectives were obtained.
- In May 2009, Sacred Heart Hospital Level II Trauma Center received a HRSA Rural Health Education and Training Grant in the amount of \$10,000 to offer the American College of Surgeons' Rural Trauma Course to three rural hospitals. The course materials were prepared and a total of six courses were conducted, educating 210 rural hospital healthcare professionals. In 2010, additional HRSA Rural Health Education and Training Grant funding was received to schedule four rural trauma courses in 2011. Additional preparedness funding would be utilized to purchase rural trauma supplies and equipment for rural hospitals receiving the training in 2011.

2011 ACTION STEP:

- ▶ Complete the Rural Trauma courses scheduled for 2011 and seek additional funding to continue the course in other rural hospitals throughout the state in 2012.

STRATEGY 4B3:

Evaluate the Trauma Transport Protocols (TTP) Manual and Chapter 64E-2, F.A.C. (now 64J-2.003, F.A.C.), for effectiveness of triage criteria – completed annual reviews from 2006 to 2010.

OUTCOMES AND OUTPUTS:

From 2006 to 2010, the Office of Trauma director reviewed the trauma transport protocols of licensed EMS providers, the Trauma Transport Protocols Manual, and evaluated *Chapter 64E-2, F.A.C.*, for effectiveness of adult and pediatric trauma criteria through the evaluation of the trauma transport protocols submitted by the EMS providers and trauma agencies.

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As of December 31, 2010 all TTPs of EMS providers seeking licensure renewal and trauma agency TTP updates were reviewed and approved. There were no adverse outcomes reported in 2010. Therefore, the Office of Trauma did not make any recommendations to the Florida Trauma System Plan Advisory Committee for revisions to the manual and rule.

2011 ACTION STEPS:

- ▶ The Pre-hospital and Transport Planning Team will:
 - Take the lead to evaluate the findings from the Trauma Triage Work Group and begin to review the Trauma Transport Protocol Manual and the related rules for revisions;
 - Provide recommendations for revisions to the Florida trauma field triage criteria and rules to the Office of Trauma, the Bureau of EMS, the Trauma planning committee, EMS Advisory Councils, and constituency groups if gaps or opportunities for improvement are identified by the planning team;
 - Review the proposed recommendations from the Association of Florida Trauma Agencies for changes to the rules and the trauma transport protocols impacting trauma agency operations;
 - Evaluate the Hillsborough County Trauma Agency Elderly Triage Criteria and make recommendations to the trauma and EMS advisory and constituency groups for possible adoption of the criteria in rule; and
- ▶ Continue to review trauma transport protocols of trauma agencies and all licensed EMS providers and monitor for reports of adverse incidents.

STRATEGY 4B4:

Review Inter-facility Transfer Guidelines for effectiveness – completed annually from 2006 to 2010, with ongoing evaluation to improve the guidelines.

OUTCOMES AND OUTPUTS:

- In 2007, the State Trauma System Plan Implementation Committee members identified the need improve the monitoring of the Diversion, By-pass, and Inter-facility Transfer Guidelines to determine if there are problems within the state and if revisions need to be made to these guidelines. The State Trauma System Plan Implementation Committee asked the Systems Planning Team, and the Diversion, By-pass, and Inter-facility Transfer Subcommittee to review the Diversion, By-pass, and Inter-facility Transfer Guidelines used by the trauma centers and to monitor the effectiveness. In 2007, the subcommittee held three conference calls to review current diversion guidelines and the diversion log that is currently used by some of the trauma centers.
- In July 2008, the Systems Planning Team chairs recommended that the Office of Trauma conduct a critical review of transfers out of trauma centers to other trauma centers, and re-establish the formal tracking of diversions, implemented in 1999. This review will temporarily study the frequency and reasons for diversion among trauma centers, until this process can be done electronically with the implementation of the Public Health Preparedness Communications and Patient Tracking System.
- During the October 23, 2008 Systems Planning Team Meeting, Dr. Larry Lottenberg, Chair of the Diversion/By-Pass/Transfer Subcommittee, presented the executive summary of the work completed by the subcommittee and the Office of Trauma staff, as well as the preliminary draft rule language for a separate rule on diversion and transfers.
- In 2009 and 2010, the Florida Trauma System Plan Advisory Committee postponed further actions on recommendations for establishing rule on diversions and transfers until the statewide implementation of the new Communications and Patient Tracking System (CPTS) of the Office of Public Health Preparedness. The department's goal is to implement this system in all trauma centers to be utilized not only during disaster events, but daily operations to track bed capacity, trauma transports by EMS providers, diversions, and inter-facility transfers of trauma patients. Throughout 2010, the Office of Trauma continued to partner with the Bureau of Preparedness and Response CPTS project manager to encourage the trauma centers to contact the lead agency in their domestic security region to implement the system in their centers. As of February 2011, there would be 17 of the 22 trauma centers that have installed the Communications and Patient Tracking System. Twelve of these trauma centers have users identified for EMResource and five for EMTrack who have received training and have begun to utilize the system. The Goal 3 update within this section of the annual report provides the names of the trauma centers that have installed the system and the number of users that have been identified and trained for each of the components of the system.

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2011 ACTION STEP:

- ▶ The Pre-Hospital and Transport and the Systems Planning Teams will work closely to review the Diversion, By-pass, and Inter-facility Transfer Guidelines and revisions to EMTALA to determine effectiveness of the inter-facility transfer guidelines and whether the guidelines should be incorporated by reference in rule.

OBJECTIVE 4C:

Assure that emergency medical services personnel are prepared to meet the challenges of providing health services competently – in progress as of December 31, 2010. This objective and strategies below were carried over to the 2011-2015 Florida Trauma System Plan Strategic Plan.

STRATEGY 4C1:

Develop a needs assessment tool for emergency medical services providers for delivery of care to trauma patients based on core competencies – in progress.

OUTCOMES AND OUTPUTS:

- In 2007, the State Trauma System Plan Implementation Committee and the Office of Trauma identified the need for an assessment tool for EMS providers for the delivery of care of trauma patients based on core competencies.
- During the July 2007 State Trauma System Plan Implementation Committee Meeting, there was discussion with the EMS medical directors, related to the need to explore a protocol for pediatric resuscitation in the field.
- During 2008, 2009, and 2010, Dr. Patricia Byers, State Trauma Medical Director, participated in each of the EMS Medical Directors' and the EMS Advisory Council meetings. In 2010, Dr. Patricia Byers was appointed as a member of the EMS Advisory Council in the trauma surgeon position. This participation will improve communication and assist with the facilitation of the development of a needs assessment tool for EMS providers for the delivery of care of trauma patients based on core competencies.
- In June 2009, appointments were made to the Florida Trauma System Plan Advisory Committee and the membership of the committee was revised to include additional representation from EMS providers and constituency groups. The state EMS medical director and other EMS provider representatives were appointed to the committee.
- In August 2009, the committee established a Pre-Hospital and Transport Planning Team to assist the Office of Trauma with the development and implementation of Goal 4 of the Florida Trauma System Strategic Plan. The team is co-lead by an EMS medical director, the state EMS medical director, and a trauma center medical director. During 2010, this planning team held a series of conference calls and two face-to-face strategic planning sessions with the Florida Trauma System Plan Advisory Committee to draft and approve the Goal 4 objective and strategies.

The following are the new Goal 4 objectives:

- Develop a partnership between the trauma centers, EMS providers, and acute care hospitals;
- Evaluate the effectiveness of the requirements, processes, and criteria for pre-hospital care, trauma triage criteria; TTPs, and inter-facility transfers, which are established in rules and guidelines, to ensure continuous improvement of pre-hospital care and appropriate transport of trauma patients; and
- In coordination with the goals of the EMS state plan, assure that EMS personnel are prepared to meet the challenges of the delivery of care to trauma patients.

In 2011, this planning team would work closely with the EMS providers and EMS medical directors to seek approval to develop and implement a needs assessment tool for EMS providers for delivery of care to trauma patients based on core competency skills.

- Protocol for Utilization of Tourniquets: In 2009, the need for a protocol for use in the trauma centers and for EMS providers for the proper utilization of a tourniquet was identified. Dr. John Armstrong, Disaster Response Planning Team Lead developed a draft protocol and presented the protocol in the EMS Medical Directors meeting on January 28, 2009 for review and comments. The comments and suggested revisions were incorporated to improve the protocol. The revised draft protocol was presented to the EMS medical directors during the June 28, 2009 meeting and the protocol was approved by the EMS Advisory Council for implementation in the October 2009 meeting of the council. The protocol was approved for implementation at the January 2010 EMS Advisory Council Meeting. Education and training of EMS providers is ongoing.

2011 ACTION STEPS:

- ▶ The Office of Trauma staff will continue to participate in the EMS Strategic Visions Committee to ensure the integration of the EMS plan with the next Florida Trauma System Strategic Plan Goal 4 objective and strategies to improve the trauma system patient outcomes; and

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- ▶ The Office of Trauma director will continue to attend and participate in the following constituency group meetings to present the quarterly trauma and outcome reports related the pre-hospital and transport of trauma patients: EMS medical directors, Florida Aeromed Program, Florida flight and neonatal nurses, fire chiefs, Florida Association of Rural Health Providers, Florida emergency room nurses, Association of Florida Trauma Agencies, Florida Committee on Trauma, and the Association of Florida Trauma Coordinators. This activity will:
 - Improve communication between EMS providers and trauma centers;
 - Assist with the facilitation of the development of a needs assessment tool to ensure the provision of EMS healthcare services competently; and
 - Assist in the identification of barriers and opportunities for improvement in pre-hospital and transport of trauma patients to improve patient outcomes.

5

Goal 05: Definitive Care: Trauma Centers

To establish a statewide network of trauma centers, meeting minimum state standards for operation and provision of quality trauma care, in coordination with all other trauma system participants.

OBJECTIVE 5A:

Establish and implement a process and timeframe for the periodic review of Florida Trauma Center Standards, DOH Pamphlet 150-9.

STRATEGY 5A1:

The Florida Trauma Center Standards, DOH Pamphlet 150-9 is evaluated annually and action plans developed to implement improvements identified – completed annually from 2006 to 2010.

OUTCOMES AND OUTPUTS:

- In 2007, the Office of Trauma and the medical consultants reviewed the December 2006 American College of Surgeons' Guidelines and identified the need for revisions to the current *Florida Trauma Center Standards, DOH Pamphlet 150-9*. Proposed standards were prepared and a rule development workshop was held on August 24, 2007. The Office of Trauma's stakeholders provided suggestions for further revisions, which were incorporated in the draft standards and applicable rules. A rule hearing was held on October 29, 2007.
- In January 2008, an additional hearing was held to obtain additional comments from the trauma centers and the public on the revised standards before moving forward with adoption. The January 2008 the *DOH Pamphlet 150-9* was incorporated by reference in Rule 64J-2.011, *F.A.C.* in March 2008.
- In January 1, 2009, the Office of Trauma staff and the out-of-state surveyors became to evaluate the trauma centers on the revised January 2008 standards. All of the trauma centers surveyed in 2009 were in compliance with the new standards.
- In August 2009, the Florida Trauma System Plan Advisory Committee renamed the Deployment Planning Team to Trauma Center Planning Team and revised the purpose of the committee. The committee will now be responsible for assisting with the development, implementation, and evaluation of Goal 5 of the Florida Trauma System Plan. The planning team will also assist the Office of Trauma with the annual reviews of the *Florida Trauma Center Standards, DOH Pamphlet 150-9* and Rule 64J-2.011, *F.A.C.*, to determine best practices, gaps, and opportunities for improvements to the standards.
- In 2009 and 2010, the Office of Trauma and the new Goal 5 Trauma Center Planning Team reviewed the standards. See Strategies 1A1 and 5C1 for details on the suggested revisions and rule promulgation activities.
- In 2010, in an effort to streamline the preparation and document accumulation for trauma center site surveys, an electronic pre-site survey questionnaire document was created. A pilot team of three trauma centers' sites was identified to test the initial version (Lee Memorial Hospital, St. Mary's Medical Center and Delray Medical Center). Several IT scenarios became evident for each site that was unique among all three of the trauma centers; however, these issues were resolved through revised versions of the electronic pre-site survey questionnaire. The first electronic pre-site survey questionnaire was completed by Lee Memorial Hospital. The process was seamless for the survey team and reduced redundant copies and paper product used during the survey process. The Office of Trauma IT staff

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would continue to make refinement to the questionnaire through the pilot tests conducted prior to and during the St. Mary's Medical Center and Delray Medical Center in February 2011.

- In 2010, the need for a more comprehensive access to shareable documents for new and seasoned trauma program managers was identified. A survey and one-on-one conversations were completed to develop a scope of documents and information that would benefit trauma centers' program leaders. Additional information surveyed in this process was to identify interested trauma program managers who would like to participate as subject matter experts to assist the Office of Trauma in compiling a comprehensive list of information and shareable documents, SME topics, education resources, and state and national resource links. The Office of Trauma staff has made revisions of the available DOH documents posted on the Office of Trauma's Florida Trauma System domain website to assure the most recent documents are available. The development and integration of these documents is ongoing. For more information on the Trauma Program Managers' Guidebook and other Florida resources are available on the domain website at the Office of Trauma Florida Trauma System domain website at www.fl-traumasystem.com. (Click on the "Trauma Managers' Guidebook" webpage.)

2011 ACTION STEPS:

- ▶ If the American College of Surgeons' new guidebook is published in early 2012, complete a review of the guidebook and determine if revisions need to be made to the *Florida Trauma Center Standards, DOH Pamphlet 150-9*, which is incorporated by reference in Rule 64J-2.011, F.A.C.;
- ▶ Create a work group to develop an orientation and training program for trauma center personnel to improve performance and develop guidelines for the establishment of a mentoring program for trauma center personnel to reduce turnover rate; and
- ▶ Create a work group to develop a Trauma Center of Excellence Program.

OBJECTIVE 5B:

Review the assignment of counties to trauma service areas and the distribution of available trauma centers and make recommendations accordingly. This objective and strategy will be carried over to the Goal 8 Regional System Evaluation objectives and strategies included the new 2011-2015 Florida Trauma System Strategic Plan.

STRATEGY 5B1:

Review the comprehensive assessment study for assignment of counties and evaluate the effectiveness of trauma transport protocols and inter-facility guidelines – completed annually from 2006 to 2010.

A variety of data reports are used to evaluate the assignment of counties within the trauma service areas pursuant to section 395.402, F.S., including, but not limited to the annual reports of the Florida Trauma Registry included in each of the trauma system annual reports, the department's annual physicians' workforce report, the Bureau of Preparedness and Response's Hospital Preparedness Program annual report, EMS mode of transport report, Florida Injury Data annual reports, historical patterns of patient referral and transfer in an area from site survey results, trauma transport protocols, and trauma service area assessments.

OUTCOMES AND OUTPUTS:

- In 2006, the State Trauma System Plan Implementation Committee reviewed the comprehensive assessment study for assignment of counties and evaluated the effectiveness of the Inter-facility Transfer Guidelines.
- During the July 8, 2008 State Trauma System Plan Implementation Committee Meeting, the Systems Planning Team recommended the following, which was approved by the committee for implementation:
 - Review of the current trauma service areas to determine the need to reapportionment trauma centers slots within trauma service areas and review the current service areas in statutes for recommendations for reorganization of the trauma service areas with the Level I and Level II trauma centers being at the top of the tier in those service areas.
 - See Goal 1, Strategy 1A1 for details on studies conducted regarding the trauma service areas and rule development activities related to Rule 64J-2.010, F.A.C., Apportionment of Trauma Centers within a Trauma Service Area, which were conducted from 2008 – 2010, pursuant to section 395.402, F.S.
 - During 2010, the Florida Trauma System Plan Advisory Committee and Goal 5 and Goal 8 planning teams reviewed the 2009 SWOT analysis and accomplishments from 2006-2010 and developed the new 2011-2015 Florida Trauma System Strategic Plan. In Goal 8 of the new plan, the advisory committee recommended the

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department seek additional funding and approval to conduct another comprehensive assessment of the Florida Trauma System to determine the most appropriate regional structure for trauma system operations and planning and evaluation processes in areas of the state not covered by trauma agencies. Also, in 2010, members of the Florida Trauma System Plan Advisory Committee and the Florida Committee on Trauma identified the need and made a recommendation to the State Surgeon General to conduct a Florida Trauma System Special Study, using out-of-state trauma system experts, to obtain an evidenced-based methodology for the department to use in determining the location of trauma centers until the department received additional budget authority and approval to conduct the comprehensive assessment.

2011 ACTION STEPS:

- ▶ Seek budget authority to use the EMS Trust Fund (Trauma portion) to conduct a statewide comprehensive assessment of the Florida Trauma System to determine the appropriate regional structure for trauma system operations, planning, and evaluation; and
- ▶ Seek approval to conduct the recommended Florida Trauma System Special Study to obtain an evidenced based methodology to determine the location of trauma centers.

STRATEGY 5B2:

Make recommendations for rule changes in Rule 64J-2.010, F.A.C., (formerly 64E-2.022). The rule was reviewed in 2006 and rule revisions were completed. The rule was reviewed in 2008, 2009, and 2010 and rule promulgation activities were initiated and were in progress as of December 31, 2010 and were carried over to the 2011 Action Plan.

OUTCOMES AND OUTPUTS:

- The revisions to Rule 64E 2.022, F.A.C., (now 64J-2.010, F.A.C.) were implemented on December 18, 2006.
- In 2007, the need to determine the effectiveness of the inter-facility guidelines and the need for revisions to the assignment of counties to ensure trauma patients receive care at a trauma center within the "Golden Hour" were determined.
- See objective/strategies for 1A1 and 5B1 above for the 2008, 2009, and 2010 status of activities relating to Strategy 5B2, the rule promulgation of Rule 64J-2.010, F.A.C., and the 2011 Action Steps.

OBJECTIVE 5C:

Evaluate the Florida Trauma Center Standards, DOH Pamphlet 150-9 revisions that were effective June 2005, March 2008, and April 2010. Develop and implement further revisions as appropriate.

STRATEGY 5C1:

Review changes of revisions identifying trends, risk- identification issues, and sentinel events – reviews completed annually from 2006 to 2010 with ongoing evaluation and refinement of the standards as identified.

OUTCOMES AND OUTPUTS:

- In 2006, 2007, 2008, 2009, and 2010, no trends, liability issues, or sentinel events were noted related to the *Florida Trauma Center Standards, DOH Pamphlet 150-9* effective June 2005 and March 2008.
- In 2008, the need for the following standards were identified: Revision to the specialty staff requirements to include vascular surgeons, addition of the preventive ulcer program standards, and the addition of the requirement to establish and maintain mentoring program for new trauma center personnel.
- The trauma centers surveyed in 2009 and 2010 were evaluated based on the 2008 *Florida Trauma Center Standards, DOH Pamphlet 150-9*. These surveys identified no trends, liability issues, or sentinel events related to the implementation of the March 2008 standards.
- During the 2009 review of the *Florida Trauma Center Standards, DOH Pamphlet 150-9*, the Trauma Center Planning Team and the Florida Trauma System Plan Advisory Committee confirmed the need to add vascular surgery to the surgical requirements, the preventive ulcer program standards, a quality improvement indicator to determine outcomes of the Diaphragm Pacer Program and to add the requirement of a mentoring program. In December 2009, a rule hearing was held and the department decided to move forward to add the preventive ulcer program standards and a Diaphragm Pacer Program quality improvement indicator to the *Florida Trauma Center Standards, DOH Pamphlet 150-9*. The revisions to the standards were adopted in Rule 64J-2.011, F.A.C., in April 2010. The vascular surgery requirement was put on hold for further evaluation.

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- In June 2010, the planning team identified the need to review all surgical and non-surgical specialties on-call requirements. See Goal 1, Strategy 1A1 for more details regarding the Rule 64J-2.011, F.A.C., rule promulgation activities related to the revisions identified in 2009 and 2010 reviews of the *Florida Trauma Center Standards, DOH Pamphlet 150-9*.

2011 ACTION STEPS:

- ▶ Continue to complete the *Florida Trauma Center Standards, DOH Pamphlet 150-9* reviews and complete rule promulgation activities as identified to revise pamphlet 150-9 and Rule 64J-2.011, F.A.C., as needed; and
- ▶ Complete surveys of the trauma centers scheduled in 2011 to evaluate compliance with the April 2010 *Florida Trauma Center Standards, DOH Pamphlet 150-9* to identify trends, risks, and sentinel events.

OBJECTIVE 5D:

Develop educational materials for acute care hospitals on all aspects of the hospital partnership concept.

STRATEGY 5D1:

Review the Inter-facility Transfer Guidelines identifying trends and problems and make recommendations quarterly – reviews completed from 2006 to 2010.

OUTCOMES AND OUTPUTS:

- Annually from 2006 to 2010, the Office of Trauma director reviewed the Inter-facility Transfer Guidelines for trends and potential problems during the trauma center surveys and the trauma transport protocol reviews.
- In 2007 and 2008, the Office of Trauma staff and the subcommittee members reviewed the 20 trauma centers' policies and procedures, guidelines, and protocols for diversion, by-pass, and transfers, as well as the existing diversion log. The subcommittee recommended the adoption of the diversion log without changes for use by the 20 trauma centers until the Office of Public Health Preparedness' (now the Bureau of Preparedness and Response) Communications and Patient Tracking System is implemented and operational in the trauma centers.
- In 2009, the Diversion and Transfer Subcommittee provided a draft rule for diversion and transfer to the Florida Trauma System Plan Advisory Committee for review. The committee postponed the evaluation of the effectiveness of the Inter-facility Transfer Guidelines until the new Communications and Patient Tracking System is implemented and operational in the trauma centers. The goal is to utilize the new system to track diversions, bypasses, and inter-facility transfers to determine the effectiveness of the state's guidelines. The committee also recommended the review of the Emergency Medical Treatment and Labor Act (EMTALA) law revisions to determine if there is a need to establish the diversion, by-pass and transfer policies in rule. Due to the planning activities of the Florida Trauma System Plan Advisory Committee and its planning teams, the review of the EMTALA was not completed in 2010. This activity would be carried over to the 2011 Action Plan.
- In 2009 and 2010, the trauma centers continued to submitting their diversion logs to the Office of Trauma. Office of Trauma created a diversion quality improvement scorecard indicator to track the number and reasons of diversion by the trauma centers. This indicator is evaluated on a quarterly basis by the Office of Trauma staff and the Division of Emergency Medical Operations Leadership Team.

2011 ACTION STEPS:

- ▶ Work closely with the Florida Trauma System Plan Advisory Committee and its Systems and Trauma Center Planning Teams to review the EMTALA law revisions and determine the need to establish diversion, by-pass, and transfer guidelines or rules; and
- ▶ Work closely with the Office of Public Health Preparedness and EMS systems to assess the implementation of the new Communications and Patient Tracking System as trauma centers are added to the system to determine the system's capability to track diversion, by-pass, and inter-facility transfers.

In 2010, the Trauma Center Planning Team held conference calls and two face-to-face strategic planning meetings with the Florida Trauma System Plan Advisory Committee to develop and approve the Goal 5 objectives and strategies included in the 2011-2015 Florida Trauma System Strategic Plan. The following are the new Goal 5 objectives:

- Establish and implement a process and timeframe for the periodic review and update of *Florida Trauma Center Standards, DOH Pamphlet 150-9* and rules;

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- Develop, implement, and evaluate an orientation and training program for trauma center personnel to improve performance; and
- Develop and deploy guidelines for the establishment of mentoring programs for trauma center personnel to reduce turnover rate.



Goal 06: Definitive Care: Medical Rehabilitation

Establish rehabilitation centers as active participants in Florida's inclusive trauma system, resulting in coordinated post-acute care for trauma victims.

OBJECTIVE 6A:

Establish guidelines for development of regional trauma plans that address medical rehabilitation needs of trauma victims

STRATEGY 6A1:

Identify guidelines for regional plans that address medical rehabilitation needs – completed in 2006, 2007, 2008, 2009, and 2010 with ongoing evaluation through the integrated Office of Trauma and the Brain and Spinal Cord Injury Program (BSCIP) site surveys of trauma centers and planning processes annually.

OUTCOMES:

- *The 2007-2009 integrated Office of Trauma and BSCIP surveys conducted with trauma center surveys continue to reduce quality assurance costs and improve trauma center compliance. In 2007, the Office of Trauma and the BSCIP conducted eight combined site surveys in 2007. These combined surveys delivered a cost savings of \$45,000 for the residents of Florida. Trauma center compliance with the joint BSCIP rehabilitation standards included in the Florida Trauma Centers Standards, DOH Pamphlet 150-9 improved due to the integrated site surveys:*
 - FY 2002 - 2003: 40%
 - FY 2007 - 2008: 88%
 - FY 2008 - 2009: 92%
 - FY 2009 - 2010: 98%
 - FY 2010 - 2011: 88%
- *In 2009 and 2010, the membership of the Florida Trauma System Plan Advisory Committee and the Rehabilitation Planning Team were revised to include additional representation from the Brain Injury Association of Florida, the BSCIP and rehabilitation centers to ensure sufficient representation to address the ongoing development and evaluation of the medical rehabilitation plans.*

2011 ACTION STEPS:

- ▶ *The Office of Trauma will continue to seek additional representation from the designated rehabilitation centers and the BSCIP regional offices to serve on the Rehabilitation Planning Team to ensure sufficient representation to ensure the implementation of Goal 6 objectives and strategies; and*
- ▶ *Continue to work closely with the Agency for Health Care Administration, the Brain and Spinal Cord Injury Program, and the designated brain and spinal cord injury facilities to develop adequate and permanent funding for inpatient and outpatient rehabilitation for adults and children and develop regional trauma plans that address medical rehabilitation needs of trauma victims.*

STRATEGY 6A2:

Develop, implement, and evaluate outcome criteria for trauma patients – completed with ongoing review and improvements.

The following is an update on the projects identified annually, status of implementation and outcomes from 2006 to 2010.

Decubitus Ulcer for Spinal Cord Injured Patient Population and Endorsement of for a Statewide Preventive Ulcer Program (PUP):

Purpose: To reduce prevalence and incidence of decubitus ulcers in the spinal cord injury population within trauma centers, acute hospitals, skilled nursing facilities, and for patients in their homes.

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Objectives:

- Increase the knowledge about reducing decubitus ulcers in the spinal cord injury population across the continuum-of-care.
- Develop a statewide pressure ulcer prevention program for spinal cord injury patients in trauma centers, skilled nursing facilities, and palliative care centers.

OUTCOMES AND OUTPUTS:

- Meetings and conference calls were held with AHCA's leadership in 2006 and 2007. Outcome: Sought endorsement and conducted a survey of trauma centers and rehabilitation centers regarding decubitus care.
- During 2007, the BSCIP and Office of Trauma continued to monitor data regarding ventilator-dependency, decubitus care, and financial costs.
- The Decubitus Ulcer Task Force developed a Skin Care Needs Assessment and in March 2007, the Office of Trauma distributed the assessment to all verified trauma centers and designated BSCIP rehabilitation centers. The purpose of the assessment was to determine:
 1. How many of the facilities currently perform prevalence studies and, if so, whether the studies are internal or external?
 2. If external, who the facility is using to conduct the studies?
 3. If the facility is collecting data about pressure ulcers on admission and, if so, what the facility is doing with this data?
 4. Whether the facility would be willing to share its data in a statewide database for the Brain and Spinal Cord Injury Program.
- During the November 2008 meeting of the BSCIP Advisory Council, the members agreed to support and endorse the Preventative Ulcer Program. They also agreed to continue to pursue AHCA's endorsement of the program.
- In December 2008, the Office of Trauma and the BSCIP staff met to discuss plans to amend the BSCIP designated facilities standards to include the Preventive Ulcer Program Standards of care for inpatient and outpatient settings, transitional units, as well as nursing homes for spinal cord injured patients. In January 2009, the program was implemented for BSCIP patients.
- In December 2009, the Office of Trauma began rule promulgation activities to add the preventive ulcer program standards to the *Florida Trauma Center Standards, DOH Pamphlet 150-9*, which is incorporated by reference in Rule 64J-2.011, F.A.C. The rule promulgation was completed in 2010 and this new standard was added to the *Florida Trauma Center Standards, DOH Pamphlet 150-9* on April 20, 2010. A copy of the new standards can be obtained from the Office of Trauma's Florida Trauma System domain website under "Trauma Center" at the following link: www.fl-traumasystem.com

Outcome: The implementation of the PUP for trauma and the BSCIP patients indicated a 10 percent decrease in pressure ulcers of spinal cord injured patients.

Source: Fourth quarter 2010 quality improvement statistics.

2011 ACTION STEP:

- ▶ Continue to monitor trauma center compliance of the new PUP standard during the 2011 trauma center site surveys.

Traumatic Brain Injury (TBI Fact Sheet): In March 2003, the BSCIP sponsored a colloquium at the University of Miami. The Brain Injury Association of Florida assembled a 42-member interdisciplinary team consisting of nurses, physicians, psychiatrists, neurophysiologists, social workers, specialists in adaptive technology, and physical, occupational, as well as respiratory therapists to address this issue. Participants developed an educational fact sheet to be given to patients and/or family members at discharge and for use in family physicians and pediatricians' practices. The Traumatic Brain (Head) Injury Fact Sheet contains information regarding possible consequences of mild brain injury in children and adults. It gives instructions regarding patient follow-up with a family physician or hospital emergency room groups, and provides contact information for the Brain Injury Association of Florida.

In addition to the fact sheets, posters were also distributed in November 2003 to acute care hospitals, public health departments, and EMS providers. From 2004 to 2008, 12,000 posters and fact sheets were distributed to the acute care hospitals, public health departments, EMS providers, and school systems. In addition, a total of 8,829 registered nurses were educated on the Traumatic Brain (Head) Injury Fact Sheet.

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OUTCOME AND OUTPUTS:

- From June 2004 to December 2008, a total of 6,820 patients were reached through the brain injury prevention materials.
- In 2009 and 2010, the Office of Trauma continued to foster partnerships and participated in the strategic planning efforts, as well as nursing education, with the Brain and Spinal Cord Injury Program, Brain Injury Association of Florida, and the Area Health Education Center (AHEC) throughout the state to address traumatic brain injury.

TBI Grant: In May 2003, the Department of Health received a HRSA grant for the project "Reaching Florida's Providers Regarding TBI," for \$150,000 annually. The department in conjunction with the Brain Injury Association of Florida developed a Mild Traumatic Brain Injury video to educate nurses, physicians and health care professionals and distributed the videos in March 2005. The department implemented the curriculum goals/objectives and evaluation process for continuing education in October 2004 and conducted the evaluation of the program annually from December 2004 to December 2009. This grant was closed out effective December 31, 2009 with a total of 8,100 emergency room nurses trained.

Mass Casualty Events and Mild Traumatic Brain Injury Grant: This project team created an interactive CD training package to train 5,000 hospital staff in the diagnosis and treatment of mild brain injury. The project team implemented the program evaluation for content, objectives and resources in June 2005 and reviewed the evaluation on annually in December from 2005 to 2009. The initial grant was closed effective December 31, 2009 with a total of 4,125 emergency room nurses trained.

The Office of Trauma continued its efforts to identify best practices and opportunities for improvement in preparation for mass casualty events and mild TBI issues from 2006 to 2010. Because of this collaboration of efforts, the department's BSCIP and the Office of Trauma's strategic planning objectives for 2008, 2009, and 2010 included building stronger collaborative partnerships between the rehabilitation facilities, and the verified trauma centers.

In 2009 and 2010, the membership of the Florida Trauma System Plan Advisory Committee and the Rehabilitation Planning Team were revised to include additional representation from the BSCIP designated rehabilitation facilities. In 2011, the Office of Trauma would reach out to the directors of all of the designated rehabilitation centers to seek additional representation on the planning team to ensure the development of regional medical rehabilitation plans. This additional representation will ensure a more inclusive trauma system and ensure individuals who have suffered a mass casualty event will receive timely trauma and medical rehabilitation services.

In March 2010, at the Strategic Planning Oversight Team (SPOT) Meeting, the Office of Trauma requested \$125,000 in funding to update the Mass Casualty TBI DVD to include blast injuries and the funding for this project was approved by ASPR, as part of the Hospital Preparedness Program Cooperative Agreement Application for FY 2010-2011. The implementation of this project began in late 2010, with Dr. Patrick Jacobs, University of Florida, Gainesville, serving as the lead subject matter expert.

2011 ACTION STEPS:

- ▶ The Office of Trauma will continue to seek additional representation from the designated rehabilitation centers and the BSCIP regional offices to serve on the Rehabilitation Planning Team; and
- ▶ Complete the Mass Casualty TBI DVD project to include blast injuries and distribute to trauma system providers.

Collaborative Partnership with the Brain Injury Association of Florida: In 2008, the Office of Trauma director participated in the Joint Strategic Planning Session with the Brain and Spinal Cord Injury Program, the Brain Injury Association of Florida, and other TBI stakeholders. Outcome: The Brain Injury Association's of Florida Five-Year Strategic Plan (FY 2009-2010 – FY 2013-2014) was developed and released for implementation in 2009. In 2009, the executive director of the Brain Injury Association of Florida became a member of the Florida Trauma System Plan Advisory Committee and participated in Florida Trauma System Strategic Plan planning sessions conducted in 2010. In 2009 and 2010, the Office of Trauma and the BSCIP has continued collaborative efforts with the Brain Injury Association of Florida to plan for the development and implementation of a model of service delivery and array of services for individuals with TBI, including services for Veterans. Due to these collaborative efforts a brochure was developed to assist Veterans, who are returning from the war who have traumatic spinal cord and brain injuries, in locating services available to them throughout Florida. A copy of the brochure can be obtained from the Brain and Spinal Cord Injury Program.

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VENTILATOR-DEPENDENT REHABILITATION AND DIAPHRAGM-PACER PROGRAMS:

OUTCOMES AND OUTPUTS:

- In 2006, the Ventilator-Dependent Rehabilitation Task Force held eight meetings. The draft Florida ventilator-dependent standards were reviewed and approved with input from AHCA, Hospice, Florida Hospital Association, Florida Health Care Association, and the Brain Injury Association of Florida.
- In July 2006, the Ventilator-Dependent Rehabilitation Program's legislative budget request (LBR) was submitted by AHCA, but the request was denied.
- The 2007 Florida Legislature appropriated \$200,000 to the Miami Jewish Home and Hospital for the Aged for a special project to develop and implement qualifications, policies, procedures, and standards for adult ventilator patient-weaning units. The intent is to develop information for establishing reimbursement for a unit that would specialize in screening and rehabilitating carefully chosen, current trauma-related ventilator-dependent patients who are housed in ICU or other critical care beds, with the intent of transitioning them to community placement.
- During 2007, the contract and deliverables were drafted and executed. The AHCA Long-Term Care Unit, the Office of Trauma, and the BSCIP evaluated the draft *Ventilator-Dependent Rehabilitation Standards of Care*. The demonstration project tools were developed (admission/discharge criteria, patient standards of care, policies and procedures, medical record forms, budget for implementation, and a program evaluation model).
- The on-site survey team that included representatives from the BSCIP, the Office of Trauma, and AHCA conducted a technical assistance visit in January 2008, and on May 20, 2008 conducted a clinical on-site survey of the pilot project. The project was in compliance with the Florida Ventilator-Dependent Rehabilitation Standards, and the project deliverables were completed on time and were accepted by the Office of Trauma.
- In 2007 and 2008, the Office of Trauma director, state trauma medical director, and the chief of the Brain and Spinal Cord Injury Program, held meetings and conference calls with AHCA leadership to discuss using the funding from HB 1645 to fund enhanced payments to expand the Ventilator-Dependent Rehabilitation Program pilot project statewide. In 2007 and 2008, AHCA submitted an LBR and proposals to obtain budget authority in statute to expend the funding received from this legislation for enhanced payments to expand the Ventilator-Dependent Rehabilitation Project in other areas of the state; however, the requests were denied.
- In early 2008, an institutional review board template was prepared for approval to conduct a diaphragm-pacer stimulation surgery training and research pilot project at two of the Level I trauma centers within the state. This surgery enables individuals to be weaned from ventilators.
- The planning teams' chairs, Rehabilitation Planning Team members, and AHCA staff, met with Dr. Ray Onders, Director of Minimally Invasive Surgery at the University Hospitals Case Medical Center, and Associate Professor of Surgery at the Case Western Reserve University, on October 23, 2008 in Orlando. Dr. Onders provided a presentation on his diaphragmatic pacer procedure and had an extensive discussion with the members and guests regarding the application of the diaphragmatic pacer process. This procedure is relatively straight forward and apparently associated with a very rapid wean process. AHCA staff agreed to take the information back to AHCA's leadership to determine if the procedure could be covered by Medicaid.
- In late 2008, Dr. Lawrence Lottenberg reported that Shands-Gainesville had received approval from the University of Florida's Institution Review Board. Shands was selected to administer the first Diaphragmatic Pacer System Implant in a ventilator-dependent spinal cord injured patient in 2009. Also, negotiations had been initiated with the Select Specialty Hospital in Gainesville to implement the Ventilator-Dependent Rehabilitation Standards to provide care for the ventilator-dependent patients after the pacer surgery to wean the patients from ventilator dependency.
- On March 19, 2009 and June 10, 2009, the first and second diaphragm pacer surgeries were conducted in Florida by Shands Level I Trauma Center at the University of Florida in Gainesville; this accomplishment has been a ten-year process. The first procedure was covered by Medicare A, which is a tremendous success obtained with the coordinated effort between representatives from the Office of Trauma, the BSCIP, and AHCA. Since the first surgery of the pilot program conducted in March 2009 to December 2010, there was a total of 12 successful pacer surgeries performed for adult ventilator-dependent trauma patients. Nine of these individuals have been 100 percent weaned from the ventilator and have been reintegrated into the community.
- During 2009, the Office of Trauma and the BSCIP continued to work with AHCA leadership and staff related to the Medicaid enhanced per diem rate for skilled nursing facilities that care for ventilator-dependent rehabilitation patients

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and coverage for the diaphragm pacer surgery for Medicaid recipients. The Office of Trauma and AHCA staff proposed matching LBRs of \$1 million to provide funding for the implementation of the per diem rate for state designated Ventilator-Dependent Rehabilitation Programs; however, the LBRs were not approved.

- A systematic and integrated action plan was developed for the pacer program implementation in July to September 2009. The Ventilator-Dependent Rehabilitation Standards were reviewed with input from Jackson Memorial Hospital Ryder Level I Trauma Center Rehabilitation Team, AHCA, Florida Health Care Association, and the Florida Association of Homes for the Aging from July to September. Changes were identified and made accordingly. The Office of Trauma held a rule development workshop on December 1, 2009 to add a quality improvement indicator to the Florida Trauma Center Standards, 150-9 Pamphlet to track the outcomes of the new pacer project. In January 2010, a Notice of Proposed Rulemaking was published in the *Florida Administrative Weekly*. No rule hearing was requested and the Office of Trauma submitted the rule revisions to the Department of State for adoption. The quality improvement indicator for the Florida Diaphragm Pacer Program was added to the *Florida Trauma Center Standards, DOH Pamphlet 150-9* effective April 20, 2010.

2011 ACTION STEPS:

- ▶ Map the referral process of trauma patients that meet the eligibility requirement for the pacer surgery to the BSCIP for coordinated case management and identification of insurance coverage or other funding sources available to fund the pacer equipment and surgery and implement the process;
- ▶ Continue to work closely with the BSCIP and AHCA to provide technical assistance to skilled nursing facilities that are interested in becoming a state designated ventilator-dependent rehabilitation facility to assist in the rehabilitation and weaning of patients after the pacer surgery; and
- ▶ Continue to work closely with BSCIP and AHCA to seek funding to fully implement the Florida Diaphragm Pacer Program and the Ventilator-Dependent Rehabilitation Program throughout the state.

PEDIATRIC REHABILITATION STUDY:

OUTCOMES AND OUTPUTS:

- In March 2007, Senate Bill 1210 was submitted to the Florida Legislature for consideration of additional funding to enhance systematic, ongoing clinical evaluation of the pediatric rehabilitation patient with multiple trauma injuries. The 2007 Legislature did not pass this proposed legislation.
- The Office of Trauma staff and the Trauma Rehabilitation Planning Team developed a legislative proposal and budget request for funding to conduct the prospective rehabilitation for children study. Both the proposal and the LBR were submitted and the department received letters of support for the study from the Brain Injury Association of Florida, the Florida Hospital Association, and the Florida Committee on Trauma. However, due to the revenue shortfall and pending budget cuts for 2007-2009, both the proposal and LBR were withdrawn. The Pediatric Rehabilitation Study Group held two conference calls with the Office of Trauma and the BSCIP staff to collaborate on issues regarding funding sources to complete the prospective pediatric rehabilitation study and to review data from the retrospective rehabilitation outcome data. As of December 2007, no funding sources were identified.
- In 2008, Dr. Joseph Tepas and the Pediatric Rehabilitation Study Group submitted a grant proposal the Bureau of EMS to request a grant to provide funding for the implementation of the prospective pediatric rehabilitation study. Unfortunately, the grant award was denied.
- In 2008, the Pediatric Rehabilitation Study Group leads continued to compile and analyze the retrospective rehab outcome data from TraumaOne at Shands Jacksonville Level I Trauma Center, as well as Brooks Rehabilitation and Jackson Memorial Hospital Ryder Level I Trauma Center, to determine baseline outcome data to prepare for the prospective study. The study retrospective data was submitted and approved by the University of Florida's IRB. Complete analysis of the retrospective TraumaOne at Shands Jacksonville/Brooks Rehabilitation data, which confirms a linkage between delay to rehabilitation and diminished recovery, was presented at an annual international meeting of the British Association of Pediatric Surgeons. The report was submitted for publication in the *Journal of Pediatric Surgery*. In addition, a second investigation continues to focus on the effect of delay to rehabilitation on successful school reintegration has been submitted to the Brooks Foundation.
- On November 11, 2008, Dr. Joseph Tepas and Dr. Gillian Hotz meet to discuss ongoing strategies to obtain grant or foundation funding and resolve other barriers to the completion of the Pediatric Rehabilitation Prospective Study. Because the absolute number of brain injuries appears to be declining, Drs. Hotz and Tepas agreed that an adequately powered prospective validation of the pilot data published in the *Journal of Pediatric Surgery* would require a statewide

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approach. This will be best accomplished by amending the Florida Trauma Registry to include the few data points necessary for prospective surveillance of the effect of delay to rehabilitation on ultimate outcome of severe pediatric TBI.

- In 2009, the Pediatric Rehabilitation Study Group leads submitted the prospective study application for a grant with the National Institutes of Health (NIH). The study data will be provided by the following institutions: TraumaOne at Shands Jacksonville, Brooks Rehabilitation Center in Jacksonville, Shands at the University of Florida in Gainesville, Arnold Palmer Hospital in Orlando, and Jackson Memorial Hospital/Ryder Trauma Center and Rehabilitation Center in Miami, as these facilities treat a significant number of pediatric TBI cases within the state. Data from the web-based Kiwanis and the Florida Pediatric Trauma Registry will be used to complete the study.
- In 2010, the Office of Trauma continued to seek grant funding to complete the pediatric study; however, no grants or other sources of funding were identified.

2010 ACTION STEPS:

- ▶ The study team will continue to review the retrospective data until funding can be obtained. If funding becomes available in 2011, the prospective study proposed above will be initiated; and
- ▶ In 2011, the Next Generation Trauma Registry Project Team will work with the Trauma Registry and Research Planning Team to ensure the plans for revisions to the Florida Trauma Registry data points include the few data points necessary to complete the prospective surveillance for the pediatric rehabilitation study.

OBJECTIVE 6B:

Develop and implement an integrated site survey process for the trauma center program and the Brain and Spinal Cord Injury Program.

STRATEGY 6B1:

Implement Objective 06-02 – completed with ongoing evaluation of the integrated site survey process.

OUTCOMES AND OUTPUTS:

- In 2007, the Office of Trauma and the BSCIP conducted eight combined site surveys in 2007. These integrated surveys delivered an individual cost savings of \$45,000 for the residents of Florida. In 2008, the BSCIP was moved under the direction of the Division of Emergency Medical Operations. This merger has improved the collaboration of efforts and integration of the survey process, data, projects, initiatives, and strategic planning efforts between the Office of Trauma and the BSCIP. From 2007 to present, the Office of Trauma and the BSCIP have continued to conduct the integrated surveys of verified trauma centers that are also state designated Brain and Spinal Cord Injury facilities to share resources, reduce costs of the surveys, and ease the burden of multiple surveys of these hospitals. See 6A1 above for the outcomes of the integrated surveys.
- From 2008 to 2010, the Office of Trauma continued to monitor the implementation of the ventilator-dependent standards and evaluate the program's outcomes. See 6A2 above for status of this action step.
- In 2009 and 2010, the Office of Trauma and BSCIP continued to improve the integration and coordination of the joint trauma center and BSCIP designate facility site surveys, as well as the implementation of Florida's Ventilator-Dependent Rehabilitation Program and the Diaphragm Pacer and Preventive Ulcer programs.

2011 ACTION STEPS:

- ▶ Continue to monitor the implementation of the integrated Ventilator-Dependent Rehabilitation Program, the Diaphragm Pacer Program, and the Preventive Ulcer Program and evaluate the patient outcomes of these integrated programs; and
- ▶ Continue to conduct the joint trauma center and BSCIP site surveys.

In 2010, the Rehabilitation Planning Team had a series of conference calls and two face-to-face meetings to develop and approve the Goal 6 objectives and strategies for inclusion in the 2011-2015 Florida Trauma System Strategic Plan. The following are the objectives included in the new Goal 6:

- Establish guidelines for the development of regional trauma plans that address medical rehabilitation needs of trauma victims in collaboration with AHCA, trauma centers, and Florida Designated BSCIP Rehabilitation Centers;
- Develop adequate, permanent/recurring funding for inpatient and outpatient rehabilitation for adults and children;
- Statewide implementation of the Ventilator-Dependent Rehabilitation Program and the Diaphragm Pacer Program;

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- Support the Brain Injury Association of Florida's and the BSCIP's plans with the development and implementation of a model of service delivery and array of services for individuals with TBI and SCI to include services for Veterans.

More information regarding the Goal 6 strategies can be found on the home page of the Office of Trauma's Florida Trauma System domain website at

www.fl-traumasystem.com. (Click on the plan banner at the bottom of the home page.)

7 Goal 07: Evaluation, Quality Management and Performance Improvement *To establish a statewide system evaluation, quality management and performance improvement process.*

OBJECTIVE 7A:

Develop an ongoing process for statewide review of trauma center performance to identify trends and promote improved trauma care through a quality management environment.

STRATEGY 7A1:

Review the Department of Health Standard XVIII quarterly indicators for trends and evaluate performance of care – completed with ongoing annual and quarterly reviews of patient data and quality improvement indicators; and the focus, interim and renewal site surveys.

OUTCOMES AND OUTPUTS:

- In 2006, the trauma center program managers developed criteria for the quality indicators to establish consistency when evaluating trends and performance of clinical care. During 2007, the trauma centers submitted the quality indicator data to the Office of Trauma each quarter and the Florida Trauma Registry staff incorporated the data into the Office of Trauma Sterling Scorecard, which were used in 2008 for quarterly review and annual evaluation of trends and opportunities for improvement.
- In July 2008, the American College of Surgeons approved the Office of Trauma's application to obtain the National Trauma Data Bank (NTDB) research dataset for admission years 2002-2006. This dataset will be used to determine regional and national benchmarks with which to compare Florida's annual trauma center mortality indicator, and will be requested in subsequent years as new NTDB data become available.
- Under the direction of the Florida Trauma Registry manager, a Master of Public Health student from Florida A&M University conducted a literature search in summer 2008 of published research studies on trauma care quality/performance improvement initiatives, in an attempt to identify benchmarks with which to compare Florida's other trauma care indicators that are not available in the NTDB. The literature search demonstrated the difficulty in finding valid comparison data, especially at the state or regional trauma systems level. The Office of Trauma will continue to research ways to devise, measure, and benchmark its own trauma systems quality/performance improvement indicators.
- On December 5, 2008, the Office of Trauma released the aggregate results of the three state required quality improvement indicators that trauma centers were required to report quarterly during 2005-2007 in compliance with standard XVIII.B.2.a of the *Florida Trauma Center Standards, DOH Pamphlet 150-9* to the Florida Trauma Performance Improvement Committee. These indicators were as follows:
 - All deaths;
 - Any trauma patient with an unplanned re-admittance to the hospital within 30-days of discharge; and
 - Any trauma patient readmitted to the ICU or an unplanned admission to the ICU from a medical/surgical unit.
- In 2009 and 2010, the Office of Trauma Performance Improvement Committee, which consists of trauma program managers, trauma registrars, and trauma agency representatives, held conference calls to discuss registry data issues and the quality improvement indicators.

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To ensure the implementation of Objective 7A and in response to requests for more timely and regular feedback on the trauma registry data submitted by each trauma program, the Office of Trauma began issuing trauma registry data compliance reports to each trauma program for each quarter of data submitted. These reports document the timeliness, quality, and completeness of the trauma registry data submitted each quarter. Compliance reports for first through fourth quarter 2009 were completed in August 2010 and sent to each trauma program. A follow-up report would be sent to each trauma program with its final ICISS-adjusted trauma patient volume for 2009 for the purposes of calculating its quarterly payout of legislatively mandated funding for trauma centers.

In December 2010, the Office of Trauma staff completed and sent a summary of the 2009 trauma center quality improvement indicator reports back to each of the trauma centers, providing comparison data on each of the state QI indicators, (deaths, readmissions, and unplanned admissions/readmissions to ICU) between the different trauma center designation levels, to maximize the use of the QI indicators reported quarterly by each trauma center in a state-level trauma system QI process. These summaries were discussed during the December 3, 2010 Performance Improvement Committee conference call, during which helpful suggestions for improvement were received. Dr. Karanbir Gill, State Trauma Medical Director, also provided suggestions for improving a state level trauma system QI process during his visit to the Office of Trauma on December 13, 2010.

The 2010 Trauma Registry Annual Report was completed for inclusion in the *2009 Florida Trauma System Annual Report* which will be published and distributed in December 2010. The following are the major QI accomplishments of Florida's Trauma System from 2007 to 2010:

- Reduction in Florida's Trauma Mortality Rate (due to traumatic injuries): Mortality is a basic indicator of trauma system performance and is directly linked to the DOH mission, which is to promote and protect the health and safety of all people in Florida. Florida's statewide trauma center mortality rate has decreased from 6.8 percent in 2004 to 4.9 percent in 2010.
- Rate of readmissions of trauma patients to the intensive-care unit (ICU) or unplanned admissions to ICU from Medical Surgical Units
 - 2010: 1.7%
 - 2009: 1.7%
 - 2008: 1.6%
 - 2007: 1.7%
- Rate of readmissions to trauma centers within 30 days of discharge
 - 2010: 2.0%
 - 2009: 1.7%
 - 2008: 1.6%
 - 2007: 1.6%
- Strategic Planning: In August 2009, the Florida Trauma System Plan Advisory Committee created a Quality Improvement Planning Team to take over the development and implementation of Goal 7. The planning team will consist of trauma medical directors, trauma program managers, and trauma agency representatives to ensure continuous quality improvement of trauma services. The Goal 7 Quality Improvement Planning Team held conference calls and two face-to-face meetings in 2010 to draft and approve the Goal 7 objectives and strategies for inclusion in the 2011-2015 Florida Trauma System Strategic Plan. More information about the Goal 7 objectives and strategies can be found on the Office of Trauma's Florida Trauma System domain website at www.fl-traumasystem.com. (Click on the plan banner located at the bottom of the home page.)
- In December 2009, the Trauma Center Planning Team members and the new Quality Improvement Planning Team Lead began rule promulgation to add another quality improvement outcome indicator to the trauma center Standard VIII to track the outcomes of trauma patients eligible for and who receive the diaphragm pacer surgery. The rule revision was adopted in rule on April 20, 2010. A conference call was held on July 23, 2010 with the QI Planning Team Leads to discuss and clarify the new diaphragm pacer program indicator on the trauma program quality improvement indicators report template. The new template was rolled out during the August 6, 2010 Performance Improvement Committee conference call and the trauma centers began reporting this data during the next quarterly QI data submissions to the Office of Trauma. This data is reviewed quarterly by the Office of Trauma director and the chief of the Brain and Spinal Cord Injury Program.

2011 ACTION STEPS:

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- ▶ Office of Trauma staff and the Performance Improvement Committee will continue to monitor the mortality rate and other quarterly and annual quality improvement indicators and compliance and will provide quarterly feedback and compliance reports to each trauma program; and
- ▶ Seek additional individuals to serve on the Quality Improvement Planning Team and begin the implementation of the 2011 Action Plan.

OBJECTIVE 7B:

Establish a process to incorporate trauma-center quality management into the system quality management program at the state level.

STRATEGY 7B1:

Implement Objective 7B – completed with ongoing quarterly monitoring of indicators.

OUTCOMES AND OUTPUTS:

- As part of a division wide quality improvement initiative prescribed by the Florida Sterling Management Model, the Office of Trauma devised the following indicators to track system performance on its quarterly scorecard:
 - OT 7.1-1: Trauma center mortality rate (state-required trauma center indicator and Division of Emergency Medical Operations (DEMO) Scorecard Trauma indicator);
 - OT 7.1-2: Percent of trauma patients receiving care within the “Golden Hour” (state-required trauma center indicator);
 - OT 7.1-3: Rate of readmissions to ICU or unplanned admissions to ICU from medical/surgical unit (state-required trauma center indicator);
 - OT 7.1-4: Rate of readmissions to trauma centers within 30 days of discharge (state-required trauma center indicator); and
 - OT 7.1-5: Percent compliance with on-time trauma center payments pursuant to Rule 64J-2.019, F.A.C. (Office of Trauma Program indicator).

These indicators were monitored on a quarterly basis in 2008, 2009, and 2010 by the registry staff. OT 7.1-1: Trauma center mortality rate was reported to the division director and the DEMO Leadership Team on a quarterly basis in 2010.

- The Office of Trauma annually tracks the following outcome in support of the following goal/objective, which was added to the DOH’s Long-Range Program Plan (LRPP) which was developed in September 2008:
- **LRPP Goal 8D:** Enhance and improve the Florida Trauma System to decrease the mortality rate due to traumatic injury.

Objective 8D: *Develop and maintain a continuous, statewide system of care for all injured patients, increase system preparedness, and decrease morbidity and mortality due to traumatic injury.*

- The statewide trauma center mortality rate decreased from 6.5 percent in 2002 to 4.9 percent in 2010. The LRPP goal is to reduce the statewide trauma center mortality rate to meet the average U.S. trauma center mortality rate of 4.4 percent or less by 2012-2013.

2011 ACTION STEPS:

- ▶ Continue to review and evaluate the trauma center quarterly quality improvement indicators through the Office of Trauma Sterling Scorecard on a quarterly and annual basis at the state level and through the Performance Improvement Committee with the trauma program managers and registrars from each of the trauma centers, as well as trauma agency representatives; and
- ▶ Provide ongoing feedback on the analysis of trauma center performance.

OBJECTIVE 7C:

Develop and implement a method for evaluating trauma system effectiveness, including identification of future goals and objectives based on the outcome of the evaluation.

STRATEGY 7C1:

Implement Objective 7C – completed with quarterly and annual evaluations.

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OUTCOMES AND OUTPUTS:

- In 2007, the Office of Trauma staff refined the Office of Trauma Sterling Scorecard to include additional indicators to evaluate trauma system effectiveness and the effectiveness of the implementation of the State Trauma System Five-Year Strategic Plan goals, objectives, and strategies based on the Sterling Model, which is "Product/Service Outcomes, Customer-Focused Results, Financial and Market Results, Workforce Results, Organizational Effectiveness, and Leadership and Social Responsibility Results."
- In 2007 and 2008, the State Trauma System Plan Implementation Committee planning teams held meetings and conference calls throughout the year to evaluate the effectiveness of the trauma system, identify opportunities for improvement in data collection and reporting, evaluate trauma care and rehabilitation outcomes, prevention programs, research projects, system deployments, funding implications, etc., which will be used to develop future planning goals and objectives.
- The Next Generation Trauma Registry Project: The Registry/Prevention/ Research Planning Teams held several meetings and conference calls to gather stakeholder requests for the Next Generation Trauma Registry Project, intended to upgrade the current Florida Trauma Registry to web-based data submission and reporting of trauma center data. The new registry was to provide more timely and valid data to evaluate trauma system effectiveness. Due to the revenue shortfall and budget reductions for 2007, the Office of Trauma suspended all activities on this project in 2007 and 2008.
- In 2008, an LBR was submitted to the Governor for inclusion in the Governor's 2009 LBR. The submitted LBR asked for budget authority to utilize funds from the trauma portion of the EMS Trust Fund to develop a business plan and data requirements for the Next Generation Trauma Registry; however, the request was not included in the 2009 Governor's LBR.
- Also in 2008, Florida Trauma Registry consultants completed an internal evaluation of trauma center performance for the Office of Trauma titled "Application of the National Surgical Quality Improvement Program (NSQIP) to Analysis of Florida Trauma Center Performance," using a de-identified, blinded extract of 2006 Florida Trauma Registry data to calculate observed-to-expected mortality ratios for each trauma center, using NSQIP methodology to adjust for injury severity and to stratify by specific injury types. The consultants presented the results of their evaluation to the Office of Trauma staff on November 18, 2008. For greater validity, the consultants repeated this evaluation in 2009, using 2007 Florida Trauma Registry data, focusing on the under-performing trauma centers first noticed in the initial evaluation.
- In 2010 during the strategic planning sessions, the Quality Improvement and the Research and Registry Planning Teams identified the need for the establishment of a Trauma System Quality Review Committee to ensure ongoing evaluation of the trauma system performance through the review of the trauma registry data.

2011 ACTION STEPS:

- ▶ Continue to explore other ways of making the registry data available for research, evaluation of trauma system effectiveness, performance improvement, and injury surveillance/prevention, which do not require additional project funding; and
- ▶ Create a Trauma System Quality Review Committee within the Florida Committee on Trauma with data from the Florida Trauma Registry to ensure the ongoing evaluation of trauma system performance at the local, regional, and state levels and identify appropriate benchmark indicators for measurement and comparison.

OBJECTIVE 7D:

Identify and evaluate existing tools for trauma system evaluation, including the American College of Surgeons' traumasystem evaluation process.

STRATEGY 7D1:

Implement Objective 7D, including the evaluation of effectiveness of Florida's trauma system using National Surgical Quality Improvement Program (NSQIP) methods of the American College of Surgeons by calculating observed-to-expected mortality ratios for each trauma center, adjusted for injury severity and stratified by specific injury types – completed with ongoing evaluation.

OUTCOMES AND OUTPUTS:

- In 2007, the Office of Trauma and the state trauma medical director selected 12 trauma research studies to be profiled in the first *Florida Trauma System Research and Data Report*. The report included population based injury surveillance data, both statewide and by trauma service area, for the following causes of traumatic injury in Florida in 2005: falls, fires, firearm injuries, homicides/assaults, motor vehicle injuries, and traumatic brain injuries. The studies selected

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represent a snapshot of areas in which research is being conducted by Florida's Level I, Level II, and Pediatric trauma centers. A copy of this report, completed and distributed in March 2008, is located on the Office of Trauma's Florida Trauma System domain website: www.fl-traumasystem.com under "Forms and Reports." The 2010-2011 research projects by trauma center is included in the "2010 Hospital Injury Prevention Programs and Research Projects" section of this report.

- In 2007, the Office of Trauma staff and the trauma medical consultants continued to work on the Site Survey Business Process Improvement Project, in particular, the development of a viable Office of Trauma electronic pre-survey questionnaire for use in site surveys of trauma centers. Due to budget cuts, the Office of Trauma postponed this project until sufficient funding could be obtained to complete the development and implementation of this project. No actions were taken in 2008 on the Site Survey Business Process Improvement Project due to lack of funding.

In 2010, in an effort to streamline the preparation and document accumulation for trauma center site surveys, an electronic pre-site survey questionnaire document was created. A pilot team of three trauma centers' sites was identified to test the initial version. Several IT scenarios became evident for each site that was unique among all three of the trauma centers; however, these issues were resolved through revised versions of the electronic pre-site survey questionnaire. The first electronic pre-site survey questionnaire was completed by Lee Memorial Hospital Level II Trauma Center. The process was seamless for the survey team and reduced redundant copies and paper product used during the survey process. The Office of Trauma IT staff would continue to refine the questionnaire through the pilot tests conducted prior to and during the St. Mary's Hospital Level II Trauma Center and Delray Medical Center Level II/Pediatric Trauma Center in February 2011.

- In 2008, the Florida Trauma Registry Consultants completed an internal evaluation of trauma center performance for the Office of Trauma titled "Application of the National Surgical Quality Improvement Program (NSQIP) to Analysis of Florida Trauma Center Performance," using a de-identified, blinded extract of 2006 Florida Trauma Registry data to calculate observed-to-expected mortality ratios for each trauma center, using NSQIP methodology to adjust for injury severity and to stratify by specific injury types. The consultants presented the results of their evaluation to the Office of Trauma staff on November 18, 2008. For greater validity, the consultants repeated this evaluation in 2009, using 2007 Florida Trauma Registry data, focusing on the under-performing trauma centers first noticed in the initial evaluation.

In 2009, the Florida Trauma Registry consultants, Dr. Joseph Tepas, Dr. Etienne Pracht, Dr. Barbara Orban, and Dr. Pam Pieper completed an internal evaluation of trauma center performance for the Office of Trauma, using a de-identified, blinded extract of 2007 Florida Trauma Registry data to analyze ventilator support days as a metric of trauma center performance. This analysis is an extension of the one conducted in 2008 using 2006 registry data to analyze mortality as a metric of trauma center performance.

Due to the completion of the 2000-2009 Florida Trauma Service Area Analysis by the Florida Trauma Registry consultants in 2010, no NSQIP analysis was completed in 2010. This will resume with the NSQIP analysis of the 2008 and 2009 data in 2011-2012.

2011 ACTION STEPS:

- ▶ Complete the NSQIP analysis utilizing 2008 and 2009 Florida Trauma Registry data focusing on the under-performing trauma centers first noticed in the initial evaluation for greater validity;
- ▶ Continue to pilot test the electronic pre-survey questionnaire during the 2011 site survey process and make revisions as needed; and
- ▶ Commission of a special project team of analyst to align data fields in the 2008-2010 Florida Trauma Registry data to facilitate the transfer of data to NSQIP.

OBJECTIVE 7E:

Develop a comprehensive process to evaluate the effectiveness of the inclusive trauma system at the local, regional, and state level.

STRATEGY 7E1:

Implement Objective 07-05 – completed, with ongoing annual evaluations.

Periodic five-year comprehensive assessments of the Florida Trauma System are needed to identify opportunities for improvement in the inclusive trauma system and to prepare the system for emerging issues due to growth of the system and changes in the state's population. Data integration between the Florida Trauma Registry, the BSCIP Central Registry and EMSTARS with all EMS providers participating will greatly improve the department's ability to provide a comprehensive evaluation of the entire trauma system.

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The following are the new Goal 7 objectives:

- Develop a regular and timely process for statewide review and feedback of trauma center performance; and
- Evaluate trauma system performance at the local, regional, and state level and identify appropriate benchmark indicators for measurement and comparison.



Goal 08: Regional System Evaluation

To establish a regional system evaluation, quality management and performance improvement in areas without a trauma agency.

OBJECTIVE 8A:

Develop and implement a comprehensive regional trauma system to address trauma issues at the local level.

STRATEGY 8A1:

Develop a process, structure, and plan for a comprehensive regional trauma system – completed in 2006, 2007, 2008, 2009, and 2010 through ongoing annual evaluations and quality improvement initiatives.

- Ongoing evaluation of the regional trauma service areas were completed from 2006 to 2010 by the Office of Trauma, the Florida Trauma System Plan Advisory Committee, and the four trauma agencies, with input from the Florida Committee on Trauma, Florida Chapter of the American College of Surgeons, Florida Hospital Association, the Association of Florida Trauma Agencies, the Association of Florida Trauma Coordinators, Domestic Security Task Force Regions and capability teams, and other trauma system continuum-of-care providers, partners and constituency groups, pursuant to section 395.402, F.S.

Florida Statutes require trauma agencies to provide county or regional trauma system evaluation and oversight at the local level. Currently, there are only four existing trauma agencies that cover only 16 of the 67 counties in the state. The lack of funding at the local level has made it difficult for the department and the Association of Florida Trauma Agencies to encourage counties or health care councils in the state to establishment regional or county trauma agencies to serve the counties not currently served by trauma agencies.

Within existing resources, the Office of Trauma has continued to provide ongoing daily oversight and annual assessments from the state level of the assignment of the 67 counties to the 19 trauma service areas and services provided by the trauma centers and the pre-hospital and transport services provided by the EMS providers. The following methods of reviews, quality assurance activities, and assessments are conducted of the 19 trauma service areas and the effectiveness of the trauma system providers pursuant to sections 395.402 and 395.4025, F.S.:

- Reviews of trauma center compliance to the *Florida Trauma Center Standards, DOH Pamphlet 150-9*, conducted through the provisional, interim, focus, and renewal trauma center site surveys processes;
- Review of the annual reports of the trauma centers, burn centers, and trauma agencies;
- Monthly reviews of the trauma transport protocols of the EMS providers who submit applications for licensure or renewal of their license to determine compliance and adverse incidents related to trauma transport;
- Quarterly reviews of trauma center diversions reported to determine the reasons and address and correct bed capacity, on-call, equipment malfunction, etc. issues identified;
- Review and analysis of quarterly and annual Florida Trauma Registry data and quality improvement data to determine the effectiveness of the trauma system and trauma centers;
- Reviews of the data available from the EMS providers that are currently utilizing EMSTARS to review EMS modes of transport from scene of injury by county of injury and trauma service area;

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- Reviews of EMS run reports in patient records during trauma center site surveys to ensure providers are submitting complete run reports to determine the effectiveness of the trauma system EMS providers to ensure transport of trauma patients to trauma centers within the "Golden Hour." (The full implementation of EMSTARS will ensure completeness of this data when EMSTARS and the Next Generation Trauma Registry are interfaced);
- Reviews of the 2010 *Trauma Service Area Analysis Annual Report*. (This report includes a comprehensive retrospective analysis from 2000 to 2009 utilizing AHCA hospital discharge data of nucleus and feeder counties that define Florida's trauma service areas based on rates of retention of trauma patients, defined by section 395.402, F.S., as patients with an injury severity score of nine or greater, by county of residence. This analysis is important to assist the Office of Trauma staff in identifying priority counties for review of new trauma centers in the trauma service areas);
- Annually reviews of county population data available through the department's CHARTS database to determine changes in population within the 67 counties assigned to the trauma service areas;
- Reviews of the patient volume and injury severity scores reported to the Florida Trauma Registry by trauma centers. (This data is also used in the distribution methodology to calculate the quarterly trauma center payments from the revenue generated from six legislatively mandated trauma center funding sources, pursuant to section 395.4036, F.S.);
- Reviews of the BSCIP annual reports, which includes statewide and county brain and spinal cord injury data and data on individuals served and community reintegrated in each within each of the six Brain and Spinal Cord Injury Program regions;
- Annual reviews of preparedness gap analysis of equipment, supplies, and medical professionals available in each trauma service area and burn bed capacity of burn centers and trauma centers included in the annual Bureau of Preparedness and Response's Preparedness Hospital Program report;
- Annual reviews the DOH Florida Physicians Workforce annual reports to determine the number and types of medical professionals statewide and in each county; and
- Annual review of the county injury data included in the Office of Injury Prevention's Florida Injury Data annual reports. (This data is utilized to determine the number of injuries and mechanism of injury in each county to determine where additional injury prevention programs are needed and areas that may need additional EMS and trauma center resources.)

For the department to provide these annual comprehensive assessments of each of the 19 trauma service areas as required by sections 395.402, 395.50 and 395.51, F.S., input at the regional and/or local county level is needed to assist the department to determine the effectiveness of the trauma center and EMS systems operating in each of the trauma service areas and to identify best practices, gaps, opportunities for improvement, and emergency medical and trauma workforce needs, including trauma and other surgical and non-surgical specialists. This local input is also needed to provide information on barriers to timely and quality delivery of trauma care and transport of injured individuals to the nearest trauma centers within the "Golden Hour."

OUTCOMES AND OUTPUTS:

- In late 2007, the State Trauma System Plan Implementation Committee discussed Strategies 8A1, 8A2, and 8A3 and assigned tasks to the Florida Association of Trauma Agencies and the Systems Planning Team to address in 2008 and provide recommendations to the committee in 2009.
- During the April 2008 AFTA Meeting, the associations' members, Office of Trauma staff and division leadership reviewed the existing statutes and rules. It was determined that the domestic security regions were established for disaster planning only. The consensus was there was no need to revise statutes and rules to establish trauma regions to align with the domestic security regions since these regions were established for disaster planning only and because the domestic security regions would split some of the trauma centers' current service areas between two regions.
- In July 2008, the State Trauma System Plan Implementation Committee discussed these findings of the association and the Office of Trauma. The committee determined that since these findings were based on the 2000 trauma study and the 2004 Comprehensive Assessment of the Florida Trauma System, a task force should be formed to determine other regionalization options other than the domestic security regions and to determine if the apportionment of trauma center slots should be revised.

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- In October 2008 based on the committee's recommendation and a request from a constituent, the Office of Trauma decided to hold rule development workshops on 64J-2.010, *F.A.C.*, Apportionment of Trauma Centers within a Trauma Service Area, to determine if revisions need to be made to the current trauma service areas and the feasibility of further regionalization of the trauma centers. See Objective 1A within this section of the report for more details regarding the rule promulgation activities of 64J-2.010, *F.S.*, from 2008-2010.
- In 2009, the Office of Trauma completed a SWOT analysis for Goal 8 and the results indicated areas of the state that are still underserved by trauma centers and trauma agencies and the need for continued regional trauma system evaluation at the local level for both areas covered and not covered by a trauma center and/or trauma agency. The analysis also indicated the need for financial support for the existing trauma agencies and incentives for counties and groups of counties within each regional trauma service area to form trauma agencies.
- During 2010, the Goal 8 Systems Planning Team held a series of conference calls and two face-to-face strategic planning sessions with the Florida Trauma System Plan Advisory Committee to review the 2009 SWOT analysis and accomplishments thus far from 2006 to 2010. The planning team developed the following Goal 8 objectives for inclusion in the 2011-2015 Florida Trauma System Strategic Plan:
 - Develop and implement a comprehensive regional trauma system to address trauma issues at the local, regional, and state levels;
 - Establish trauma regions and plans that include all trauma system continuum-of-care provider groups, and facilitates continuous quality improvement of trauma services at the local, regional, and state levels;
 - Establish appropriate roles for trauma agencies to assist in furthering the operation of trauma systems at the regional level;
 - Establish a process for periodic evaluation of subspecialties and other human resource and training needs at the regional level;
 - Establish, implement, and evaluate uniform criteria for diversion and transfers of patients from one trauma center to another and from non-trauma centers to trauma centers; and
 - In conjunction with internal and external partners, develop and implement a periodic evaluation process of the communications systems available in each trauma region to identify opportunities for improvement, and address current and emerging communications needs of trauma centers, EMS, and other health and medical providers at the local, regional, and state levels.

In June 2010, recognizing that the domestic security task force regions were not appropriate for the daily operations of the Florida Trauma System, and the need for the identification of a more appropriate regional structure and evaluation process in areas not currently served by a trauma agency, the Florida Trauma System Advisory Committee approved the recommendation for the department to seek additional budget authority to conduct another Florida Trauma System comprehensive assessment. The department leadership approved the above Goal 8 objectives as part of the new 2011-2015 Florida Trauma System Strategic Plan for implementation.

A copy of the 2011-2012 Florida Trauma System Strategic Plan can be obtained from the Office of Trauma Florida Trauma System domain website at the following link: www.fl-traumasystem.com (The plan banner is located at the bottom of the home page.)

- In 2010, members of the Florida Committee on Trauma and the Florida Trauma System Plan Advisory Committee identified the need and made recommendations to the state surgeon general to conduct a Florida Trauma System Special Study, utilizing out-of-state trauma system national experts, to establish an evidenced-based methodology to determine the location of trauma centers until approval and additional budget authority was granted for another comprehensive assessment of the Florida Trauma System.
- In 2010, in addition to the rule promulgation activities and other trauma service area evaluations, the Office of Trauma contracted with Drs. Etienne Pracht and Barbara Orban, University of South Florida, to conduct a retrospective analysis (2000-2009) of nucleus and feeder counties that define Florida's trauma service areas based on rates of retention of trauma patients, defined by section 395.402, *F.S.*, as patients with an injury severity score of nine or greater, by county of residence. This study was conducted utilizing Florida hospital discharge data from AHCA. This analysis was important to identify priority counties for review of new trauma centers in the trauma service areas. The study was completed in August 2010 and with further refinement would be published in early 2011.

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2011 ACTION STEPS:

- ▶ Seek approval of additional budget authority to conduct the comprehensive assessment in 2012 utilizing the criteria in section 395.402, F.S., the Western-Bazzoli criteria and other criteria to evaluate access to care and the effectiveness of the trauma service areas and determine the most appropriate regional structure for the daily operations of Florida's trauma system;
- ▶ Seek approval to conduct the recommended Florida Trauma System Special Study to obtain an evidenced based methodology to determine the location of trauma centers; and
- ▶ Complete the 2010 analysis of nucleus and feeder counties and provide a report to the trauma stakeholders.

STRATEGY 8A2:

Seek legislative authority and administrative rules to establish trauma regions and to guide the operation of Florida's inclusive trauma system – in progress. See Objective 1A (Rule 64J-2.010, F.A.C.) and Strategy 8A1 above for more details on the activities related to this strategy. This strategy was revised in 2010 and was carried over for implementation in Goal 8 of the 2011-2015 Florida Trauma System Strategic Plan.

STRATEGY 8A3:

Establish and maintain an interagency approach to planning, operation, and evaluation of the state trauma system - completed with ongoing evaluation and refinement needed, especially in areas of the state not directly covered by a trauma center and/or trauma agency to provide regional system planning, operation, and evaluation at the local level.

OUTCOMES AND OUTPUTS:

- During 2008, the AFTA reviewed the current rules pertaining to trauma system planning, operation, and evaluation of trauma agencies, pre-hospital, TTPs, and trauma scorecard methodologies for adult and pediatrics. The proposed revisions to the rules were submitted to the Office of Trauma for consideration. A Rule Development Workshop for only the trauma agency rules was held on October 1, 2008. The Office of Trauma submitted the Notice of Proposed Rule and the rule revisions to the trauma agency rules (64J-2.007-2.009, F.A.C.), became effective in March 2009.
- The rule development activities on the rules related to pre-hospital, TTPs, and trauma scorecard methodologies for adult, pediatric, and elderly were postponed until 2010-2011. In August 2009, a new Pre-Hospital and Transport Planning Team was created by the Office of Trauma and the State Trauma System Plan Advisory Committee to assist with the implementation of Goal 4 and assist the Systems Planning Team with the implementation of Goal 8. In 2010, the members of this new planning team, representing trauma centers, EMS providers, trauma agencies, and other constituency groups were assigned to take the lead to review these rules, manuals, and guidelines relating the pre-hospital, transport and trauma field triage of trauma patients. This action will help to identify if revisions are needed to refine and improve the planning, operation, and evaluation of the state trauma system.

For more details on the activities of the Pre-Hospital and Transport Planning Team, See the update for Goal 4 within this section of the report.

2011-2012 ACTION STEPS:

- ▶ The Pre-Hospital and Transport Planning Team and the System Planning Team will review the rules, manuals, guidelines for pre-hospital, TTPs, and the trauma field triage criteria (scorecard methodologies) for adult, pediatrics and elderly and recommend revisions if needed to the rules governing these areas; and
- ▶ If revisions are needed and approval is granted from the EMS and trauma constituency and advisory groups, the Office of Trauma and the Bureau of EMS will begin rule development.

STRATEGY 8A4:

Establish guidelines for development of regional trauma plans that address medical rehabilitation needs of trauma victims - completed from 2006 to 2010 with ongoing evaluation and improvements.

OUTCOMES AND OUTPUTS:

- From 2006 to 2010, the Office of Trauma staff continued to conduct reviews to identify and address medical rehabilitation needs of trauma victims.
- In 2007, the Rehabilitation Planning Team identified the issue of prolonged resuscitation of pediatric injury patients and brought the issue to the attention of the Office of Trauma and the State Trauma System Plan Implementation Committee for action to assess the need for establishment of guidelines to address this issue.

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- In 2008, the state trauma medical director brought the issue of prolonged resuscitation of pediatric injury patients to the EMS Advisory Council and the EMS Medical Directors meetings to develop draft guidelines on resuscitation of pediatric injury patients in the field by EMS providers.

Due to other priorities and Medicaid Reform, the development of regional trauma plans that address medical rehabilitation needs of trauma victims was carried over to the Goal 6 in the 2011-2015 Florida Trauma System Strategic Plan.

2011-2012 ACTION STEPS:

- ▶ The Office of Trauma staff and the Rehabilitation, the Systems, and the Pre-Hospital and Transport planning teams will work with the Florida Trauma System continuum-of-care providers and the regional domestic security task forces to address the development of regional medical rehabilitation plans to improve regional medical control and delivery of trauma related services provided to trauma patients; and
- ▶ The Office of Trauma will continue to work closely with the Bureau of EMS, the EMS Advisory Council, and the EMS medical directors to address the issue of prolonged resuscitation of pediatric injury patients.

OBJECTIVE 8B:

Establish trauma regions that include emergency medical services and trauma-system stakeholder groups.

STRATEGY 8B1:

Establish trauma regions for state trauma system planning – completed by the establishment of the 19 regional trauma service areas. Additional evaluation is needed on the effectiveness of the structure of trauma service areas and the regional structure as the trauma system continues to mature (see 8A above).

The Office of Trauma and the Florida Trauma System Plan Advisory Committee (formerly the State Trauma System Plan Implementation Committee) identified the need for the establishment of hand surgery centers of excellence modeled from the current burn centers of excellence and the need for local and regional monitoring of diversion. The following are the activities since 2007 relating to trauma center diversion and the establishment of hand surgery centers of excellence:

Trauma Center Diversion, By-Pass, and Inter-facility Transfer Guidelines:

- In 2007, the State Trauma System Plan Implementation Committee members identified the need to improve the monitoring of the Diversion, By-pass, and Inter-facility Transfer Guidelines to determine if there are problems within the state and if revisions need to be made to these guidelines. The State Trauma System Plan Implementation Committee asked the Systems Planning Team and the Diversion, By-pass, and Inter-facility Transfer Subcommittee to review the guidelines used by the trauma centers and to monitor the effectiveness. In 2007, the subcommittee held three conference calls to review current diversion guidelines, as well as the diversion log that is currently used by some of the trauma centers.
- In July 2008, the Systems Planning Team chairs recommended that the Office of Trauma conduct a critical review of the transfers out of trauma centers to other trauma centers, and re-establish the formal tracking of diversions, which was implemented in 1999, to study the frequency and reasons for diversion among trauma centers, until this process can be done electronically with the implementation of the Public Health Preparedness Communications and Patient Tracking System.
- During the October 23, 2008 Systems Planning Team Meeting, Dr. Larry Lottenberg, Chair of the Diversion/By-Pass/Transfer Subcommittee, presented the executive summary of the work completed by the subcommittee and the Office of Trauma staff, as well as the preliminary draft rule language for a separate rule on diversion and transfers.
- In 2009 and 2010, the Florida Trauma System Plan Advisory Committee postponed further actions on recommendations for establishing a rule on diversions and inter-facility transfers until the statewide implementation of the new Communications and Patient Tracking System (CPTS) of the Office of Public Health Preparedness. The department's goal is to implement this system in all trauma centers to be utilized not only during disaster events, but daily operations to track bed capacity, trauma transports by EMS providers, diversions, and inter-facility transfers of trauma patients.

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In 2010, The Office of Trauma continued to partner with the Bureau of Preparedness and Response CPTS project manager to encourage the trauma centers to contact the lead agency in their domestic security region to implement the system in their centers. As of February 2011, there would be 17 of the 22 trauma centers that have installed the Communications and Patient Tracking System, 12 of these trauma centers have users identified for EMResource and five for EMTrack that have received training and have begun to utilize the system. The Goal 3 update within this section of the annual report provides the names of the trauma centers that have installed the system and the number of users that have been identified and trained for each of the components of the system.

2011 ACTION STEP:

- ▶ The Pre-Hospital and Transport and the Systems planning teams will work closely to review the Inter-facility Transfer Guidelines and revisions to EMTALA to determine effectiveness of the Inter-facility Transfer Guidelines and whether diversion and inter-facility transfer guidelines should be incorporated by reference in rule.

OUTCOMES AND OUTPUTS:

- Hand Surgery Regional Centers of Excellence: In late 2007, the State Trauma System Plan Implementation Committee assessed the medical control of pre-hospital care. This assessment identified the need for training of EMS medical directors and emergency room physicians and nurses on the appropriateness for the transfer of hand-injured patients to trauma centers. The Hand Surgery Subcommittee of the State Trauma System Plan Implementation Committee was formed to address the need for regional hand surgery centers of excellence and training.

OUTCOME:

- Hand Surgery Triage Training Program Grant funding was budgeted in FY 2007-2008 due to the increasingly frequent situation of limited hand surgery specialists being available in the state, a need for improved training in hand surgery triage at trauma centers was identified. In 2008, a team of hand surgery specialists, lead by Dr. Winston Richards at the University of Florida, completed development of a DVD, titled *Hand Emergencies*. This is a hand surgery triage training program which would be distributed to the trauma centers, the acute care hospitals and EMS providers to assist in training of trauma surgeons, emergency room physicians and EMS personnel in the latest concepts of hand surgery triage. It should improve timely emergency care and the determination of what types of hand injury cases need rapid transfer to trauma centers with a hand surgery specialist available. In October 2008, the *Hand Emergencies* training program DVDs were distributed to all trauma centers, acute care hospitals, trauma agencies, EMS providers, as well as other trauma system partners.

In 2008, the Hand Surgery Subcommittee members developed a process to evaluate the *Hand Emergencies* curriculum and DVD for effectiveness in hand surgery triage. Copies of the *Hand Emergencies* DVD are still available and can be obtained from the Office of Trauma.

In February of 2009, Dr. Winston Richards and his team of hand surgery specialists submitted a questionnaire on hand surgery to all trauma centers and acute care hospitals through the Florida Hospital Association, vice president for health care policy. The purpose of the survey was to evaluate the number of potential hand surgery specialists available statewide. The survey was distributed in April 2009 by the Florida Hospital Association. Based on the responses to the survey, Dr. Richards and his team conducted telephone surveys to those hospitals that perform replantations to determine their interest in serving as a regional center of excellence. The study found that these hospitals were not interested in serving as a sole facility for these surgeries; but expressed that this responsibility should be spread out over several hospitals throughout the state utilizing the burn centers as a model. Dr. Richards and the Hand Surgery Subcommittee continued to survey trauma centers to determine their willingness to become Regional Hand Surgery Centers of Excellence. In late 2009, Dr. Richards completed the study and submitted his study on hand surgeries in Florida for publication in January 2010.

In 2010, a national survey was conducted on hand injuries and surgery. The Office of Trauma and the Systems Planning Team decided to hold off on moving forward with identifying trauma centers to become regional hand surgery centers of excellence until the results of the national survey were released. This project was carried over to the 2011-2015 Florida Trauma System Strategic Plan.

2011 ACTION STEP:

- ▶ Reassess the establishment of regional hand surgery centers of excellence after reviewing the national survey on hand surgery.

STRATEGY 8B2:

Identify trauma constituencies including recipients of trauma care and trauma care providers in pre-hospital and hospital settings - completed.

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OUTCOMES AND OUTPUTS:

In January 2008, the Office of Trauma and the planning team leads identified trauma system constituencies.

STRATEGY 8B3:

Establish coordinated emergency and disaster planning criteria for all participants in Florida's trauma system – completed within ongoing evaluation and refinement.

OUTCOMES AND OUTPUTS:

See Goal 3 above for the ongoing activities for this strategy.

STRATEGY 8B4:

Integrate emergency medical services, emergency and public health preparedness, and local healthcare systems in trauma regions – completed with ongoing evaluation and refinement.

OUTCOMES AND OUTPUTS:

Ongoing activities through disaster planning and annual reviews and updates to the ESF-8 Manual were conducted from 2006 to 2010. See status of Goal 3 strategies above.

Please note that the ongoing evaluation and refinement of Goals 3 and 8 are contingent upon additional funding and collaborative efforts and input from local and regional level providers, organizations and agencies.

OBJECTIVE 8C:

Establish appropriate roles for trauma agencies to assist in furthering the operations of trauma systems at the regional level – completed with ongoing evaluation and refinement.

STRATEGY 8C1:

Develop criteria for quality management activities of trauma agencies addressing regional system performance - completed. See Outcomes in Strategies 8A1 above.

STRATEGY 8C2:

Seek various funding sources for trauma agencies – efforts are completed annually.

OUTCOMES AND OUTPUTS:

- In July 2006, the Office of Trauma submitted a LBR for budget authority to utilize \$1 million from the trauma portion of the state EMS Trust Fund to provide funding for the operation of trauma center registrars and the trauma agencies. The department did not approve the request for inclusion in the 2008 DOH LBR package.
- In 2007, the Office of Trauma submitted another LBR for \$1 million from the state EMS Trust Fund to assist the trauma centers and the trauma agencies to ensure continued operations of the trauma center registrars and the trauma agencies. However, the LBR was not submitted in the 2008 Division of Emergency Medical Operations' LBR package due to the future significant budget reductions expected.
- From 2008 to 2010, the Office of Trauma continued to review federal grant announcements to seek grant funding for trauma agencies.
- In 2009, the Florida Trauma System Plan Advisory Committee membership was revised and representation from the Office of Rural Health and the local health councils was sought. The Office of Rural Health appointee is now serving as an ad hoc member of the committee to represent rural health and the local health councils. Having this representation on the council will assist in establishing stronger collaborative efforts and resources to provide funding and partnerships with the Office of Rural Health and the local health councils to provide regional evaluation and input to identify regional needs of the areas of the state not currently covered by trauma agencies.

2011 ACTION STEPS:

- ▶ Continue efforts to seek grant and other funding sources to provide financial support for the existing trauma agencies and incentives for counties or health care councils to form trauma agencies to serve the underserved areas of the state; and
- ▶ Continue to build stronger collaboration and partnerships with the Office of Rural Health and local health councils.

For additional information regarding trauma agency funding and operations of the existing trauma centers, please see Goal 1, Strategy 1E within this section and the trauma agency report section of the annual report.

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OBJECTIVE 8D:

Establish a process for periodic evaluation of human resource needs at the regional level – completed

STRATEGY 8D1:

Establish appropriate roles for trauma agencies and the Department of Health in trauma regions - completed. See Strategy 8A1 above.

STRATEGY 8D2:

Identify resources and services within trauma regions – completed with the preparedness gap analysis annually. See



Goal 09: Florida Trauma Registry

To provide an accurate and accessible Florida Trauma Registry to support trauma system evaluation, performance improvement, public health planning, injury prevention, and outcomes research.

status of outcomes of Goal 3 and Strategy 8A1 above.

OBJECTIVE 9A:

Develop a comprehensive, periodic reporting process that ensures accurate data and timely availability.

STRATEGY 9A1:

Implement and conduct an annual review of the Florida Trauma Registry Manual and data collection and revise as necessary – completed from 2006 to 2010.

OUTCOMES AND OUTPUTS:

- In 2006, the Florida Trauma Registry staff reviewed and revised the data collection registry manual and outcomes based on statutory revisions in HB 497 passed during the 2006 Florida Legislative Session.
- In September 2007, Florida Trauma Registry staff and the Registry/Prevention/Research Planning Teams and the trauma program managers reviewed the registry manual to assess the need for revisions. In November 2007, the Office of Trauma held a rule development workshop to solicit input on the suggested revisions to the *Florida Trauma Registry Manual*, which is incorporated by reference in Rule 64E-2.018, F.A.C., (now Rule 64J-2.005, F.A.C.).
- The revised *Florida Trauma Registry Manual*, February 2008, initiated in 2007, was incorporated by reference in Rule 64J-2.006, F.A.C., effective July 8, 2008. The trauma centers began the implementation of the new procedures and data dictionary in July 2008. A copy of the revised manual can be found on the Office of Trauma website at the following link: <http://www.doh.state.fl.us/demo/Trauma/registry.htm>.
- In January 2009, the Florida Trauma Registry staff began to evaluate the trauma centers' compliance of the new registry data collection and submission requirements during trauma center site surveys and quality reviews of the data submitted by trauma centers to the registry. This evaluation continued with the 2010 surveys and proved that the new registry requirements were fully implemented in all trauma centers.
- In mid-2009, the Office of Trauma received approval from the State Surgeon General to establish a Trauma Registry Task Force and project team, with assistance from the DOH Division of Information Technology, to conduct an analysis of the business requirements needed to develop the Next Generation Trauma Registry. Beginning in August 2009, the Office of Trauma's Registry staff, with the assistance of the Division of Information Technology staff assigned to the Florida Trauma Registry Project, began to conduct an analysis of current business processes and requirements for the Next Generation Trauma Registry. This initial analysis was completed in December 2009 and presented to the division director and director of the Office of Trauma for final approval in January 2010 to move forward with the project and hire a project manager. This analysis was a critical first step necessary to plan for the successful development and eventual implementation of the Next Generation Trauma Registry.
- From June 2009 to December 2010, the Trauma Registry and Research Planning Team and the Next Generation Trauma Registry Project Team reviewed the *Florida Trauma Registry Manual* to identify revisions needed to align data points to the National Trauma Data Standard and prepare data requirements for the Next Generation Trauma Registry,

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including data points needed for trauma research, trauma system performance improvement, and the integration of outcome data with EMSTARS and the Brain and Spinal Cord Injury Central Registry. This review of the manual would continue in 2011 with input from the quality improvement data and the trauma registry data user groups. The rulemaking process will begin in late 2011 after development of an electronic data submission format (XML Schema) that is compliance with the new manual. Extract, transform, and load (ETL) processes have been developed for importing each file format submitted by trauma programs into an enterprise data warehouse and would be tested in 2011.

The project team requested test files from the TraumaOne and the TraumaBase Software vendors that would enable the immediate standardization of all files submitted by the trauma programs using these software products, thereby enabling easier integration and analysis of these files by the Florida Trauma Registry Unit. In 2010, standardization efforts continued to be coordinated between the vendors and the respective trauma center customers. The Office of Trauma held several software-specific user group conference calls during December 2010 to facilitate this standardization process. The standardization process was carried over to the 2011 Action Plan.

- The Office of Trauma issued a Request for Information (RFP) in July 2010, to which six trauma registry software vendors responded. On the basis of these responses, four vendors were invited to present product demonstrations of their software to the Office of Trauma staff in July and August 2010. On the basis of these demonstrations, technical requirements would be developed for a Request for Proposals (RFP) that would be issued in early 2011 to procure a commercial off-the-shelf (COTS) package via the Intent to Negotiate (ITN) process as a long-term solution for the trauma registry. The Office of Trauma continued to prepare the business case and project management plan that would be presented to the DOH's Division of Information Technology Governance Committee in 2011.

2011 ACTION STEPS:

- ▶ Hire a business analyst to assist the registry project manager and team with the completion of the business case and project management plan for presentation to the DOH's Division of Information Technology Governance Committee; and
- ▶ Complete the review and revisions of the *Florida Trauma Registry Manual* initiated in 2009 and complete the rule promulgation activities to incorporate the new manual in Rule 64J.2.006, F.A.C.

STRATEGY 9A2:

Implement a quarterly data quality/edit report – completed in 2006 with ongoing evaluation and refinement.

OUTCOMES AND OUTPUTS:

- In 2006, the Florida Trauma Registry staff implemented a quarterly data quality/edit report.
- In March 2007, the trauma center quarterly performance improvement reports were approved and implemented. These indicators were added to the Office of Trauma Sterling Scorecard and are reviewed on a quarterly basis with the trauma center program managers to evaluate trends and identify areas of improvement.
- From 2007 to 2010, the Florida Trauma Registry consultants (Dr. Etienne Pracht, Dr. Barbara Orban, and Dr. Pam Pieper), continued to review the quarterly trauma center data and perform the International Classification Injury Severity Scoring (ICISS) methodology used to calculate trauma center payments and ensure the validity and accuracy of the data.
- Annually from 2006 to 2010, the registry staff:
 - Issued a data completion and quality report to each reporting trauma center upon submission of the trauma data each year. Data completeness and accuracy are verified prior to completing the annual Florida Trauma Registry data reports, which are included in the Florida Trauma System annual reports; and
 - Completed the Florida Trauma Registry Data Reports from 2006 to 2010, which were incorporated in the Florida Trauma System annual reports each year. These data reports are reviewed annually to assess the Florida Trauma System in accordance with section 395.402 (3)(j), F.S., to determine the actual number of trauma victims currently being served by each trauma center.
- From 2009 to 2010, the registry staff completed data compliance reports and provided these reports as a means of feedback to each trauma program, documenting the timeliness, quality, and completeness of the trauma registry data that each trauma program has submitted to the Office of Trauma.

2011 ACTION STEPS:

- ▶ The Next Generation Trauma Registry Project Team and the Trauma Registry and Research Planning Team will

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schedule conference calls with the Quality Improvement Data and the Trauma Registry Data Groups to continue to identify needed revisions to the *Florida Trauma Registry Manual* and further refine the business requirements for automatic validation of the data in the Florida Trauma Registry upon submission by each trauma center; and

- ▶ The registry staff will continue to complete data compliance reports and the Florida Trauma Registry annual reports to provide feedback to the Florida Trauma System continuum-of-care providers to promote continued quality improvement of trauma services throughout the state.

OBJECTIVE 9B:

Present to providers a regular review and comparison of patient outcomes at a state level to facilitate and ensure an effective quality improvement process.

STRATEGY 9B1:

Implement improved Quality Indicator (QI) Reports – completed with ongoing evaluation and refinement.

OUTCOMES AND OUTPUTS:

- In March 2007, the Office of Trauma staff and Performance Improvement Committee held a conference call and the committee approved the quality improvement indicators for inclusion in the Office of Trauma Sterling scorecard. The QI indicators were incorporated into the Office of Trauma scorecard to evaluate the performance of the trauma centers and report trends, to document performance improvement, and to identify opportunities for improvement.
- From 2006 to 2010, the Florida Trauma Registry staff prepared the annual Trauma Registry Data reports for incorporation in the Florida Trauma System annual reports, which were distributed to the Governor, the Legislature, and the trauma system continuum-of-care providers, partners and stakeholders.
- See the status of Strategies 7A – 7E above for the status of the implementation of improved QI reports.

2011 ACTION STEPS:

- ▶ Define business requirements for streamlining QI reporting into registry data reporting; and
- ▶ Prepare the 2010 Trauma Registry Data Report for inclusion in the *2010 Florida Trauma System Annual Report*.

STRATEGY 9B2:

Provide annual comparison reports with national and state data - completed.

OUTCOMES AND OUTPUTS:

- During 2007, the DOH Division of Emergency Medical Operations Quality Improvement Team and the Office of Trauma held meetings to further refine the office and division scorecard indicators. Office of Trauma staff began researching national and state data to compare the state's data with national benchmarks and with other comparable states. Revisions to the scorecard were incorporated and approved by the division director.
- In late 2008, the Office of Trauma began to provide the trauma centers with statewide quarterly comparison reports between the trauma center QI indicators and the statewide averages.
- See the 2009 status of Strategies 7A – 7E above.

2011 ACTION STEPS:

- ▶ Update the Office of Trauma Sterling Scorecard on a quarterly and annual basis and monitor for trends to identify opportunities for improvement to ensure an effective and ongoing quality improvement process;
- ▶ Continue to benchmark with national and state standards and data; and
- ▶ Continue to provide each trauma center with quarterly comparison reports between the trauma center QI indicators and statewide averages and seek national benchmarks.

STRATEGY 9B3:

Implement ICD-9 Injury Severity Scoring (ICISS) under Rule 64J-2.019, F.A.C., as a more accurate methodology for determining trauma center payments, based on injury severity of trauma patients treated by each trauma center – completed in 2008 with ongoing evaluation.

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

OUTCOMES AND OUTPUTS:

- The utilization of the ICISS for determining quarterly trauma center payments was fully implemented beginning with the September 30, 2008 distribution of trauma center payments. This methodology will utilize a survival risk ratio (SRR) of 0.85 as the cut-off point for defining injury severity, down from the previous SRR of 0.90.
- In preparation for the September 30, 2008 trauma center payment distribution that was based solely on the ICISS, registry consultants Dr. Barbara Orban and Dr. Etienne Pracht presented and answered questions on the ICISS during the Florida Trauma System Plan Advisory Committee meeting on July 8, 2008, in Orlando. Full ICISS implementation was completed in the preparations for the September 30, 2008 pay-out.
- In 2009 and 2010, the Florida Trauma Registry consultants continued to evaluate the injury severity scores each quarter and the Office of Trauma utilized these scores to process the quarterly trauma center payouts pursuant to section 395.4036, F.S., and Rule 64J-2.019, F.A.C.

2011 ACTION STEP:

- ▶ Continue to evaluate and utilize the ICISS to determine trauma center payments.

OBJECTIVE 9C:

Develop interdepartmental and external partnerships to share and integrate data for the purpose of improving patient outcomes and facilitating planning throughout the course of patient care.

STRATEGY 9C1:

Participate in data integration project evaluation and planning – completed with ongoing evaluation and planning for the development of the Next Generation Trauma Registry.

OUTCOMES AND OUTPUTS:

- In 2006 and 2007, the Office of Trauma initiated meetings with the state epidemiologist and Florida Trauma Registry consultants to participate in data integration project evaluation and planning.
- From 2008 to 2010, the Office of Trauma initiated meetings with EMS and the BSCIP to gather business requirements for integration of EMSTARS and the BSCIP Central Registry data with the Next Generation Trauma Registry.
- The Research Planning Team met during the planning team breakout sessions on July 8, 2008 to update the Research Planning Team's SWOT analysis and action plan. Priorities identified in the action plan include the development of a trauma registry data release policy and data request form template for research, marketing considerations to promote the use of trauma registry data for research once it is available, and implementation of a research agenda.
- Efforts to release Florida Trauma Registry data to external researchers are planned and ongoing. The registry manager researched data release policies and request forms from other states to use as models for developing, with input from the research consultants, a data release policy and request form for trauma registry data. The Florida Hospital Association will be recruited to obtain the necessary buy-in from the trauma center CEOs to consent to releasing their facilities' trauma registry data for research.
- During the October 23, 2008 planning team breakout session, the research consultants provided input on a draft Florida Trauma Registry Pre-IRB Data Request Form and reviewed the results of the trauma center QI reports related to trauma center mortality.

On June 3, 2009, the Research Planning Team and registry manager met with the DOH attorneys and the DOH IRB administrator to review and approve the draft registry data request form and data use agreement. These documents were approved with minor revisions. Final implementation of the data request form and data use agreement is pending the standardization and integration of existing raw trauma registry data records (beginning in 2010) submitted by each trauma center into uniform statewide de-identified datasets that could be released by request upon the DOH IRB review and approval.

- In August 2009, the Florida Trauma System Plan Advisory Committee combined the Registry and Research related goals, objectives and strategies into Goal 9 and formed the new Registry and Research Planning Team to ensure data integration and utilization of registry data to further trauma system research and evaluation of Florida's inclusive trauma system.

2010 STATE TRAUMA SYSTEM FIVE-YEAR STRATEGIC PLAN UPDATE

2011 ACTION STEP:

- ▶ Continue standardization and integration of existing raw trauma registry data records submitted by each trauma center into uniform statewide de-identified datasets that could be released by request upon the DOH IRB review and approval.

OBJECTIVE 9D:

Implement a more responsive, uniform, and streamlined data set and electronic collection process that is more readily integrated with quality assurance processes and other data sets.

STRATEGY 9D1:

Develop a SQL database for production registry data – in progress (see Objectives 9A through 9C above).

STRATEGY 9D2:

Implement improved electronic reporting of quality improvement indicators – in progress (see also Objectives 9A through 9C above).

OUTCOMES AND OUTPUTS:

- In 2006, trauma program managers developed criteria for collection of quality improvement indicators to establish consistency when evaluating trends and performance of clinical care. Trauma programs are required to submit quality improvement indicator data to the Office of Trauma on a quarterly basis.
- In 2007, Office of Trauma staff incorporated the trauma center quality improvement indicators and data into the Office of Trauma Sterling Scorecard. From 2008 to 2010, the trauma center quality improvement indicators and data were collected quarterly and evaluated annually for trends and opportunities for improvement.
- From 2006 to 2010, the Performance Improvement Committee held conference calls every six weeks to discuss data collection and reporting issues.
- See Objectives 9A through 9C above for the business requirements gathering activities of the Trauma Registry Project Team needed to develop the Next Generation Trauma Registry web-based database, which will enable improved electronic reporting of quality improvement indicators.

STRATEGY 9D3:

Work with the trauma registry user community to analyze business needs and develop a next generation web-based state trauma registry database – see Objectives 9A through 9C above.

In 2010, the Trauma Registry and Research Planning Team held conference calls and two face-to-face meetings with the Florida Trauma System Plan Advisory Committee and other constituent groups' representatives to develop and approve the new Goal 9 Trauma Registry and Research objectives and strategies for inclusion in the 2011-2015 Florida Trauma System Strategic Plan.

The plan objectives for Goal 9 include the following:

- Improve the current process for collecting, using, and sharing trauma registry data through the implementation of the Next Generation Trauma Registry;
- Optimize the current use of trauma registry data to support and improve state and regional trauma system operations; and
- Promote investigator-initiated research within Florida's trauma system; using trauma registry data when possible. This will be accomplished by implementing the Office of Trauma's IRB process for review and approval of requests to use Florida Trauma Registry data for records-based research.

More information regarding the Goal 9 objectives and strategies can be found on the Office of Trauma Florida Trauma System domain website at www.fl-traumasystem.com. (Click on the plan banner at the bottom of the home page.)

2010 VERIFIED TRAUMA CENTERS

What is a trauma center and why is being near a trauma center important?

A trauma center is a type of hospital that provides specialized medical personnel, equipment and facilities for immediate treatment for severely injured patients, 24 / 7 / 365. If you've experienced a mild or moderate injury, the emergency departments are ready with basic emergency services to treat you. But, if you have severe traumatic injuries, having fast access to a trauma center is critical to your survival.

Each year, the Florida Trauma System helps to ensure that emergency medical services providers provide pre-hospital care and transport of injured residents and visitors to the nearest trauma center. Timely and quality emergency services, trauma care, and medical rehabilitation can help individuals continue to live to their full potential, despite having experienced a severe injury.

In 2010, the Florida Trauma Registry statewide patient data showed that 44,388 trauma patients were treated and discharged from Florida's trauma centers, compared to 43,709 in 2009, an increase of 1.6 percent.

Research supported by CDC shows that getting care at a trauma center within one hour of a severe injury could decrease the risk of death by 25 percent versus a non-trauma center hospital (<http://www.cdc.gov/TraumaCare/>). In 2010, most trauma patients (71 percent) were discharged from the hospital to their homes. Patients discharged to a rehabilitation facility accounted for eight percent of hospitalizations for trauma, while nine percent were discharged to a long-term care facility. Hospital length of stay (LOS) of three or more days is indicative of severe injury. In 2010, 52 percent of Florida's trauma center patients had hospital LOS of three or more days. The Florida Trauma Registry data shows that Florida's trauma system goal of delivering the most severely injured patients to trauma centers if being met.

In 2010, Florida had 22 verified trauma centers. All of Florida's trauma centers are verified by the Office of Trauma in accordance with section 395.4025, *Florida Statutes* and rules 64J-2.011 – 2.017, *Florida Administrative Code*. All levels of trauma centers are critical components of Florida's trauma system. The following is a summary of each level:

Level I Trauma Centers

Level I trauma centers have formal research and education programs for the enhancement of trauma care. Level I trauma centers are verified by the Office of Trauma to be in substantial compliance with Level I trauma center and Pediatric trauma referral-center standards. Level I trauma centers also serve as resource facilities to Level II trauma centers, Pediatric trauma referral-centers, and general hospitals through shared outreach, education, and quality improvement activities. Level I trauma centers participate in an inclusive system of trauma care, including providing leadership, system evaluation, and quality improvement activities.

Level II Trauma Centers

Level II trauma centers are verified by the Office of Trauma to be in substantial compliance with Level II trauma center standards, as established by Department of Health rule. Level II trauma centers serve as resource facilities to general hospitals through shared outreach, education, and quality improvement activities. Level II trauma centers also participate in an inclusive system of trauma care.

Pediatric Trauma Centers

Pediatric trauma centers are verified by the Office of Trauma to be in substantial compliance with the pediatric trauma center standards, as established by Department of Health rule. Pediatric trauma centers are required to participate in collaborative research and conduct education programs for the enhancement of pediatric trauma care. These centers also serve as resource facilities to general hospitals through shared outreach, education, and quality improvement activities and participate in an inclusive system of trauma care.

2010 TRAUMA CENTER LETTER OF INTENT PROCESS

Throughout 2010, the department's leadership continued to work diligently to ensure all areas of the state are covered by a verified trauma center. In 2010, there were 22 verified trauma centers providing direct coverage for 15 of the 19 trauma service areas. In accordance with section 395.4025(2)(a), *Florida Statutes*, the Office of Trauma mailed the "Letter of Intent DH Form 1840" to all licensed acute care hospitals on July 30, 2010, to apply to become a trauma center.

Through the Letter of Intent process, the Office of Trauma encourages acute care hospitals to apply to operate as verified trauma centers to expand these life-saving trauma services into the underserved areas of the state.

The following hospitals submitted a Letter of Intent in 2010, notifying the department of their intent to submit an application in the 2011 application cycle to apply for trauma center verification:

- Bay Medical Center, Level II
Requested an extension of 18 months
- Ft. Walton Beach Medical Center, Level II
Withdrew the application
- Delray Medical Center, Level I
Began operations as a Provisional Level I Trauma Center on May 1, 2011
- St. Mary's Medical Center, Level I
Withdrew the application

2010 VERIFIED TRAUMA CENTERS

2010 TRAUMA CENTER APPLICATION PROCESS

The following hospital submitted an application based on their 2009 Letter of Intent:

- Bay Medical Center, Level II
Withdrew the application
- University of Miami Hospital
Withdrew the application
- Ft. Walton Beach Medical Center, Level II
Withdrew the application
- Orange Park Medical Center, Level II
Requested an extension of 18 months
- Blake Medical Center, Level II
Requested an extension of 18 months
- Kendall Regional Medical Center, Level II
Requested an extension of 18 months
- Regional Medical Center Bayonet Point, Level II
Requested an extension of 18 months

In 2010, the Office of Trauma staff continued to provide technical assistance to applicant hospitals during the application, review, and provisional processes, culminating in a hands-on evaluation of their operations prior to determining the applicant hospital's ability to meet all of the requirements to operate as verified trauma centers in Florida.

2010 TRAUMA CENTER SITE SURVEYS

Each fiscal year, the Office of Trauma staff schedule the following surveys:

- Provisional (initial verification for seven-year certificate to operate as a verified trauma center);
- Interim (every three years to ensure continued compliance);
- Renewal (every six-seven years to renew the seven-year certification); and
- Focus (corrective actions from deficiencies cited during interim or renewal surveys).

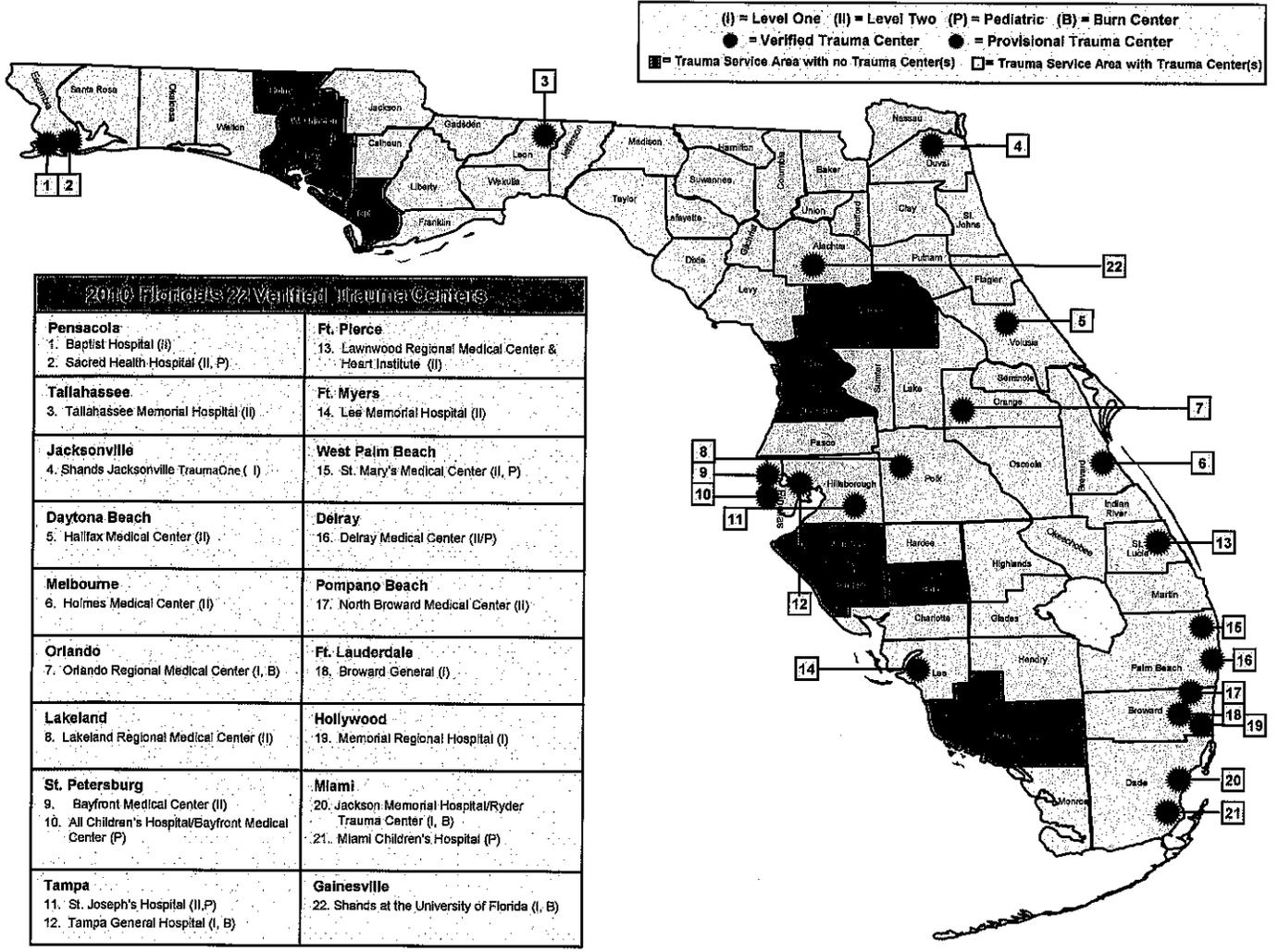
Each survey is conducted by out-of-state reviewers with the knowledge of trauma patient management as evidenced by experience in trauma care at a trauma center and approved by the governing body of the state of which they are licensed.

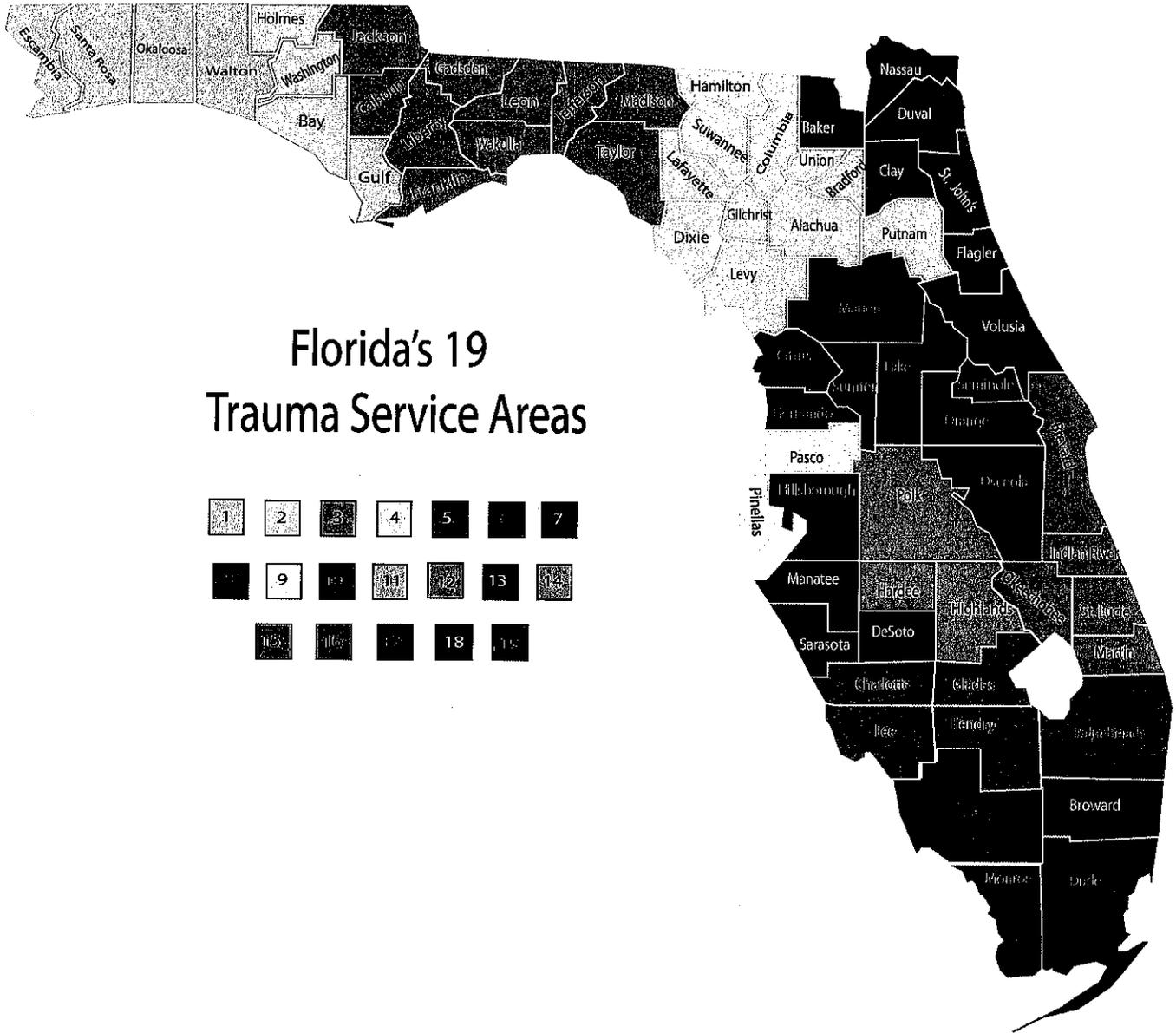
In 2010, the following surveys were conducted to ensure continued quality assurance of Florida's trauma centers:

St. Mary's Medical Center	Pediatric	February 2010
Delray Medical Center	Pediatric	February 2010
Lawnwood Regional Medical Center	Level II	March 2010
North Broward Medical Center	Level II	May 2010
Lee Memorial Hospital	Level II	December 2010

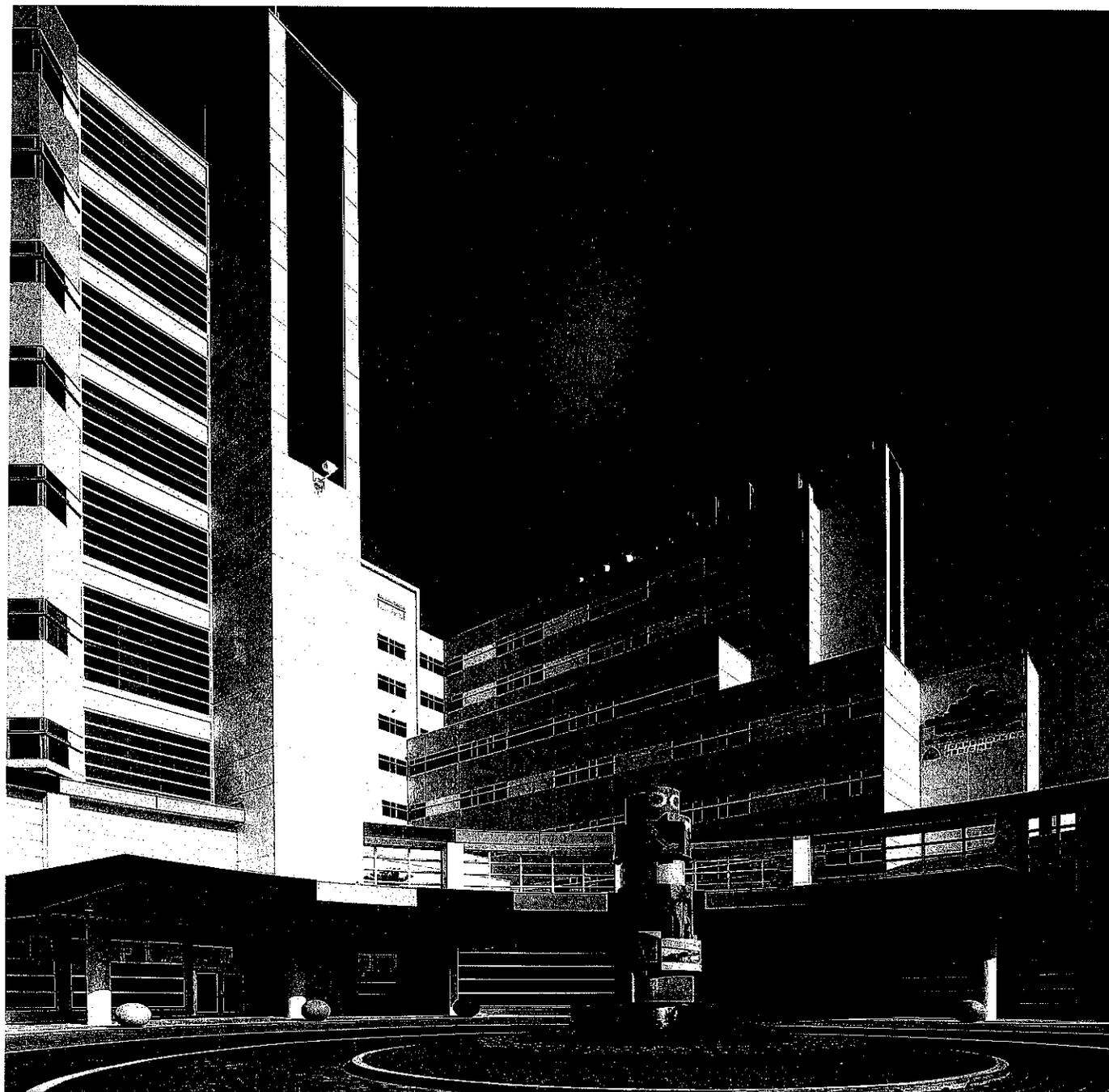
For more information regarding the letter of intent, application, and site survey processes, please visit the Office of Trauma's Florida Trauma System domain website at www.fl-traumasystem.com.

2010 VERIFIED TRAUMA CENTERS





**ALL CHILDREN'S HOSPITAL
PEDIATRIC TRAUMA CENTER - St. Petersburg**



all children's hospital



JOHNS HOPKINS MEDICINE

ALL CHILDREN'S HOSPITAL PEDIATRIC TRAUMA CENTER - St. Petersburg

All Children's Hospital (ACH) in downtown St. Petersburg is the pediatric referral center for Florida's west coast. In 2010, ACH moved into a brand new hospital, with more than one million square feet of inpatient and outpatient space. The 259-bed hospital features individual patient rooms, 12 operating suites, and advanced imaging technologies. In April 2011, ACH became a fully integrated member of Johns Hopkins Medicine.

The hospital's primary service area includes 17 counties in west central Florida but each year ACH treats patients from across the state. More than 300 pediatric specialty and subspecialty physicians provide care at ACH. For more than a decade, ACH and neighboring Bayfront Medical Center have shared a joint designation as a state verified pediatric trauma referral center. Thanks to this unique partnership, families in the region benefit from this efficient use of healthcare resources that combines Bayfront's role as a Level II trauma center with ACH strengths as a tertiary and quaternary level pediatric referral center with the full spectrum of pediatric medical and surgical subspecialty care, as well as nursing and rehabilitative services.

ACH 28-bed pediatric emergency center includes treatment rooms, two major trauma rooms and a trauma/casting room. The emergency center handled more than 41,000 patient visits in 2010 and is staffed by 12 pediatric emergency medicine physicians. Within the emergency center, a Clinical Decision Unit serves patients who require extended observation and evaluation for possible admission. The emergency center is adjacent to ACH pediatric radiology and diagnostic imaging department, which includes high-resolution CT scanners, rapid sequence MRI scanners equipped for neuroradiology, functional MRI and brain mapping, x-ray, PET/CT, SPECT, ultrasound, and nuclear medicine. Seven full-time pediatric radiologists provide 24-hour coverage. The emergency center has parking for 16 ambulances, and the rooftop helistop is fortified to accommodate large military helicopters for patient transport, in the event of natural or manmade disasters

In 2010, ACH admitted 822 patients who sustained traumatic injuries, including 143 Trauma Team activations. Trauma patients came from 17 counties in central and southwest Florida. Age distribution by patient volume was:

Ages

• <1 year:	12%
• 1-4 years:	27%
• 5-9 years:	25%
• 10-14 years:	24%
• 15-17 years:	12%

The most common mechanisms of traumatic injury included falls, motor vehicle accidents, bicycle accidents, playground injuries, pedestrian vs. auto incidents, off-road vehicle accidents, skateboard accidents, and sports injuries. The frequency of these types of injury and the age distribution of our patients help guide us in targeting community education and outreach programs through our Suncoast Safekids Coalition, with councils in five separate counties.

ACH's Trauma Program provided extended care for four children who survived the January 2010 earthquake in Haiti.

TRAUMA PROGRAM RESOURCES AT ACH INCLUDE:

- 4 pediatric surgeons
- 4 pediatric neurosurgeons
- 5 pediatric orthopedic surgeons
- 7 pediatric radiologists
- 12 pediatric emergency medicine physicians
- 8 pediatric critical care physicians
- 4 pediatric plastic & craniomaxillofacial surgeons
- Subspecialists in pediatric cardiology, cardiovascular surgery, and neurology
- Ophthalmology, nephrology, infectious disease & other areas
- Emergency Center/trauma program director
- Pediatric Intensive Care Unit with 28 individual patient rooms
- Trauma program manager
- Trauma program registrar
- Orthopaedic technicians
- Pediatric respiratory therapy
- Pediatric inpatient occupational, physical & speech-language therapy
- Pediatric psychiatry and psychology
- Integrated family care (social work, case management, pastoral care and child life)
- 24-hour physician access and transport hotline to expedite transfer and admission of pediatric trauma patients to ACH
- Neonatal and Pediatric Transport Team brings patients to ACH using ambulances specially equipped for infants and children, or by Bayflite helicopter

ACH network of 11 outreach centers, located in eight counties, provides trauma patients the opportunity for ongoing follow-up care and rehab services following discharge.

EDUCATION FOR HEALTHCARE PROFESSIONALS

ACH is committed to educating healthcare providers on the special medical and developmental needs of children. The programs include:

- Pediatric continuing medical education programs in our extended referral region. Weekly pediatric grand rounds is also available through live and archived webcasts to reach healthcare providers throughout the community. In 2010, trauma related topics included head trauma, functional neuroimaging, transfusion medicine, surgery, and marine injuries. Additional outreach programs featured pediatric orthopaedics and pediatric surgery.
- ACH and Bayfront Medical Center presented at the *Bay Area Trauma Symposium*, providing eight hours of continuing education for 125 healthcare professionals.
- ACH Emergency Center provides training for U.S. Special Forces medical staff from the Southern Command.

ALL CHILDREN'S HOSPITAL PEDIATRIC TRAUMA CENTER - St. Petersburg

- All Nurses, physicians, and allied health professionals at ACH maintain basic life support and Pediatric Advanced Life Support (PALS) certification. The nursing staff complete PALS and the Emergency Nurse Pediatric Course (ENPC) within one year of employment. Healthcare providers from other hospitals also participate in this training.
- Quarterly trauma "Lunch & Learn" programs at ACH provide continuing education for nurses, EMTs, and other providers.
- ACH trauma program manager serves on the Board of Directors of the Society of Trauma Nurses and is active in professional development.

INJURY PREVENTION & EDUCATION

ACH is committed to improving children's health through injury prevention and education efforts. In 1991, the hospital established the Florida Suncoast Safekids Coalition at ACH, which has grown to include councils in Pinellas, Manatee, Sarasota, Polk and Pasco counties. These councils comprise more than 350 individuals (including representatives from local health departments, first responders, law enforcement, school districts, and businesses) who meet monthly to address community specific needs and plan injury prevention and education activities.

In 2010 ACH and the Suncoast Safekids Coalition reached more than 700,000 children, parents, teachers, and community leaders through a myriad of programs and events:

Child Passenger Safety

- Safekids and its member agencies held car safety seat check-up events in Pinellas, Manatee, Sarasota, Pasco, and Polk counties, including monthly events rotating through ACH specialty care outreach centers. Hundreds of parents and professionals took part in child passenger safety seat education and other awareness and training programs.
- Safekids provided NHTSA (National Highway Traffic Safety

Administration) training to professionals from law enforcement, ACH and other hospitals, and health and social service agencies, leading to certification as national child passenger safety technicians. Safekids and ACH conduct regularly scheduled car seat inspections at ACH outreach locations and other locations in the hospital's extended referral region.

- ACH operates a Special Needs Occupant Protection Loaner Program through a grant from the Florida Department of Transportation (FDOT) to provide adequate child passenger restraints and/or equipment that precludes the use of a standard child safety seat for special needs children and patients being discharged from the hospital with a medical condition

Bicycle Safety

- The Safekids Coalition members taught hands-on bike safety skills and provided helmets to children and families from throughout the Tampa Bay region thanks to community based bicycle education programs.

Safe Transit To & From School

- More than 44,000 students, teachers and parents participated in the annual Safekids Walk This Way Walk to School Day in October, funded in part by a grant from FedEx/Kinko's. The event teaches safe pedestrian behaviors to elementary school students.



ALL CHILDREN'S HOSPITAL PEDIATRIC TRAUMA CENTER - St. Petersburg

- ACH leads the Safe Routes to School Program in four counties including Pinellas, Pasco, Polk, and Manatee. Funded by the FDOT the program encourages children and parents to walk or bicycle safely to school.

Drowning Prevention

- Safekids and ACH worked with community partners to distribute educational materials and conduct community-wide events spotlighting water safety.
- ACH is the lead organization for *FloridaSafePools.com*, which provides a wealth of online drowning prevention information for families.

Injury Prevention

- In addition to the many Safekids educational events, ACH promotes injury prevention education as the lead sponsor for school-based MORE HEALTH programs in Pinellas County elementary and middle schools, reaching more than 75,000 students in 2010-11.

COMMUNITY DISASTER PLANNING

The new ACH is designed to function as "island" in the wake of a major hurricane, with 100 percent redundant utilities that can provide three weeks of self-generated power. Mechanical, electrical, and ventilation equipment are located on the fourth floor to reduce vulnerability. The hospital and its staff actively participate in community disaster planning activities such as:

- Designation/participation in the National Disaster Medical System.
- Disaster drills with Pinellas County Emergency Management and other hospitals and community partners let ACH test the hospital's capability for receiving, treating, and managing multiple trauma patients. These drills help the hospital review and adjust policies for patient tracking and identification, surge capacity, communications, and incident command center functions.
- Hazmat preparedness drills and staff training, and maintenance of Level C gear and equipment.

The new ACH Emergency Center has both external and internal decontamination facilities can handle up to 100 victims per hour, and radiation monitors are included in all Emergency Center entrances. These unique facilities are incorporated into regular disaster drills to help Emergency Center and EMS staff be prepared for a potentially catastrophic event. The hospital also has a rooftop helistop that can accommodate large military helicopters that might bring patients to ACH in the event of a natural or manmade disaster. The U.S. Coast Guard practices these landings at ACH.

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BAPTIST HOSPITAL LEVEL II TRAUMA CENTER - Pensacola



BAPTIST
Health Care Foundation

Baptist Hospital is located in Pensacola and has been treating patients since the inception of the Florida Trauma System in 1951. Baptist Hospital Level II Trauma Center has grown over time and now has a capacity of 492 beds. Baptist Hospital is also designated as a Level I trauma center for the state of Alabama. Baptist Emergency Trauma Center (BETC) consists of 34 beds including two trauma resuscitation rooms. Over 61,000 patients came through our emergency room this past year. Each year, BETC has had a steady increase in registry patients.

Baptist Hospital is also the home of Baptist LifeFlight, the first hospital-based air ambulance program in Florida and third in the nation. LifeFlight provides an integrated helicopter transport system covering northwest Florida, southern Alabama, and central and southern Mississippi. In 2010, LifeFlight 3 was moved to Greenville, Alabama to better meet the needs of an underserved area and expand the total service area for LifeFlight. This complements the three other LifeFlight locations: LifeFlight 1 in Pensacola Florida; LifeFlight 2 in Mobile Alabama; and LifeFlight 4 in Hattiesburg Mississippi. LifeFlight significantly reduces the transport time of critically ill patients providing a greater chance of recovery. In addition to their work transporting patients, the LifeFlight crews offer outreach and injury prevention programs and act as ambassadors to the public and other hospitals in the region.

Baptist Hospital's Trauma Program is committed and dedicated to providing the best quality care to our patients. This commitment is personified in and through the leadership of our trauma medical director, Dr. Mary Jane Benson. Dr. Benson has been the trauma medical director at Baptist Hospital for 17 years. Through her uncompromising dedication to excellence and leadership, Baptist

Hospital continues to develop and grow as a trauma center. Each month Baptist Hospital's Level II Trauma Center Quality Improvement Committee meets and discusses current trends and methods in our trauma system. This allows us to seek ways of improving our methods and provide the best possible care to our trauma patients. This committee includes all disciplines that care for our trauma patients allowing us to treat the patient as a whole.

DEMOGRAPHICS AND CLINICAL STATISTICS

In 2010, blunt injuries accounted for 86.5 percent of the trauma patients seen in the BETC while penetrating injuries accounted for 11.4 percent of this patient population, and burn injuries accounted for 2.1 percent. The frequency of the most common categories of injury was as follows:

• Ground Level Falls	35.5%
• Automobile Collisions	17.5%
• Motorcycle	5.7%
• Blunt Assault	5.5%
• Stabbing	4.8%
• Pedestrian vs. Auto	4.2%
• GSW	4.0%
• Long Fall	3.0%
• Bicycle	2.5%
• Burns	2.1%

EDUCATION

Baptist Hospital continues to provide high quality education and training not only to our employees but to the community as well. In 2010, a total of 1,013 participants were enrolled in BLS CPR classes, 243 in ACLS classes, 75 in PALS classes, and 63 in TNCC classes. Baptist Hospital also hosts monthly lunch conferences on trauma related topics in order to offer continuing education credits to physicians, nurses, and allied health personnel.

Baptist Hospital co-sponsors the annual Surviving Trauma Conference with other local hospitals. Local and nationally recognized speakers lecture on aspects of care for the trauma patient ranging from pre-hospital to rehabilitation. The conference provides continuing education credits for physicians, mid-level practitioners, nurses, paramedics, EMTs, and allied



health professionals. The conference attendance ranges from 250 to 350 annually with attendees coming from Florida, Alabama, Mississippi, Louisiana, Georgia, and South Carolina on a regular basis.

Baptist Hospital continually reaches out to meet the educational needs of its staff and the medical community. Emergency medical services education assumes a critical role in the care of the trauma patient. Baptist LifeFlight Education Outreach personnel held landing zone safety classes with drills at multiple fire departments in 2010. Public safety demonstrations were held upon request as well.

OUTREACH AND PREVENTION

In 2010, Baptist Hospital was involved in many community outreach and injury prevention efforts. TraumaRoo is our safety kangaroo mascot; he promotes safety at school safety lectures, health-fairs, and community events.

Five Flags for Life

Baptist Hospital continues to be involved in water safety and drowning prevention programs. It initiated the "Five Flags

for Life" beach safety literature distribution program in 2001 and continues to provide literature for distribution to visitors and local school children.

Shaken Baby Syndrome Education

Baptist Hospital utilizes a simulator doll in Mother/Baby classes that enables students to see the specific area of the brain that is damaged when a baby is shaken. The affected area can be seen through the glass skull as it lights up with a red LED when the baby is shaken with enough force to cause damage. The physical functions such as, vision, speech, or respiration, that would be lost or impaired by damage are printed on the glass skull so that students gain a full understanding of the devastating damage that can be caused by the act of shaking a baby. The need to reach babysitters and siblings of infants with this important message was met by taking the simulator doll to schools and health fairs where over 2,000 people were educated.

Teen Prom "Safe Ride Home" Taxi Vouchers

Baptist Hospital partnered with Yellow Cab to provide free taxi rides home from prom night for teens in the event that they or their driver became intoxicated. Approximately 2,700 vouchers were printed and distributed to students



at formal wear shops. No teens were treated in Baptist Hospital's Level II Trauma Center this year for injuries related to impaired driving on prom night.

Baptist Healthcare Andrews Institute Sports Injury Prevention

Baptist Healthcare Andrews Institute has dedicated athletic trainers assigned to 14 area high schools. In 2010, Andrews Institute provided 7,441 injury assessments at the schools. These assessments resulted in 155 referrals to emergency departments and 755 referrals to physicians and clinics. Since minor sports injuries can easily worsen into more serious conditions and new injuries may occur as the athlete compensates for existing injuries, Andrews Institute provides free Saturday morning injury assessments by an orthopedic physician during football season. Proper tackling technique is shown to the schools using the "Heads Up" football video to prevent spinal cord injuries. Other topics addressed by the trainers were proper throwing mechanics, ankle bracing, proper stretching techniques, shoulder injuries, and hydration.

Senior Citizen Injury Prevention

Baptist Hospital is a participating member of the area Gulf Coast Falls Prevention Coalition (GCFPC). The coalition provides an annual falls prevention screening event which includes evaluations by physical therapists, nurses, and audiologists. The GCFPC also provides falls prevention lectures to local senior groups.

The Baptist Golden Care Program partnered with AARP to provide the 55 Alive Mature Driving Course. A total of 459 senior citizens received certificates after completing the eight hour course. The course covers how to compensate for normal age-related changes in the senses and reflexes, rules of the road, and defensive driving tactics because senior citizens have a higher fatality rate per mile driven than any other age group.

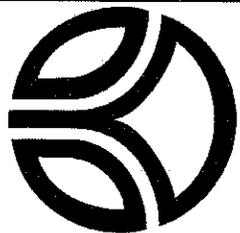
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BAYFRONT MEDICAL CENTER
LEVEL II TRAUMA CENTER – St. Petersburg



Bayfront
Medical Center

BAYFRONT MEDICAL CENTER LEVEL II TRAUMA CENTER – St. Petersburg

Bayfront Medical Center, a 480-bed, not-for-profit, teaching hospital in St. Petersburg operates a level II adult and pediatric trauma center. This year, the center is celebrating 25 years of service to the community as the only trauma center in Pinellas County. The comprehensive trauma team includes board-certified trauma surgeons and specially-trained emergency nurses and medics, responding to the healthcare needs of west coast residents. The pediatric trauma center is run in partnership with All Children's Hospital, a Johns Hopkins Medicine affiliate.

DEMOGRAPHICS AND CLINICAL STATISTICS

In 2010, Bayfront's Emergency Department treated 49,400 patients, with more than 2,600 of those being critically injured trauma patients. Top mechanisms of injury included 28 percent falls, 26 percent motor vehicle accidents, and 10 percent motorcycle accidents.

Bayfront Level II Trauma Center is built on the talents and commitment of physicians from many specialties, including trauma; orthopedics; ear, nose and throat; hand surgery; ophthalmology; vascular; plastics; cardiology; nephrology, urology; anesthesia; general surgery; and obstetrics. The expertise of approximately 20 physicians and staff are always on standby for a patient. More than 550 physicians, representing a variety of specialties serve on Bayfront's medical staff.

EDUCATING HEALTHCARE PROFESSIONALS

As a teaching hospital, Bayfront plays an important role in educating the healthcare professionals of tomorrow. Since the 1970's, Bayfront's residency program has provided quality, hands-on learning opportunities to new physicians, coming from medical schools across the nation. These new physicians have access to work in a variety of settings, from the clinical practice to Bayfront's Emergency and Trauma Center.

To keep learning at the top of the mind, educational opportunities are regularly offered to Bayfront's clinical team and ancillary support departments. Patient rounds are held daily and special trauma education grand rounds are offered monthly—open to nurses and ancillary support team

members.

Bayfront also hosts educational events every year that are open to caregivers around the area. Every year Bayfront organizes the *Bay Area Trauma Symposium* in partnership with All Children's Hospital, providing education on the latest best practices in the industry and providing case studies for new learning. The *Orthopaedic & Neuro Trauma Symposium*, held in conjunction with St. Petersburg College, is also another educational event open to healthcare professionals in the area who are interested in learning about how to enhance patient care and improve knowledge of trauma treatments.

In addition to opportunities offered to its staff, Bayfront serves as one of three host hospitals in the nation for the U.S. Military's Special Operations Combat Medic Program. Through the program, medics from a variety of different areas of the military receive hands on training in labor and delivery, the trauma intensive care unit, emergency department, operating room, anesthesia department, and All Children's Hospital. They are then able to apply this knowledge to real-world experiences once they graduate and go into combat.

INJURY PREVENTION AND COMMUNITY EDUCATION

Education plays a large part in keeping our community healthy. To underscore our commitment to learning, throughout the year, Bayfront's Trauma Services Team regularly offers community education, reminding everyone that trauma is a preventable disease for which simple safety precautions can go a long way.

Last year during trauma awareness month, the team partnered with Sarasota Memorial Hospital to do a "no texting while driving campaign pledge." Throughout the month, public service announcements ran on radio stations throughout the Tampa Bay area. Safety information was made available to the community on the hospital's website and campus.

Bayflite, Bayfront's air medical transport program, continues its tradition of participating in our community's Prom

25 YEARS

of Lifesaving Trauma Care

== 1986  2011 ==

BAYFRONT MEDICAL CENTER LEVEL II TRAUMA CENTER – St. Petersburg

Promise Program. Through the program, area high school students sign a pledge to not drink and drive during prom. Before the prom festivities take place, Bayflite and other medical responders stage a mock car crash and rescue to show students just how dangerous drunk driving can be.

Additionally, Bayflite participated in the Touch a Truck Program, which allows school children to explore fire trucks and the Bayflite helicopter. This program helps educate children about emergency services.

RESEARCH

Throughout the year, Bayfront's Institutional Based Research program allows nurses and physicians to conduct research that helps expand industry knowledge and practice. This year our trauma intensive care unit, in collaboration with pharmacists, conducted a study on alcohol withdrawal in critically ill patients, which was published in the American Association of Critical Care Nurses' Critical Care Nurse magazine. And the results of a team member's study on nurse retention were published in the Journal of Emergency Nursing.

COMMUNITY AND DISASTER PLANNING

Bayfront team members keep their response to emergency and disaster situations finely tuned by participating in regularly offered education and training activities. Throughout the year, Bayfront participates in disaster preparedness mock drills, ranging from mass casualty incidents to hazmat decontamination and hurricanes. The drills also include county-wide exercises. Throughout the year, team members have access to attend a variety of trainings and educational sessions to keep their skills sharp.



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BROWARD GENERAL MEDICAL CENTER LEVEL I TRAUMA CENTER - Fort Lauderdale



Broward General Medical Center, a 716 bed comprehensive acute care facility located in Fort Lauderdale, exists as part of Broward Health, one of the ten largest public healthcare systems in the nation. Providing excellent service since 1938, Broward Health strives to provide world class healthcare to all individuals served. As an example of the system's commitment to the community and recognition of the need to provide quality care to patients impacted by trauma, Broward General Medical Center has maintained its Level I Adult/Pediatric Trauma Center status since 1996.

DEMOGRAPHICS AND CLINICAL STATISTICS

In 2010, the Trauma Services Division at Broward General Medical Center treated 2194 patients suffering a traumatic event or mechanism of injury. Eighty-five percent of these patients were adults and 65 percent of trauma center patients were males. Whether arriving by ground or air, all trauma patients were evaluated in a dedicated trauma area which boasts four large, individual resuscitation bays and six observation beds. All patients have immediate access to a CT scanner which is housed in the resuscitation unit and can be transported to the assigned trauma operating room within minutes should operative intervention be deemed necessary. In 2010, six percent of all trauma patients were admitted to the operating room after being evaluated by the trauma team and determined to need an immediate operation.

Adult patients determined to require intensive care and monitoring are admitted to the 24 bed Atrium Intensive Care Unit (ICU) where staff are trained to meet the needs of and provide quality care to trauma patients. Pediatric patients requiring this higher level of care are admitted to the Pediatric ICU, where staff is also required to remain competent in the care of the critically injured pediatric trauma patient. In 2010, 16 percent of patients arriving to

the trauma center were admitted directly to an ICU. The design of the trauma center built in 2005 demonstrates the facility's commitment to trauma care. Aircraft transporting injured patients to the Level I trauma center land on the rooftop helipad. Patients are then immediately transported to the resuscitation unit through a dedicated elevator, which ensures arrival and progression towards definitive care within minutes. This elevator also provides direct access to the operating rooms housed on the second floor and the Atrium ICU on the third, allowing rapid movement of patients between treatment areas. Those individuals determined not to require intensive care are admitted to either a step down unit or dedicated medical surgical floors. While moving throughout the facility, the care of the trauma patient is managed by a comprehensive, multidisciplinary team including the trauma surgeon, trauma nurse practitioner, trauma social worker, trauma case manager and quality assurance personnel.

The Trauma Services Department continues to participate in emergency preparedness activities and initiatives within the county and state. Participation in training opportunities, drills, and disaster mitigation planning assists not only to ensure that Broward General is ready to respond to the needs of the community in the event of a disaster, but also helps to ensure the allocation of additional resources to the trauma center through federal grant funding sources. Funding received from the Secretary of Preparedness and Response allows the Trauma Program to purchase supplies and equipment to ready itself to respond should a disaster occur.

BROWARD GENERAL MEDICAL CENTER LEVEL I TRAUMA CENTER - Fort Lauderdale

EDUCATION

The Trauma Services Division at Broward General is committed to supporting medical, nursing and allied health professional continuing education through the provision of varied educational opportunities. Trauma grand rounds is offered monthly, wherein medical professionals from both within our own community and nationally come to Broward General to deliver a presentation on a trauma related topic. Topics for trauma grand Rounds in 2010 included:

- Warfarin Toxicity in the Trauma Patient
- Cognitive Changes after Head Trauma in Children
- The Essentials of Burns
- Pain Management in the Trauma Patient
- The Role of the Medical Examiner in Trauma
- Pediatric Trauma
- ARDS in the Trauma Patient
- Trauma Case Study – Pancreatic Injury
- Solution Focused Brief Therapy for Trauma Patients

Nursing courses such as TNCC, CATN and ENPC are offered at regular intervals to staff, as well as focused forensics and pediatric trauma seminars. Also available to staff are modules accessible via the Broward General online learning system. Trauma related learning modules available in 2010 included:

- Wound Healing: Burns
- Wound Healing: Abdominal Compartment Syndrome
- Alcohol Related Emergencies
- Neurological Assessment of the Unconscious Patient
- Management of Neurological Emergencies
- Treatment of Increased Intracranial Pressure
- Wound Healing: Chest Wounds
- Overview and Competencies of Neurological Emergencies

Education for the multidisciplinary trauma team is also provided during our weekly trauma rounds. Led by a trauma surgeon, nurses, social workers, physical therapists, rehabilitation specialists, psychologists, and other staff attending learn about the latest advances in trauma care through the in depth case discussions of each patient. Scenarios are presented to the students and residents present, allowing for not only learning about the patient being discussed but the management of patients given different conditions or circumstances.

INJURY PREVENTION AND COMMUNITY EDUCATION

Recognizing that a successful trauma system and program begins with injury prevention and outreach, the Trauma Services Department is proud to have a registered nurse dedicated to educating the community on ways of staying safe and remaining healthy. By participating in community health fairs, teaching about car seat safety, participating in programs to show children how to cross the street safely, and speaking to middle schools students about gun violence, the goal of the Trauma Program at Broward General is to reduce the number of those whose lives are impacted by trauma. Beside are examples of outreach and injury prevention programs offered:

PROGRAM	ATTENDANCE
Career/Safety/Health Fairs	>16000
Child Abuse Prevention Event	600
Pedestrian Safety	>200
Project Sentry	2100
Night Out on Crime	3000
Falls Prevention	50
Car/Car seat/Bike Safety	>300
TOTAL	>22000

Injury prevention and outreach also includes the distribution of information, literature and tools such as coloring books, blinking lights, glow bracelets, house safety items, and stickers. In 2010 over 14,000 items were given to attendees in order to help better communicate the message of prevention and provide the tools necessary to increase personal safety.

RESEARCH AND SCHOLARLY ACTIVITIES

Led by our trauma clinical research director, the trauma research team at Broward General is very active not only conducting research designed to improve the outcomes of trauma patients and publishing these results, but in speaking both nationally and internationally on the subject of trauma care. Monthly video conferences are also held with healthcare professionals in five separate hospitals in three South American countries. During these conferences, cases are presented and then discussed with the goal being to improve trauma care through education and idea exchange.

COMMUNITY AND DISASTER PLANNING

Through participation in local and regional disaster drills and continuous evaluation of existing plans, the emergency preparedness team at Broward General remains ready to respond to any natural or man-made disaster. Hazardous materials and disaster management courses are offered at regular intervals to provide staff with the latest information related to mass casualty incident management and techniques on how to decontaminate patients should the need arise.

BROWARD GENERAL MEDICAL CENTER LEVEL I TRAUMA CENTER - Fort Lauderdale

RESEARCH/PUBLICATIONS

Ratification of IATSI/WHO's Guidelines for Essential Trauma Care Assessment in the South America Region. (2010). *World Journal of Surgery*, 34(11), 2735-44.

Endoscopically Assisted Repair of Mandibular Angle Fractures. (2010). *Journal of Oral and Maxillofacial Surgery*, 68(4), 912-14.

Implementacion y Desarrollo de Sistemas de Atencion en Trauma en America Latina. (Book Chapter). *Trauma. Colombian Surgery*, Rev Colomb Cir.

Oral Presentations

PrePeritoneal Pelvic Packing. (2010) Pan American Trauma Society Congress, Montevideo, Uruguay

Emergency Percutaneous Dilatational Tracheostomy: Changing the Algorithm at a Regional trauma center. (2009). Germany.

Como Evitar Errores en el Diagnostico de Trauma Abdominal. (2010). XXXIV Congreso Nacional de Cirugia Trauma. Ecuador.

Advances in the Treatment of Hemodynamically Unstable Pelvic Fractures. (2010). Florida Committee on Trauma Resident Paper Competition.

Abstracts/Poster Presentations

A 7-year Retrospective Evaluation of Helmeted vs. Non-Helmeted Motorcycle Crashes and Craniofacial Injuries Sustained at a Level 1 Trauma Center. (2010). ACOMS 31st Annual Scientific Conference and Exhibition, San Antonio, TX

Unstable Pelvic Fractures. (2010). XXIII Pan American Trauma Society Congress, Montevideo, Uruguay.

Emergency Percutaneous Dilatational Tracheostomy. (2010). XXIII Pan American Trauma Society Congress, Montevideo, Uruguay.

Use of Teleconference for the Advancement of Trauma Care in the Americas. XXIII Pan American Trauma Society Congress, Montevideo, Uruguay.

Open Reduction Internal Fixation of Mandibular Angle Fractures: An Endoscopically Assisted Minimally Invasive Approach. (2010). ACOMS.

Research in Progress/Pending Publication
Prevention of Elderly Pedestrian Injuries: A Multi Trauma Center Project

International Videoconference: Lessons Learned

When "Hyper-Resuscitation" Leads to "Hyper-Acute" Secondary Abdominal Compartment Syndrome

Prevalence of Additional Injuries in Pediatric Blunt Liver and Splenic Trauma: Impact on the Ability to Implement Evidence Based ICU and Hospital Length of Stay Guidelines

Guidelines for Essential Trauma Assessment in the South American Region

Pre-Hospital Communication Tool

Osteocell/Management of Non unions with Cellular Matrix Containing Viable Mesenchymal Stem Cells

Delayed Transdiaphragmatic Hepatic Rupture

Antibiotic Intramedullary Nails: Minimizing Potential Complications

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Real People. Real Stories.



SUCCESS STORY ROY GARCIA

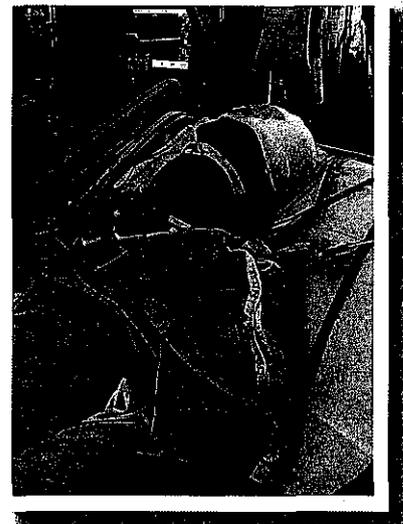
Roy Garcia's last memory from the night of August 3, 2010 is hanging out with his friends, skating and having a good time. Although many people often have lapses in memory, Roy's inability to recall the later events of that day came as a result of being involved in a motor vehicle collision. At approximately 1:00 a.m. on the morning of August 4, Roy was ejected from a car as it rolled over. Emergency Medical Services was called to the scene by an off duty police officer, where the crews found Roy laying on the side of the road, somewhat combative, responsive only to painful stimuli.

He was transported immediately as a Level 1 Trauma Alert to Broward General Medical Center.

Roy arrived at the trauma center unresponsive. He was intubated and taken emergently to have CT scans run in order to determine the nature and extent of his injuries. The CT scans revealed a significant head injury with a large amount of bleeding within the brain. Neurosurgery was consulted and a catheter was placed into Roy's head in order to measure the pressures in his brain and to ensure that additional blood, which could cause further damage, was not collecting. During the day, the staff continued to monitor Roy's

status and pressures in his brain. However, by the late afternoon the pressures started to increase and it was determined that an operation would be necessary in order to preserve Roy's brain function. He was taken to surgery at 5:50 p.m. for a craniotomy, evacuation of the hemorrhages, and removal of parts of Roy's brain that were severely damaged and bruised. Roy returned to the Intensive Care Unit after this surgery, where the staff continued to monitor the pressures in Roy's head. However, with the pressures elevating once again three days later that were non responsive to medications and other interventions, Roy had to return to surgery where additional bruised brain was removed. The removal of the damaged parts provided more room for the swollen brain and allowed blood to flow normally to this vital organ.

Roy returned to the Intensive Care Unit, where he spent the next two and a half weeks. During which time Roy continued to have the pressures in his brain monitored, receive breathing assistance from a machine, be fed through a tube, and receive supportive treatments



Real People. Real Stories.



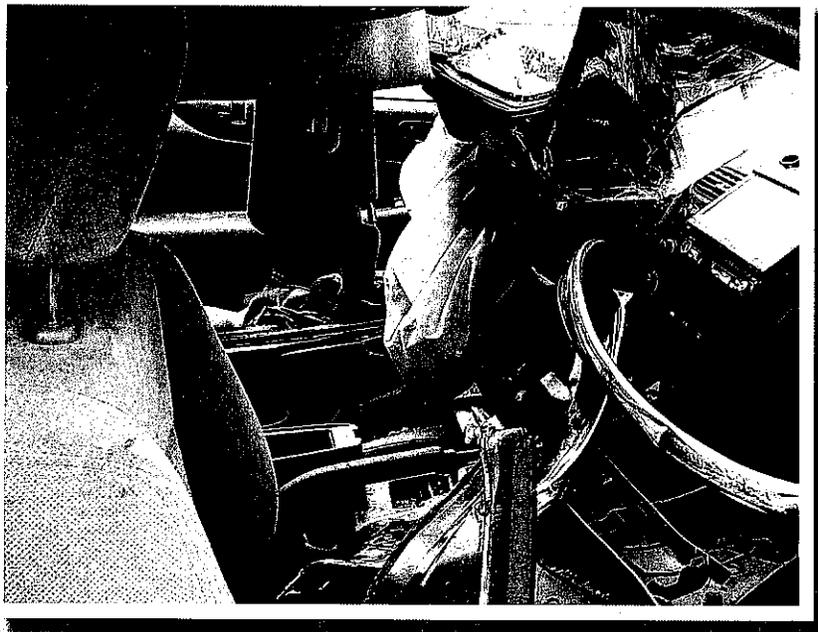
for whatever medical conditions developed. The staff did however see improvement in Roy's mental status as on August 15 he began to open his eyes to pain, and then as time progressed, to speech only. In addition, he began to move in response to pain and then began to localize to what was causing him pain. Finally, on August 18, Roy started to open his eyes spontaneously and actually follow some commands of the medical staff. So by August 21, Roy had

progressed so much that he was moved to the step down unit. He was following commands, lifting his arms and legs against gravity, and receiving minimal assistance from the ventilator.

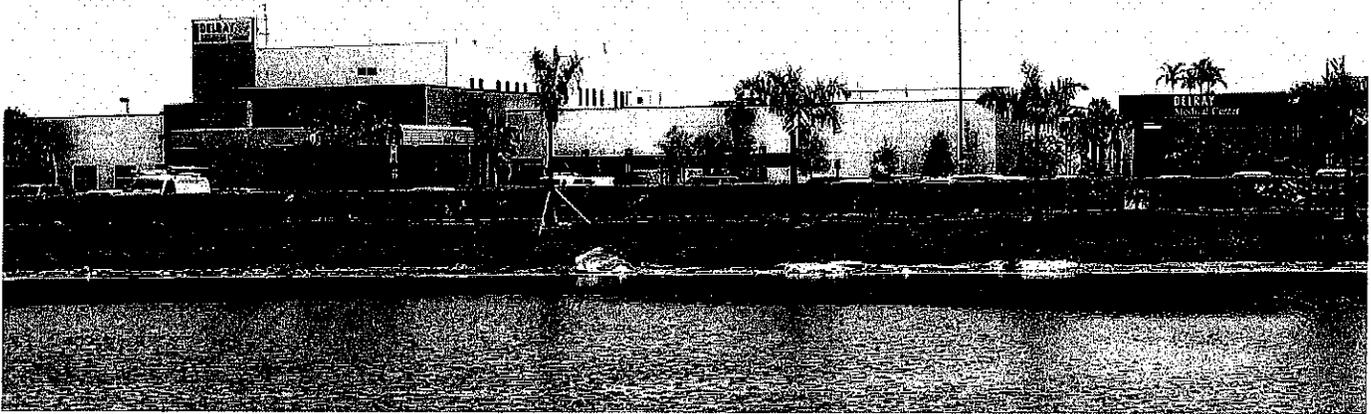
By August 25 Roy was off the ventilator and breathing completely on his own. He was actively participating in physical therapy, attempting to walk, and working with occupational therapy to regain functional abilities. He would

mouth to the therapists what he wanted or needed and was noted to be improving in all aspects by all who evaluated him daily. As the end of August approached, Roy was deemed ready enter a rehabilitation setting. On August 31, Roy was transferred to acute rehab, where he remained and improved until September 20, when he was discharged home.

Today Roy is a pleasant, talkative individual who describes himself as a very social person. Roy has secured a full-time job and hopes to start at the Fire Academy in the fall. Roy admits that he has no recollection of his time spent at Broward General and only remembers being taken to the ambulance that would subsequently transport him to the rehabilitation center. With outpatient therapy now complete, Roy is excited to resume his life as he knew it and move forward towards his goal of serving the community as a firefighter paramedic.



DELRAY MEDICAL CENTER LEVEL II AND PEDIATRIC TRAUMA CENTER - Delray Beach



DEMOGRAPHICS AND CLINICAL STATISTICS

Delray Medical Center is a 493-bed acute care hospital and a Level II and Pediatric Trauma Center. It is one of two trauma centers in Palm Beach County operated by Tenet Healthcare Corporation. The hospital has been a Level II trauma center for 20 years. In 2010, the Division of Trauma Services provided care for 1,430 trauma patients, including 1,237 admissions. Trauma Services at Delray Medical Center serves the southern portion of Palm Beach County. This includes the following cities: Bell Glade, Boca Raton, Boynton Beach, Delray Beach, Greenacres, Lake Worth, Wellington, and the southern portion of the City of West Palm Beach.

Operating within the scope of its special taxing authority, the Health Care District of Palm Beach County administers the county's trauma system, which also includes an aeromedical program. With a goal of providing a seamless continuum of high-quality care for our trauma patients, Delray Medical Center maintains a collaborative relationship with our Emergency Medical Services (EMS), acute care hospitals and rehabilitation facilities. Collaboration in such an agency improves communication and processes within the community.

We have dedicated, highly trained in house trauma surgeons on staff 24 hours a day, 7 days a week to meet the needs of the communities we serve. In addition, a core group of highly trained and caring nurses staff our trauma resuscitation area and in-patient trauma units. A full compliment of medical and surgical specialists assists in the management of our trauma patients. A dedicated multidisciplinary team of case managers, social workers, rehabilitation and speech therapists, pharmacists and respiratory therapists are some of the professionals who care for our trauma patients and their families every day.

Designated as one of America's 50 Best Hospitals for a fifth year in a row in 2011, Delray Medical Center is also the recipient of the HealthGrades Distinguished Hospital Award for Clinical Excellence. Holding this honor for eight consecutive years and the Cardiac Care Excellence Award

for five consecutive years, places the hospital among the top 5 percent nationwide.

The hospital, certified by the Joint Commission as a Primary Stroke Center, offers a full range of programs including comprehensive cardiac, neuroscience, orthopedic, psychiatric, surgical weight reduction and urologic services. In addition, the hospital provides full service outpatient care including surgery, diagnostics, sleep disorders and wound care treatment.

EDUCATION AND TRAINING

The Division of Trauma Services has a very active education program. The specialized skill and knowledge of our staff is developed by utilizing several teaching modalities. These include certification courses such as TNCC, ENPC, ACLS and PALS, Trauma Grand Round lectures, skills labs, unit-based education programs, computerized self-study modules and continuing education programs. We also maintain a cross-training program, through which nurses floating into the trauma care areas meet the education requirements of the state. The Trauma program manager facilitates and supports this process by providing the staff with opportunities to advance their knowledge beyond the minimum requirements. CEN and CCRN certification programs and the Course in Advanced Trauma Nursing are a few examples of the advanced specialty training that is available to the nursing staff.

OUTREACH AND INJURY PREVENTION

An active component of our program is providing community outreach and injury prevention awareness throughout the age spectrum. This is achieved through programs such as helmet and bike safety and booster seat awareness for elementary and middle schools, drinking and driving prevention for local high schools, and home safety and fall prevention lectures for the elderly.

DELRAY MEDICAL CENTER LEVEL II AND PEDIATRIC TRAUMA CENTER - Delray Beach

Our outreach events are often coordinated with our Community Partners: EMS, local police agencies, Florida Highway Patrol, Florida Department of Transportation, and Safekids. The trauma program manager is actively involved and sits on the Strategic Planning Committee for I of the Palm Beaches.

Our pre-prom event at Wellington Community High School this year was presented to over 1000 students. The success of this program was directly related to the dedication of our trauma center and community partners to prevent injuries.

In May 2010, we held our Trauma Awareness Day celebration, a favorite event. Our theme "New Beginnings" included previous patients and families, staff, physicians, air and ground EMS personnel, as well as local police departments. This dramatic and touching event has become, by popular demand, an annual event and our 2011 festivities are already being planned.

RESEARCH

Our pediatric research "A Retrospective Study: Pediatric Trauma and Mechanism of Injury" revealed that falls were the number one mechanism of injury for our pediatric population. This information was shared with our local Safekids Coalition and preventing falls has been added to the 2011 Strategic Plan for Safekids of the Palm Beaches. TICU nurses are preparing for a best practice study on Prevention of Sacral Pressure Ulcers in the Trauma Population; this study would begin in January 2011.

Trauma surgeons at Delray Medical Center are actively involved in research projects and have presented at National and International Trauma Conferences. Research topics included: amongst others, Pre-peritoneal Pelvic Packing, and the development of an International Videoconference Lecture series, Lessons Learned.

DISASTER PREPAREDNESS

Delray Medical Center is actively involved in local and regional coordination of education and training for a mass casualty incident. The hospital has participated in several mass casualty exercises at the county level, as well as involvement in Region 7. Delray Medical Center is a member of the Palm Beach County Healthcare Emergency Response Coalition, which is an organizational partnership and collaboration between the hospitals and EMS to ensure preparedness.

The Haiti earthquake in January 2010 tested Delray Medical Centers ability to respond to mass casualty. The trauma center received almost 30 patients emergently and for weeks afterward. Caring for these patients and in many cases their family members confirmed Delray's commitment to being prepared in times of disasters.

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HALIFAX HEALTH MEDICAL CENTER LEVEL II TRAUMA CENTER - Daytona Beach



HALIFAX HEALTH

Halifax Health Medical Center opened its doors to the community in January 1928 with 125 licensed beds and was staffed with 22 physicians, 22 nurses, four dentists, and two technicians. Today, with 944 beds and more than 500 physicians on medical staff representing 46 specialties, Halifax Health Medical Center is the area's largest healthcare provider.

With an expanding network of comprehensive healthcare services, Halifax Health Medical Center offers a tertiary hospital, a cancer treatment center with four outreach locations, psychiatric services, the area's largest hospice organization, and an 80 bed community hospital in nearby Port Orange, Florida. Widely recognized for its outstanding medical staff and leading-edge technology, Halifax Health Medical Center utilizes advanced imaging technology, much of which is the first of its kind in the Southeast.

Halifax Health Medical Center is a teaching hospital with an accredited Radiologic Technology Program and a long-standing Family Medicine Residency Program. Halifax Health Medical Center is also affiliated with the Florida State University School of Medicine and Daytona State College.

DEMOGRAPHICS AND CLINICAL STATISTICS

At 89,000 square feet (bigger than a football field), Halifax Health Medical Center also boasts Florida's largest emergency department which cares for more than 100,000 patients annually. Halifax's Emergency Department is home to our Level II trauma center, staffed with over 35 emergency physicians, seven trauma surgeons, three neurosurgeons, and an expansive multidisciplinary team of trauma caregivers, who are all uniquely skilled with advanced training in critical care medicine ready to care for the severely injured patient 24 hours a day, 365 days a year. These same caregivers also staff local racing events as Halifax Health Medical Center is the official healthcare system for the Daytona International Speedway. In addition to operating the area's only trauma center, we also offer the area's only Comprehensive Stroke Center, 24-hour Neonatal and Pediatric Intensive Care Units, Pediatric Emergency Department, and Child and Adolescent Behavioral Services.

Halifax Health Medical Level II Trauma Center has three state-of-the-art trauma suites, with the ability to manage up to six trauma patients simultaneously. Two express elevators can transport patients from the rooftop helipad to the Emergency Department or Operating Room in less than 20 seconds. The 4,500 square foot helipad can accommodate two standard aeromedical helicopters or one military Blackhawk. The Trauma center maintains a joint partnership with the county's aeromedical provider, Air One, operated by the Volusia County Sheriff's Office.

Daytona Beach is viewed as a special event and tourist destination attracting hundreds of thousands of visitors each year. Coined as the "World Center of Racing," the Daytona International Speedway hosts a variety of racing events including: *Speedweeks* - a two week period which concludes with the Daytona 500 that attracts 200,000 plus race fans and the "Coke Zero 400" - a summer racing event in July. Daytona Beach is also well known for Bike Week - a prominent 10 day motorcycle event that brings more than 500,000 visitors and *Biketoberfest* - a four day motorcycle event with more than 100,000 visitors. Halifax Health Medical Level II Trauma Center is the cornerstone of trauma care for all of these events and as such, the trauma patient population increases

HALIFAX HEALTH MEDICAL CENTER LEVEL II TRAUMA CENTER - Daytona Beach

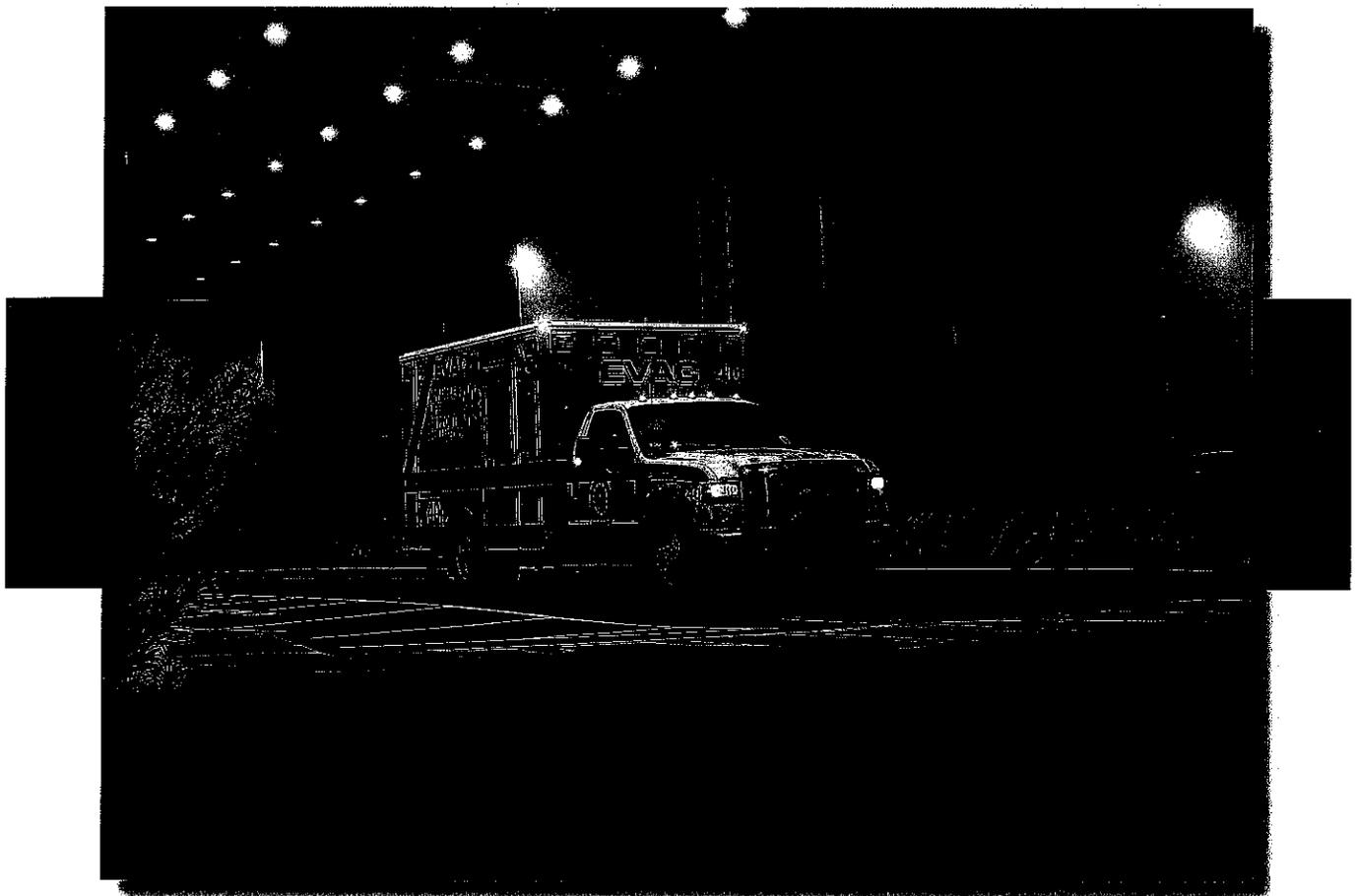
dramatically, with Bike Week being the busiest time at the trauma center. In 2010, the trauma center at Halifax Health Medical Center admitted 2,035 injured patients, 875 of them critically injured. A total of 52 pediatric trauma alerts (15 years of age or younger) were treated at Halifax Health Medical Center in 2010. Blunt trauma accounted for 90.4 percent of our trauma alert patients and 8.9 percent were due to penetrating injuries; <1 percent of our trauma alert patients had suffered burns.

Halifax Health Medical Center is a designated acute care facility with Florida's Bureau of Brain and Spinal Cord Injury. In an effort to enhance the continuum-of-care for our brain and spine injured patients, Halifax Health Medical Center established plans in August 2010 for a joint partnership with Brooks Rehabilitation Hospital for an inpatient rehabilitation unit consisting of up to 40 beds at our Daytona Beach campus. Patients with complex neurologic and other major injuries such as traumatic brain injury, spinal cord injury, hip fracture, and stroke shall benefit greatly by this added rehabilitation service. Brooks is the most highly accredited provider in Florida with 13 distinct program accreditations, including stroke, brain injury, and spinal cord injury. Occasionally, severely injured patients with complex rehabilitation needs require specialized services

not currently available in the Daytona Beach area. Together with Brooks Rehabilitation Hospital and Halifax Health Medical Center, we can better treat complex patients with inpatient rehabilitation services, affording these patients with greater probability to return safely to their home or community care center and avoid re-hospitalization.

EDUCATION

Halifax Health Medical Center has its own Educational Services Department, currently consisting of 12 clinical education registered nurse coordinators who are appointed to either one or more clinical units, depending upon size and complexity. Having a group of educators as its own department allows for improved organizational education and a more global perspective for regulatory education. The Educational Services Team meets monthly to review the needs of our caregivers. In 2010, a total of 78 caregivers participated in Halifax's six Trauma Nursing Core Courses (TNCC) and 19 participants in our two Emergency Nursing Pediatric Courses (ENPC). Education staff also works collaboratively with our local EMS with conducting American Heart Association courses. Halifax Health Medical Center also features a computer-based educational program, Net Learning,[™] where course material is provided electronically.





INJURY PREVENTION AND COMMUNITY EDUCATION

Halifax Health Medical Level II Trauma Center partners with the Healthy Communities organization, which is also an affiliate of Halifax Health Medical Center, to promote the safety of our children. Healthy Communities serves as the lead organization for Safekids Volusia/Flagler, a part of Safekids Worldwide.™

Knowing that head injury is the leading cause of wheeled sport-related deaths and the most important determinant of permanent disability after a crash, the Safekids Coalition has provided more than 19,500 children with a free bicycle helmet and taught them how to properly fit and wear the helmet. The coalition also works with community partners to hold bicycle rodeos to provide children with hands-on instruction in collision avoidance, safe bike operation and helmet safety. Healthy Communities also participates in the *waterproofFL*™ Florida Injury Prevention Program.

Halifax Health Medical Level II Trauma Center and Safekids Volusia/Flagler are heavily involved in promoting child passenger safety. Throughout the year, the coalition holds several car seat check-up events throughout Volusia and

Flagler counties to assist parent/guardians with the correct installation and usage of car seats and booster seats. Our goal for each car seat inspection/installation is for the child to leave safer than s/he arrived.

Halifax Health Medical Level II Trauma Center participates in many community events, radio broadcasts, and forums to provide information regarding the work and the mission of our Trauma Center. Halifax Health Medical Center is also actively involved with providing education and participating in EMS-related symposiums with our local public safety agencies. Staff from Halifax Health Medical Center also assists with our local spinal cord injury and brain injury support groups, which meet monthly at our Daytona Beach campus.

COMMUNITY AND DISASTER PLANNING

Halifax Health Medical Level II Trauma Center has a comprehensive all hazards disaster planning and preparedness process. Our multi-year training and exercise plan outlines annual training and exercises for over 3,500 caregivers. These include response to hospital fires, infant abduction attempts, bomb threats, tornados, and other severe weather and manmade events.

HALIFAX HEALTH MEDICAL CENTER LEVEL II TRAUMA CENTER - Daytona Beach

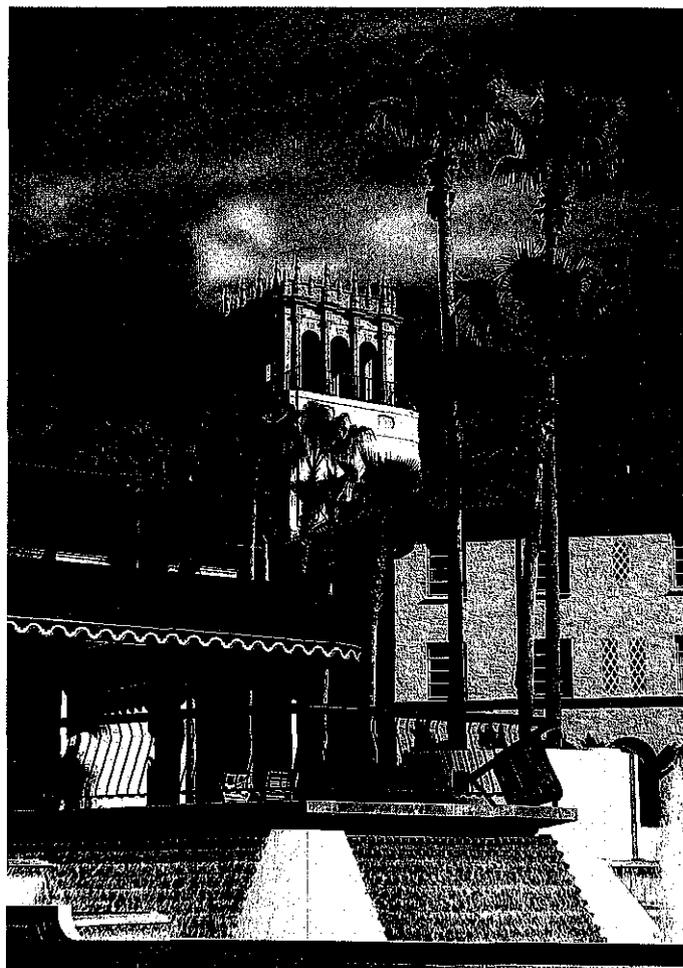
We work closely with the Volusia County Emergency Operations Center and schedule ongoing planning sessions with all Volusia County acute care hospitals to ensure consistency of emergency planning and operations. At least one full scale county wide exercise is executed annually to test individual hospital plans and their integration into the community plans.

The 800MHz radio system utilized by our Emergency Department, Security Force, and Trauma caregivers is interoperable with county and local agencies and is supported by the county infrastructure. This ensures communications are seamless and interoperable between EMS, EOCs, sheriff, fire, and local police departments during all hazard events. In addition, Halifax has implemented the EMResources Program as a means of sharing real time bed availability during emergencies with other hospitals in the region.

Halifax maintains a bank of 10 generators capable of providing emergency power to continue operations during emergencies. Essential systems for clinical areas, such as heating, ventilation, air conditioning, laundry, dietary, and information systems shall continue to function during hazards that leave the community without power. In addition to electricity, well water can be pumped to the facility to ensure adequate sanitary system operation as needed.

As a system, we participate in the ASPR grant funding for hospital preparedness and in 2011 received \$78,380 to conduct exercises, training and to purchase equipment for mass casualty incidents. Hospital administrative staff are trained in the use of the Hospital Incident Command System and serve as incident commanders during all exercises and actual events.

Peter C. Springer, M.D., Halifax Health Medical Center Emergency Services Administrator, also serves as the Volusia County EMS Medical Director and continuously promotes and advances Halifax Health Medical Center with the leadership and medical performance of the area's EMS system. On behalf of Halifax Health Medical Center, Dr. Springer actively participates with many aspects of Volusia County Emergency Management Services, as well as the Volusia County Emergency Operations Center.



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Real People. Real Stories.



SEVERINO TAMAYO SUCCESS STORY

On September 5, 2010, Severino Tamayo was riding his motorcycle to church, in his hometown of Palm Coast, when he was involved in a serious accident. Emergency Medical Services found him unresponsive and not breathing and he was promptly airlifted to Halifax Health Medical Level II Trauma Center. A multidisciplinary team of caregivers were immediately mobilized to provide Tamayo with advanced trauma life support. Tamayo's injuries were a fractured skull, broken clavicle (collar bone) and scapula (shoulder blade), punctured right lung, and several broken ribs. Because of the severe trauma to his brain, Tamayo was put into a medically induced coma to give his brain a chance to heal, and to prevent any additional injury.

Of the little more than two weeks he was at Halifax, Tamayo spent 11 days in a medically induced coma. Although he has an overall positive feeling about his stay at Halifax, the specific details of his stay are understandably clouded. His wife Grace, however, remembers it like it was yesterday. She was with her husband during his entire stay at Halifax Health, experiencing the ups and downs of his recovery in real time.

Grace says it is "...a blessing that he was taken to Halifax." She can name a team of nine nurses she says were essential to her husband's recovery,

describing them as dedicated, understanding, nurturing, and professional. A few in particular went above and beyond by giving her hope and even helping her cope with the situation. Grace described one nurse in particular as having "believed in my husband, and believed in me."

On Tamayo's second day at Halifax, his case worker brought a tote bag from Mothers Against Brain Injury. It was filled with extremely helpful information to assist in understanding brain injury from beginning to end, covering everything from finances to medical treatments. It also included inspirational stories, poetry, and more.

After 11 days in a medically induced coma, and around-the-clock care and supervision at the Halifax Health Medical Level II Trauma Center, Tamayo woke up to discover his recovery was just beginning. Several days later he was transferred to Brooks Rehabilitation in Jacksonville for the remainder of his recovery. Following his recuperation, Tamayo and his wife Grace returned to Halifax to thank the doctors and nursing staff who played such a vital role in his recovery.

Today, Tamayo has made a full recovery from his motorcycle accident. He is able to continue working as a banking branch manager at Wells Fargo, and is enjoying life with Grace and their three kids, Jonathan (13), Sarah (11) and Nicholas (9).

HOLMES REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Melbourne



THE Trauma CENTER at HOLMES REGIONAL MEDICAL CENTER

*Health
First*

Holmes Regional Medical Level II Trauma Center (HRTC) is Brevard County's only Level II state verified trauma center on Florida's Space Coast. The trauma center is located on the campus of Holmes Regional Medical Center (HRMC) in Melbourne — the largest of Health First's not-for-profit hospitals with 514 beds. The Brevard County based Health First family of healthcare facilities/services also includes three other not-for-profit acute care hospitals — Cape Canaveral Hospital, Palm Bay Hospital, and Viera Hospital.

Established in 1999, HRTC has become a leader in the delivery of trauma care and regional disaster preparedness. During 2010, a total of 1,355 injured patients received trauma care at HRTC, with one fourth of these patients being transported to HRTC by Health First's First Flight state-of-the-art air ambulance's Nurse-Paramedic Flight Team. The importance of the enhanced care delivered by the certified Nurse-Paramedic Flight Teams on First Flight and the speed of our EC-135 jet helicopter has had a tremendous impact on our trauma patients' outcomes, especially for receiving care during the "Golden Hour" — the first 60 minutes after a traumatic injury occurs.

Our staff includes six trauma surgeons, three orthopedic traumatologists, a maxillofacial plastic surgeon, and seven trauma physician assistants—a level of support not traditionally enjoyed by Level II trauma centers. Our support staff includes a trauma program manager, a quality Improvement coordinator, a trauma registrar, Physician Specialties Office, medical assistants and resource specialists, and a core group of ED nurses who are specially trained and certified in trauma care.

DISASTER PREPAREDNESS

In 2010, HRTC staff participated in several mass casualty exercises and training opportunities such as DMEP and hurricane evacuation drills. In March, we held our annual B3:Bombs/Burns/Blast Conference. National and international experts in disaster management gathered to deliver information and insight regarding management of a major burn/bomb/blast events and treatment of injuries resulting from such events.

COMMUNITY OUTREACH, INJURY PREVENTION, AND EDUCATION

HRTC's staff has developed relationships with community partners such as emergency medical services providers, law enforcement, the U.S. Air Force, as well as community service agencies, businesses, and schools to develop teen driver safety programs and discourage distracted driving. This year we initiated a "Don't Text and Drive Pledge Campaign" aimed at teens. Visit healthfirstreality.org/TraumaTexting.aspx for more information.

HOLMES REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Melbourne

HRTC also implemented the Society of Trauma Nurse's "Don't S.L.I.P." Program for seniors that includes information on fall prevention, safe driving, medication safety, and pedestrian safety. Other community educational programs that have been sponsored by HRTC include program presentations on pediatric drowning prevention and "Drive with CARE." In 2010, we also began working with the University of Miami and Lakeland Regional Medical Level II Trauma Center to develop a comprehensive injury prevention program for motorcyclists.

HRTC sponsors a monthly multidisciplinary educational conference featuring local, state, and national experts on a broad range of trauma-related topics. Other educational opportunities include Trauma Tracks Basic and Advanced Nursing Education Program, TNCC, and Fundamentals of Critical Care. We are planning to present our first Advanced Trauma Life Support® course for physicians in June 2011. For the past two years, HRTC has held an annual conference focusing on preparation for bombs, burns, and blast (B3: Bombs/Burn/Blast) patients featuring international experts on these subjects.

FACILITIES

HRTC is located inside The Heart Center on the first floor of the seven-story facility, which has a roof-top helipad with capability to support both our medical air ambulance and a U.S. Military's Blackhawk helicopter. The helipad's rooftop triple-wide elevator travels express to open just outside of the Trauma Center's five-bay acute Resuscitation Unit located inside our state-of-the-art Emergency Department on The Heart Center's first floor. The Heart Center's 14-bed Surgical Intensive Care Unit and our 36-bed Progressive Care Unit provide facilities to support trauma patients through the continuum-of-care. It is our commitment to provide the highest quality of care for our patients.

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JACKSON MEMORIAL HOSPITAL RYDER LEVEL I TRAUMA CENTER - Miami



Jackson
HEALTH SYSTEM



Jackson Memorial Hospital (JMH) is a 1500 bed tertiary care center located in Miami, Florida. JMH/Ryder Level I Trauma Center is a free-standing four story building within the hospital complex and is one of the largest, most comprehensive facilities in the world. All incoming patients are immediately assessed on the first floor Trauma Resuscitation Unit (TRU) by one of our 15 board certified surgeons, who all serve as clinical faculty at the University of Miami Miller School of Medicine (UM). If necessary, life saving surgery is performed in six adjacent operating rooms. Critically injured patients requiring the expert care of a dedicated ICU team will be admitted to our Trauma

Intensive Care Unit (TICU) located on the second floor of the building. For those who are less critically injured, or who have partially recovered from their injuries, highly specialized trauma and burn care is provided in a step down unit and medical surgical units located on the third floor. An adult neuro-rehab unit and adolescent unit are housed on the fourth floor. The JMH/Ryder Level I Trauma Center also houses the University of Miami/Jackson Memorial Burn Center, and is verified by the American Burn Association and the American College of Surgeons (ACS).

JACKSON MEMORIAL HOSPITAL RYDER LEVEL I TRAUMA CENTER - Miami

DEMOGRAPHICS AND CLINICAL STATISTICS

Our facility served 4740 trauma patients in 2010; 23 percent of this population had an Injury Severity Score (ISS) > 15. Approximately 22 percent of this population presented with penetrating trauma, 71 percent with blunt injury, and seven percent with burn injuries. Pediatrics comprised seven percent of this trauma population.

Four registered nurses are available 24/7 to treat incoming trauma alerts. Overall care of each patient is supervised by a trauma surgeon, most of whom have more than 10 years experience. This accumulated experience can be lifesaving; we have demonstrated a significant correlation between experience and patient outcome in that subset of patients with an ISS >35.

Initial trauma care is provided in one of our five resuscitation bays located in the TRU. Depending on the initial injuries, the patient may then be moved into one of the six observation beds also housed within TRU. Additional acute care is provided in the 25 bed TICU in which five are designed for acute burn care. A minimum staffing ratio of one registered nurse per two patients is maintained and increased as needed based on acuity. A 12 bed step down unit, 16 medical surgical beds and an outpatient clinic dedicated to trauma/burn patient follow up, comprise Trauma 3A. Trauma 3B consists of 30 beds and provides medical surgical care for adult and pediatric burn patients. Any beds on Trauma 3B not being used to provide care for those suffering burn injuries may be used for those injured through other traumatic mechanisms. Rehabilitation is also provided at Jackson Memorial, through a dedicated neuro-rehab floor, pediatric rehabilitation center and adult rehabilitation center.

EDUCATION / TRAINING

The US Army has selected UM/JMH Ryder Level I Trauma Center as the training site for its Forward Surgical Teams. These teams are a versatile, complete surgical unit that can operate independent of a combat support hospital, near the front lines in support of both Conventional and Special Operations as needed. We have developed a first of its kind situational training exercise for a military mass casualty situation. Nearly every Forward Surgical Team deployed to Iraq and Afghanistan since 9/11 has passed through our training program. In 2010, 254 service members benefited from this experience, to include both active duty and reserve component FST's, White House Medical Unit personnel, US Navy corpsmen, and US Army flight medics.

As of August 31, 2010, JMH and the Air Force Reserve have established a training agreement to enhance the clinical knowledge and performance for reserve personnel in the areas of treatment, triage, resuscitation, surgical intervention, critical management, and wound care.

The William Lehman Injury Research Center (WLIRC) has been working to develop new educational formats for use in trauma training. They have developed a series of production quality, multimedia online educational modules for trauma care. A series of procedural videos has also

been developed to assist in the education and maintenance of surgical competence for the most important emergency procedures in trauma care. The program has been awarded accolades from the ACS and has recently been accepted for inclusion into the national resident education portal developed by the Surgical Council on Resident Education (SCORE).

The Surgical Critical Care Fellowship Program at the UM/JMH is one of the oldest and largest certified post graduate training programs in the US. We provide a comprehensive critical care education including a diverse clinical experience, including both trauma and general surgical cases, clinical and laboratory research opportunities, and administrative and teaching experience. Additionally, we provide training and education to UM/JMH residents and students of all levels. All University of Miami medical students rotating through the trauma service receive a patient safety course. This education helps to cultivate more patient safety conscious physicians and create practitioners who are more attuned to patient safety concerns. Registered nurses and support staff are offered a monthly trauma specific didactic training which incorporates topics such as mechanisms of injury, burns, abdominal trauma, and organ procurement. Over 300 staff members took advantage of this educational opportunity in 2010.

INJURY PREVENTION AND COMMUNITY EDUCATION

The Injury Prevention Program at JMH has made great strides in providing community-wide injury prevention education in 2010. Our programs provide age specific injury prevention education to the community free of charge, in an attempt to reduce the number of preventable injuries and deaths across the lifespan.

Achievement in 2010 includes:

- 94 community outreach events where 9,905 individuals were educated.
- 3,157 elementary school age children were trained on bicycle, pedestrian, poison prevention and motor vehicle safety.
- 47 injury prevention specialists from area organizations and agencies, such as the police and fire departments, schools, local health and transportation departments as well as other hospitals, participated in a Regional Injury Prevention Pilot meeting in partnership with the Department of Health Office of Injury Prevention.
- 791 parents were educated in parent workshops on general safety information related to bicycle, pedestrian, poison prevention, alcohol / drug awareness and motor vehicle safety.
- 296 bicycle helmets were fit and distributed to individuals through the Pediatric Emergency Department as well as community events.
- 1,740 teens were educated on the dangers and potential life long consequences of risky behavior including alcohol and drug use, distracted driving and lack of seatbelt use.
- 460 corporate individuals were educated on distracted / impaired driving and seat belt use.
- 2,699 teens received violence prevention education



including bullying and gun safety information through grade specific assemblies.

- 715 senior citizens were provided with home safety, medication safety and fall prevention education. Over 20 programs were provided to both, citizens of our county and healthcare personnel, some of which included, Aquatic Safety Awareness Program (ASAP) and Students Against Destructive Decisions (SADD).

The Pediatric Neurotrauma Program includes clinical, research, education and prevention as its major components. The current injury prevention program directed by Dr. Gillian Hotz includes the WalkSafe™, BikeSafe and Concussion Programs under the KiDZ Neuroscience Program at the Miami Project to Cure Paralysis and UHealth Sports Medicine.

- The WalkSafe™ program, an elementary school based pedestrian injury prevention program developed at the UM/Ryder trauma center in 2001, has been funded by multiple grants and agencies. The WalkSafe™ program couples injury prevention with health promotion efforts in order to encourage children to walk more, and walk safely. In 2010, the WalkSafe™ curriculum was taught in 100 percent of Miami-Dade County's public elementary schools, and reached more than 155,000 elementary school students in 10 different counties. Since the WalkSafe™ Program's inception in 2001, the total number of pedestrian-hit-by-car injuries for children ages 0-14 has decreased by 43 percent in Miami-Dade County (source: FDHSMV crash data). Modeled after the WalkSafe™ Program, Dr. Schulman has been funded for three years from the Florida Department of Transportation and has successfully created and piloted a pedestrian safety program for elderly pedestrians in Miami-Dade County.
- The BikeSafe™ Program was developed in 2009 to model after the WalkSafe™ Program. The mission of BikeSafe™ is to encourage bicycling as a mode of transportation in Miami-Dade County and empower bicyclists of all ages and abilities to ride safely.
- The Concussion Program in existence since 1995 is a comprehensive program that includes neuroimaging, neurological evaluation, computerized neuropsychological testing program (ImpACT) and continued outreach

education. This year all Miami Dade County High School Football players were baseline tested with ImpACT.

- Comprehensive programs developed at the medical center also include two grant funded violence and weapon prevention programs for juveniles. Both The Family Gun Safety Education Program and The GATE Program for Juvenile Weapons Offenders have won the National Association of Public Hospitals Safety NET Healthy Communities Awards.

RESEARCH AND SCHOLARLY ACTIVITIES

Severe injury can activate complex neuro-humoral feedback systems and cascades within the body that can lead to secondary damage of otherwise normal tissue. Many recent innovations have been translated from laboratory benchtops into practical bedside care for victims of life-threatening major torso trauma and traumatic brain injury. In a collaborative study with the Department of Neurosurgery, patients with life threatening brain injury where most other therapeutic options are exhausted, we are evaluating new applications for FDA-approved generic drugs. In collaborative studies with the Department of Anesthesiology, we are evaluating novel, non-invasive or minimally invasive, monitors for triage in the pre-hospital setting, for reducing sedation use in the intensive care unit, and for diagnosing and treating deep venous thrombosis and coagulation disorders

WLIRC, in partnership with the US Army, has demonstrated the versatility of telemedicine in the trauma environment. Specifically, attending specialty physicians will remotely support on-site team and care of patients with the InTouch Health RP-7 robot. This research has demonstrated telemedicine technology could virtually bring world class trauma experts to the battlefield (or any site on the globe) to support and mentor deployed military physicians who are treating injured soldiers and physicians in rural areas. This could mitigate current and future concerns about gaps in rural and urban trauma care and critical care staffing shortages. The WLIRC and JMHS have

JACKSON MEMORIAL HOSPITAL RYDER LEVEL I TRAUMA CENTER - Miami

also been testing mobile telemedicine system for use in the operating room (OR). Studies have grown to include collaborations with other state agencies and trauma centers across the state to better understand how telemedicine can assist during disaster response phases. The Teletrauma Program of the WLIRC evaluates telemedicine solutions for the optimal delivery of trauma care, education and information exchange. The use of telemedicine for daily morning rounds is currently standard operating procedure in the TICU. The International Tele-Trauma Grand Rounds is a weekly series of complex trauma case presentations and advanced trauma and critical care topics. To date, we have collaborated with institutions across Brazil, Colombia, Canada, Florida, Washington D.C., and California.

Dr. Carl Schulman has completed a study funded by the Robert Wood Johnson Foundation to study the problem of elderly pedestrian injury. The primary purpose of this project was to identify risk factors that will lead to the development and implementation of effective prevention strategies to reduce the risk of pedestrian injury in this vulnerable population.

We are also actively engaged in initiatives to understand how errors and adverse outcomes can occur during the management of trauma victims. It is our aim to understand these strategies and apply them in our care of trauma patients. Patient safety efforts also include collecting and analyzing incident and adverse outcome data and we have earned federal government designation as the Ryder Trauma Patient Safety Organization which is the first specialty designated trauma PSO approved by the U.S. Department of Health and Human Services.

Neurological services also continues with their research into the long-term outcomes of those patients who receive hypothermia treatment after suffering a traumatic brain injury (TBI) and/or spinal cord injury (SCI). Some other research projects that took place for 2010 are Biomarkers of Brain Injury, Spreading Depressions as Secondary Insults after Traumatic Injury, Culture of Neural Progenitor Cells from Patients with Acute Brain Damage, Evaluation of Traumatic Brain Injury Severity and Outcome, and Retrospective study of cranioplasty following decompressive craniectomy for head trauma.

MOTOR VEHICLE CRASH RESEARCH

The WLIRC under Jeffery Augenstein, MD, PhD, Medical Director, Professor of Surgery, conducts motor vehicle crash research which leads to important findings regarding air bag injury including; occult, side and lower extremity injuries, as well as injuries among elderly occupants. The center has teamed with BMW to explore the newest safety technology in cars; Advanced Automatic Crash Notification (AACN). Dr. Schulman has also been awarded a R01 grant from the CDC entitled "Using Vehicle Telematics to Improve Triage of Crash Injured Occupants."

COMMUNITY AND DISASTER PLANNING

In addition to the classes offered within JMH, an online class was developed by our Disaster Committee that has been mandated for all clinical and non clinical personnel to participate in annually. In 2010 over 6,000 employees completed the Disaster Management and Preparedness courses. Our emergency management specialist, Mr. David Daley provided the AHRQ Surge, participated in the hurricane preparation table top exercise that focused on "Water Loss," "Oxygen Loss" and "Communication Loss" scenarios.



JACKSON MEMORIAL HOSPITAL RYDER LEVEL I TRAUMA CENTER - Miami

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Real People. Real Stories.



JACKSON MEMORIAL HOSPITAL / RYDER LEVEL I TRAUMA CENTER THEVENOT JEUDY

On the 12 of January 2010, Haiti suffered a terrible earthquake, leaving 230,000 people dead and 1.2 million people without homes. Later that afternoon at approximately 3:30 p.m., Mr. Thevenot Jeudy, a local citizen of Haiti, was leaving his job at the Justice Department and stopped to buy a phone card. While in the store, he heard a "loud noise" that sounded like a train was passing. At that moment, he knew that it was an earthquake. As he ran from the store, the building collapsed and his legs were crushed by falling debris. He struggled mightily for two hours but was unable to free himself. He was eventually rescued when local citizens arrived and were able to free him. His problems were not over yet because the community had no functioning transportation or communication. Mr. Jeudy was left on some type of flat surface, bleeding from his bilateral lower extremities and awaiting further treatment. At around 10:00 p.m., a child saw him and offered to call his family. Mr. Jeudy gave the child his brother's phone number and then he left to make the call. Mr. Jeudy's brother, a physician from Haiti, arrived and was able to give him emergent care. The following day Mr. Jeudy's brother drove him to the nearest hospital type facility. Mr. Jeudy's brother worked relentlessly and eventually was able to make arrangements to transfer him to Jackson Memorial Hospital/Level I Ryder Trauma Center.

Mr. Jeudy arrived at Jackson Memorial Hospital Level I Ryder Trauma Center on January 19, 2010. He underwent an extremely complicated course of care and was discharged home with family more than one year later. Mr. Jeudy had obvious crush injuries to bilateral lower extremities, with a significant infectious process and necrotic tissue. Jackson's efforts to care for Mr. Jeudy required a vast multidisciplinary approach. The

wounds were initially washed out and dressed by orthopedic surgeons. Mr. Jeudy underwent various diagnostic procedures which identified that he had an open infected right talus fracture with a complex open infected wound, a complex infected wound of left distal tibial region, and sepsis. Mr. Jeudy's condition mandated a stay in the Trauma Intensive Care Unit (TICU) for aggressive treatment. While in the TICU, Mr. Jeudy was treated for severe complications which included respiratory issues, sepsis, and abdominal complications that required surgical intervention. Mr. Jeudy underwent approximately 17 surgical procedures including irrigation and debridements of extremities, exploratory laparotomy, subtotal colectomy with ileostomy, small bowel resection with primary anastomosis, surgical repair of various fractures, and skin grafting to repair extensive tissue loss of the bilateral extremities. On March 19, 2010 Mr. Jeudy went into cardiac arrest. The TICU personnel along with Trauma Team were eventually able to restore vital signs and Mr. Jeudy's long road to recovery continued. Mr. Jeudy's incredible recovery was highlighted by a 174 day ICU stay and an additional 153 day stay in the Trauma Step-Down Unit.

On January 27, 2011 Mr. Jeudy was transferred to Jackson's inpatient rehabilitation unit in stable condition. Mr. Jeudy worked hard everyday to meet the goals that were established by the Rehab Team. By the day of his discharge, Mr. Jeudy had achieved most of his goals including being able to walk with a rolling walker and to walk independently using one hand to steady himself on the parallel bars. On March 3, 2011 he was discharged to his Miami area home to continue his rehabilitation care with his family.



After speaking with Mr. Jeudy, he is still hopeful that he will have a 100 percent recovery and will walk independently. He is still motivated to continue with his home therapy and to improve his daily level of function. He is looking forward to returning to Haiti and to continue his life's work as a lawyer. He is grateful to the Jackson Health System, the U.S. Government, and especially to his primary doctor, Edward Lineen, M.D., Jackson Memorial Hospital Trauma Surgeon and University of Miami Faculty stating, "without them, I would have been dead."

Real People. Real Stories.



JACKSON MEMORIAL HOSPITAL RYDER LEVEL I TRAUMA CENTER GLORIA SUCCESS STORY

On August 18, 2010 Gloria, 25 weeks pregnant with her second child faced a life altering accident. Below, Gloria recounts the circumstances leading to her accident and the event itself.

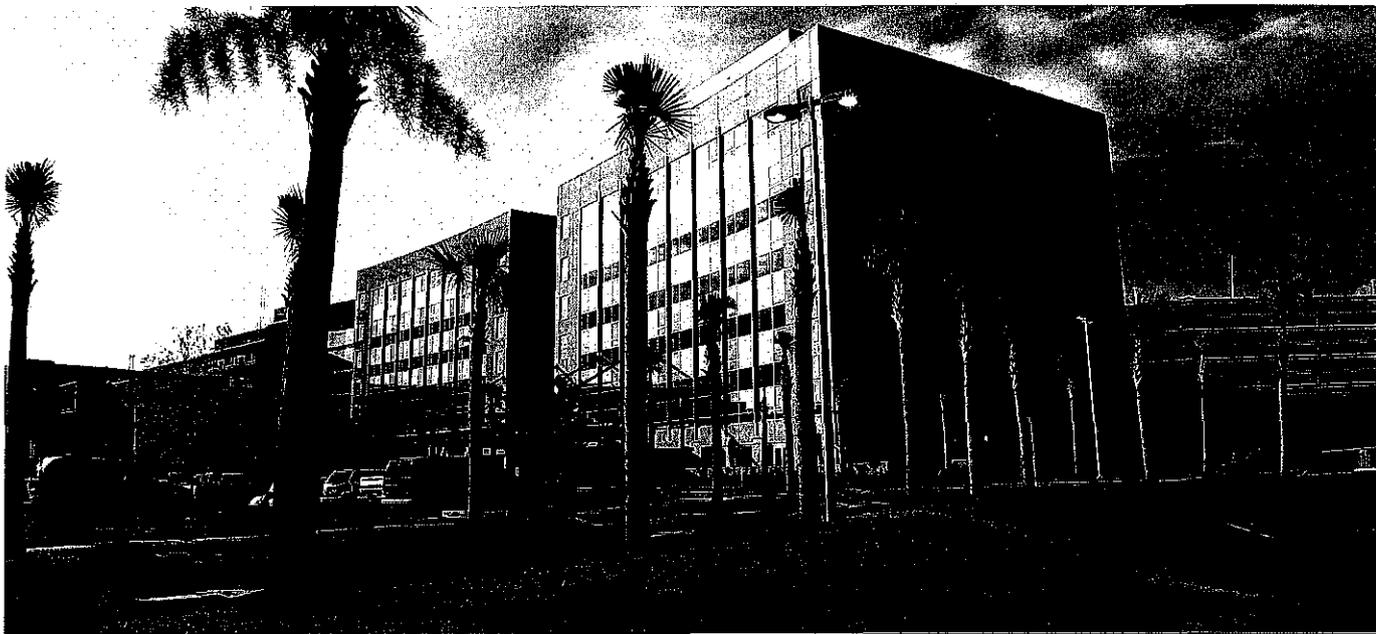
"I was at home preparing a family dinner and had lit some candles. My husband left to pick up his daughter and he took our three year old son, David with him. In a matter of seconds, as I walked by the candles, my skirt caught fire. I looked down and the flames were up by my waist. I quickly started tearing my clothes off because I was six months pregnant and all I could think of was my unborn baby (Luis). I then went outside the house screaming for help. Luckily, my husband was still outside putting our son in his car seat and he was able to extinguish the fire.

The paramedics were at my house within minutes and they flew me over to Jackson Memorial Hospital Ryder Level I Trauma Center by helicopter. From the moment I got to the hospital everyone was so helpful and caring. I was terrified, but the nurses and doctors assured me everything would be alright. Because I was pregnant, my treatment had to be different than a regular burned victim. I was at Ryder for 60 days as my burns slowly healed and baby Luis was monitored. The staff at the burn unit became family to me. They shared my unborn baby's milestones and every sonogram. Everyone took excellent care of baby Luis and me. Within two months I was able to go home and give birth to my baby as planned!

I am now still recovering from the accident after 10 months, but I am able to care for my sons and my family. I'll be going back to work in the near future. I couldn't have made it through such a horrible accident without the exceptional care I was given at Ryder Trauma/Burn Center. I thank God for each and every person that helped me through my recovery....they are all angels in disguise! My warm regards and lots of love to you all!"

Gloria sustained a 39.5 percent total body surface burns from a flame injury when the clothing she was wearing ignited from candles. Because of her pregnancy modifications were made to her burn care. The Burn Team in consensus with the patient and obstetrician decided to treat her burns conservatively. For Gloria this meant twice daily wound care with enzymatic debrider, pain management, physical and occupational therapy, and every four hour fetal monitoring. After two months in the University of Miami/Jackson Memorial Hospital Level I Ryder Trauma/Burn Center, Gloria was discharged with follow up care.

LAKELAND REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Lakeland



Lakeland Regional Medical Center (LRMC) is a private, not for profit hospital located in Lakeland and is the Fourth largest hospital in Florida. We have the busiest single site Emergency Department in the state, and we are licensed for 851 beds. Our trauma center's designated service area is comprised of Polk, Highlands and Hardee counties, which have a combined census of approximately 728,612 residents based on U.S. Census Bureau estimates for 2010. Trauma patients are also received from other counties, including Hillsborough and Pasco. Although we receive trauma patients from several counties, the majority are from Polk County.

DEMOGRAPHICS AND CLINICAL STATISTICS

Trauma Program Operations:

- ▶ Division of Acute Care Surgery
 - Six full-time trauma/critical care surgeons provide trauma call on a continuous basis under the leadership of Olumide Sobowale, M.D, Trauma Services Medical Director Trauma surgeons are board certified in general and critical care surgery.
- ▶ Division of Neurosurgery
 - Two full-time board certified neurosurgeons
- ▶ Division of Orthopedic Surgery
 - Four full-time board certified orthopedic surgeons
 - Outpatient Clinics for Trauma, Neuro, and Orthopedic follow up care
 - Trauma Program Manager
 - Trauma Clinical Registrar
 - Trauma Performance Improvement Coordinator

- Trauma Outreach & Injury Prevention Coordinator
- Trauma Program Administrative Assistant

Statistics:

- The LRMC Emergency Department is the busiest single site ED in the state
- Volume for calendar year 2010 was 153,221 patient visits, averaging more than 419 patients per day
- LRMC has a 17 bed Trauma Intensive Care Unit designated for trauma and neurosurgical patients
- LRMC has a designated Trauma floor for post-trauma recovery - either initially or once the patient's condition allows transfer from the TICU
- 1165 Trauma Patients
 - 26% of patients had an Injury Severity Score of >15
 - 5.6% discharged home from ED
- Mechanism of Injury
 - 86% blunt, 14% penetrating
- 68% male, 32% female
- Age of Trauma Patients (96% adult, 4% pediatric)
 - 4% birth – 15 years
 - 29% 16 – 29 years
 - 22% 30 – 44 years
 - 27% 45 – 64 years
 - 18% >= 65 years

LRMC received its sixth consecutive medal of honor from LifeLink of Florida for top-tier organ donation rates. No other hospital in LifeLink's 15-county service area has received this national award six years in a row.

LAKELAND REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Lakeland

EDUCATION OF HEALTHCARE PROFESSIONALS

There is significant focus on education at LRM for nurses, physicians, and other allied staff who provides care to trauma patients. Many of our educational offerings are open to external health care providers.

- Trauma Case Review for Nurses - Trauma surgeons present recent cases in an educational format, and provide opportunities for discussion and Q&A.
- Trauma Journal Club - Monthly literature review of trauma journal article. Discussion led by TICU manager or CNS.
- Advanced Trauma Life Support (ATLS®) – LRM is an ATLS training site for physicians. Trauma Services conducts at least two student refresher courses each year, and courses are open to external registrants.
- TNCC, ENPC, PALS and ACLS - Courses are conducted multiple times throughout the year and are open to external registrants.
- Trauma 101- A course developed at LRM to provide initial trauma training for RNs.
- Trauma Update - A course developed at LRM to provide ongoing trauma education for staff. The course is conducted in the spring and fall of each year; it focuses on emerging trends in trauma care and includes case reviews. All staff are welcome to attend.
- The Electronic Library of TRAUMA Lectures – A CD of trauma related presentations designed to complement the text, Trauma Nursing: From Resuscitation Through Rehabilitation 3rd Edition, by McQuillan et al, and serves as a complete educational program for training nurses across the trauma continuum of care.
- Trauma One – ATLS simulator with on-screen "body." The participant can follow through the learning mode or perform the testing mode that evaluates performance. In-service credit is available. The simulator is maintained at the Polk County EMS training station.
- Other topics as identified by educators, staff, physicians, or peer review.



INJURY PREVENTION AND COMMUNITY EDUCATION

Violence Prevention: During 2010 LRM Trauma Services initiated a violence prevention program, which will include a video for presentation in middle and high schools. The video includes interviews and footage of a former trauma patient, a GSW victim who suffered a spinal cord injury, and how his life has been affected by violence.

- 1027 victims of violence (GSW, stabbings, and assaults) treated at LRM in past 5 years
- 46% of all assaults with a weapon occur to individuals between the ages of 16 and 29

Motorcycle Safety: LRM is a partner in the \$250,000 Motorcycle Safety Grant funded by FDOT, administered through the Florida DOH.

- 17.8% of all traffic fatalities are motorcyclists
- Since the repeal of the helmet law in 2000, fatal motorcycle crashes have increased 21%

Trauma Awareness Day: Our annual celebration is well attended by trauma survivors and their families, many of whom share uplifting stories of courage and perseverance. The celebration is also attended by the many caregivers who helped make a difference in their lives: pre-hospital EMS ground and flight crews; sheriff's office deputies; police officers; and all levels of LRM staff from the ED, TICU, and Trauma Unit, as well as the trauma medical director, trauma program manager, and trauma and neurosurgeons.

Florida Injury Prevention Advisory Council (FIPAC): Our trauma medical director and trauma program manager are active members of FIPAC. Dr. Olumide Sobowale, trauma medical director, is on the team for Goal 2: Facilitate opportunities for collaborative injury prevention efforts in: Traffic

LAKELAND REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Lakeland



safety, poisoning, interpersonal violence, suicide, child maltreatment and other injuries. Janine Curlutu, RN, BSN, Trauma Program Manager is on the team for Goal 3: Falls Prevention.

Coalition on Injury Prevention (CIP) for Polk County: Established in 2002 as a joint effort between LRMC Trauma Services and the Polk County Health Department. LRMC assumed the role of lead agency in 2010. The membership consists of injury prevention professionals from various fields. The coalition's mission is to provide education and prevention activities through partnerships, communication, support networks, and community events.

SafeKids: LRMC Trauma Services actively participates in the Polk County Council of the Suncoast Coalition of SafeKids. Several injury prevention events are scheduled throughout the year focusing on bike helmet fittings and Child Passenger Safety Seat Checks.

WalkSafe: A pediatric pedestrian injury prevention program developed with a grant at Ryder Trauma Center in Miami. LRMC has participated since 2007, when the program was expanded throughout the state. WalkSafe's goal is to reduce injuries and fatalities through an elementary school based prevention program that includes age appropriate classroom curriculum. LRMC hosted an awards ceremony and pizza party for the program's Polk County, grade-level, poster contest winners. The ceremony was well attended by family members, school principals, PE coaches and other school faculty. The program had each child's poster framed for presentation, and provided each child with a pair of Nike sneakers. The WalkSafe Program is complimented by National Walk to School Day, SafeKid's "Walk This Way" and the "Safe Routes to School" programs.

Waterproof Florida/Florida Safe Pools: Florida leads the country in drowning deaths of children ages one through four. Waterproof Florida is a water safety campaign

developed by the Florida Department of Health, and involves three main layers of protection: 1) Supervision, 2) Barriers, and 3) Emergency Preparedness. This campaign is supported by major stakeholders in drowning prevention, including Florida Safe Pools. The members of the Polk County Coalition on Injury Prevention participated in a Florida Safe Pools educational session, and arranged a pool safety event at Lakeland's public pool. The program's main focus is on barriers to pool access.

Basic Aid Training (BAT) and First Aid for Children Today (FACT): American Red Cross programs presented by the trauma program manager to children in grades K-5 at the Boys & Girls clubs. Includes basic aid and injury prevention information.

Career Academy: Conducted two times/year for high schools students interested in health care careers. Trauma program manager or trauma outreach & injury prevention coordinator present information regarding the various types of trauma and resulting injuries seen in the ED.

Heat Stress Presentation: This program was developed for use in the community for companies whose employees are exposed to hot weather and in need of education to prevent heat stress conditions. Topics include heat-related illnesses, how to evaluate associated risks, controlling heat stress, normal cooling mechanisms, prevention, first aid, safety, and awareness. In addition, the OSHA "Quick Card" for Preventing Heat Stress is distributed to each person attending the presentation.

Fall Festival: Q.I. Department football themed information & safety fair. Trauma outreach & injury prevention coordinator and trauma program staff manned a "Stadium Security" booth providing gun safety information, and distributed more than 400 gun locks to staff.

LAKELAND REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Lakeland

Mothers Against Brain Injury: LRMCM social workers distribute tote bags to families of patients who have experienced a traumatic brain injury. The tote bags are provided free of charge by Mothers Against Brain Injury (www.mabii.org), an organization founded by Tracy Porter whose own son was affected by a TBI. The totes contain useful items, such as pillows, blankets, toiletries and snacks, as well as various resource materials, and they are much appreciated by patients' families. Approximately 80 tote bags were distributed during 2010.

Adult Health, Wellness, and Injury Prevention: LRMCM Trauma Services participates in community-initiated health and wellness fairs, and provides information on home and medication safety and falls prevention.

COMMUNITY AND DISASTER PLANNING

The trauma medical director, trauma program manager, and trauma surgeons participated in State of Florida Disaster Management & Emergency Preparedness training program.

LRMCM Management Team completed NIMS training (IS-700.a, IS-100.HC, and IS-200.HC), and the trauma program manager participated in the Train the Trainer Course.

The trauma medical director and trauma program manager are active members of the LRMCM Emergency Management Committee. LRMCM participates in internal and external readiness drills.

Tampa Bay Regional Domestic Security Task Force-4

- Following 9/11, Florida divided itself into seven (7) Regional Domestic Security Task Forces. The goal of the RDSTF is to provide a regional response to any WMD or terrorist incident that may occur within the State.
- The trauma director and trauma program manager are active members of the Health & Medical Committee for the Tampa Bay RDSTF-4.

For additional information, please contact:

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Real People. Real Stories.



LAKELAND REGIONAL MEDICAL CENTER LEVEL II TRAUMA CENTER DeAnthony Williams Success Story

Submitted by: Teghan Sheets, R.N.
Trauma Injury Prevention and Outreach Coordinator
Lakeland Regional Medical Center Level II Trauma Center

"I first met Mr. DeAnthony Williams during routine injury prevention rounds one Thursday. It was hard to believe that just a week prior he was paralyzed by a gunshot to his spinal cord. His optimism and enthusiasm was evident by the smile on his face. As I spoke with him in more detail about the events that surrounded the disabling shot, he shared with me about his background of drug activity, violence, and imprisonment that had progressed in his life from a young age.

One other thing that was evident that day as I spoke to DeAnthony was his desire that people learn from his mistakes.

DeAnthony was with us from December 22, 2010 to January 17, 2011, when he was discharged to a rehabilitation facility. Throughout his recovery process, we stayed in contact and I am excited today to have him join our efforts to prevent the young people in our community from living a life of violence.

Together with one of our local high schools, we will re-enact DeAnthony's story and use it as a tool to tell young people about the dangers of violence."

LAWNWOOD REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Fort Pierce

DEMOGRAPHICS AND CLINICAL STATISTICS

Lawnwood Regional Medical Center (LRMC) & Heart Institute is part of the East Florida Division of Hospital Corporation of America. The hospital has 331 acute care hospital beds. In June 2011 we will open our Surgical Intensive Care Tower which will provide us with an additional 24 trauma ICU beds. In late 2011, we will open a Pediatric Intensive Care Unit, which will be staffed with pediatric intensivists.

Trauma patients are resuscitated in our state of the art resuscitation rooms. We have two dedicated helicopter landing pads to ensure rapid access to our resuscitation suite, scanners, operating rooms and Trauma ICU beds.

LRMC became a Provisional level trauma center in May 2009 and was verified as a Level II trauma center in July 2010. We provide trauma care to a population of just over a million from St Lucie, Indian River, Stuart, Martin, and Okeechobee counties.

The trauma center at LRMC is recognized not only as an innovative leader in providing care to the critically injured trauma patient, but also by its commitment to the community. Our services include emergency medicine, general surgery, psychiatry, neurosciences, neonatology, cardiac medicine, cardiac surgery, and general orthopedics. We also have a comprehensive Stroke Center. An important component of the trauma patient's continuum-of-care is rehabilitation. LRMC's Physical Medicine and Rehabilitation Department continues to be progressive and innovative in providing services including occupational, speech, physical, psychological, and recreational therapy. LRMC's Rehabilitation Unit is accredited by the Commission on Accreditation of Rehabilitation.

Lawnwood is now part of the University of South Florida/HCA Trauma Network, joining forces with one of the state's top medical schools allowing us to reach our goals for research, quality, safety and better outcomes for our patients. The Trauma Network links hospitals from South Florida to Jacksonville, helping HCA standardize treatment from one center to the next, also in case of a disaster, doctors at one trauma center can take over at another.

TRAUMA STATISTICS

Indicator	2009	2010
Total Trauma Patients	934	1387
Total Trauma Alerts	606	1048
ISS>15	25%	21%
MOI Blunt	85%	87%
Penetrating	14%	12%
Burns	1%	1%
Length of stay Hospital	4.4 days	4.0 days
Length of stay ICU	2.0 days	2.2 days
Average ISS	11	11

EDUCATION HEALTH CARE PROFESSIONALS

LRMC is proud of the trauma education we provide to our staff and community. All staff are expected to complete eight hours of trauma related education per year and the emergency room staff 16 hours of trauma related education.

The following are a list of educational activities supported by the trauma service line:

- **Monthly Trauma Nursing Peer Review** for the multidisciplinary team including pre hospital providers is held the second Friday of each month, in this meeting we discuss opportunities arising from the care of our trauma team the meeting is chaired by the trauma medical director and trauma program director.
- **Trauma Critical Care Council** - The Clinical Nurse Leader, a masters prepared nurse, champions this important group to promote professional practice and implement evidence based practice at the bedside through a nurse driven self governance program, for trauma patients.
- **TNCC ENPC PALS ACLS** - The above courses are held at LRMC and staff from the trauma center are active instructors.
- **Burns and Disaster Education** - LRMC is represented at Region 5 by a disaster coordinator, training at LRMC has included courses from FEMA. as well as burns education for the interdisciplinary team and mock mass casualty emergency management incidents including radiation decontamination.
- **Trauma Lecture Library** - The Society of Trauma Nurses Trauma Lecture Series is a CD presentation complementing Karen McQuillan's trauma text Trauma Resuscitation through Rehabilitation and used for trauma nurses throughout the continuum-of-care.
- **Indian River Community College Trauma Update** - Twice a year LRMC trauma team presents an eight hour course at Indian River State College which is trauma specific education for LRMC staff, EMS and LRMC students.
- **TEAM** - The T.E.A.M. course from the American College of Surgeons provides a standardized introductory course in the evaluation and management of trauma and has been utilized for education of the multidisciplinary team at LRMC.

NATIONAL CONFERENCES

The trauma program director is an active member of the Society of Trauma Nurses and teaches the Advanced Trauma Course for nurses nationally, in addition he has worked as a member of the conference planning committee for the annual trauma conference held in Orlando and San Antonio.

LAWNWOOD REGIONAL MEDICAL LEVEL II TRAUMA CENTER - Ft. Pierce

INJURY PREVENTION AND COMMUNITY EDUCATION

LRMC is very active in the local community and with state wide initiatives for injury prevention. Below is a list of programs:

- **Shattered Dreams** - LRMC co operated with Saint Lucie County Fire Rescue and Indian River Fire Rescue for the pre prom presentation showing the dangers of drinking and driving.
- **Mothers Against Brain Injury** - LRMC social workers program staff and distribute tote bags to families of patients who have experienced a traumatic brain injury. The tote bags are provided free of charge by Mothers Against Brain Injury (www.mabii.org), an organization founded by Tracy East- Porter whose own son was affected by a TBI.
- **Single Brief Intervention and Referral** - SBIRT has been defined and practiced at LRMC as a comprehensive, integrated, public health approach to the screening and identification of individuals who are practicing risky alcohol and drug use, and the timely delivery of early brief interventions to these people in order to reduce risky use, no matter of funding the trauma social worker completes a screening a brief intervention and the patient is referred to counseling services if needed.
- **Shepherd Center** - LRMC has developed a unique relationship with the Shepherd Center in Atlanta; we are using the DVD Understanding Spinal Cord Injury and Understanding Brain Injury for all families and patients with catastrophic injury. The center has also delivered lectures to our staff on spinal cord the first 72 hours on the acute management of spinal cord Injured patients.
- **Be Seen Safety Campaign** - Upon becoming a Provisional trauma center LRMC distributed blinking light units to all schools in a multidisciplinary effort including the police to make school children more visible when walking to school and playing. Since distributing these lights LRMC has seen no children with injuries while walking to school. We have currently distributed over 5000 of these blinking lights to local schools.
- **Bike Rodeo** - In cooperation with the local Lutheran church, Fort Pierce Police Department, the Emergency Room and Trauma staff LRMC distributed over 300 bicycle helmets and hosted rodeos where bikes were tested for safety, safe riding techniques were discussed and free bike helmets were distributed to our community.
- **High Risk Drivers Course** - Every quarter LRMC hosts this driving safety course facilitated through AARP.
- **Community and Disaster Planning** - LRMC participates in the statewide disaster preparedness program coordinated by the Department of Health. Physicians and nursing team members have attended the Disaster Emergency Preparedness course run by USF/HCA. Staff have completed the FEMA disaster courses. We participate in state, regional, and local disaster planning and continually update and revise our disaster plan for competencies, bioterrorism, and weapons of mass destruction. We participate in regional and community disaster drills including radiation decontamination, as well as mass casualty.

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LEE MEMORIAL HOSPITAL LEVEL II TRAUMA CENTER - Fort Myers



Who we are... We are your friends, your family, and your neighbors.

Open since 1916, Lee Memorial Health System (LMHS) continues to be an award-winning health care system with more than a million patient contacts each year. Our success, however, begins with our greatest assets...our employees.

Our staff is routinely recognized for the compassionate and dedicated care they provide to their patients. More than 9,300 employees and 4,500 volunteers and auxiliary members are part of the Lee Memorial Health System family - the very heart of our health system. Our medical staff, which totals nearly 1,130 Lee County physicians, is also a vital part of our health system.

We are much more than just a health system -- **We are caring people caring for people.**

OUR MISSION

Our mission is to continue to meet the health care needs and improve the health status of the people of Southwest Florida by:

- Providing quality primary, secondary, and selected tertiary health care services in a personalized, convenient and cost-effective manner with a dedicated health care team;
- Meeting or exceeding customer expectations and addressing the spiritual and emotional needs of patients and their families;
- Promoting wellness, healthy lifestyles, community health education programs and a collaborative community effort;
- Maintaining a financially viable delivery system with multiple care sites to generate the resources needed to make essential health care services available to all, including those unable to pay; and
- Remaining a not-for-profit community health care leader and resource.

Lee Memorial Health System has been acknowledged for being among the 100 Top Hospitals for cardiac services, orthopedic care, stroke care, and intensive care. LMHS consists of four hospitals: Lee Memorial Hospital, LMHS Hospital, Cape Coral Hospital, and the recently opened Gulf Coast Medical Center. LMHS operates Lee Memorial Level II Trauma Center, the Children's Hospital of Southwest Florida, the Rehabilitation Hospital, as well as a home

— LEE MEMORIAL —
TRAUMA
C E N T E R
Surgical/Critical Care

LEE MEMORIAL HOSPITAL LEVEL II TRAUMA CENTER - Fort Myers

health agency, a skilled nursing facility, outpatient centers and the Lee Physician Group.

As a public, not-for-profit healthcare system, Lee Memorial Health System is owned by the citizens of Lee County, Florida and operates under the direction of a publicly elected, 10-member board of directors. The LMHS board also serves as the board of directors for the Lee County Trauma Services District.

OUR TRAUMA CENTER

The Lee County Trauma Services District was created as an independent special district pursuant to Chapter 189, *Florida Statutes*, by the 2003 Florida Legislature. The purpose was to financially support the provision of trauma services in Lee County, including the comprehensive emergency medical services for victims of trauma and trauma-related injuries provided by the state of Florida Level II trauma center operated by Lee Memorial Health System (LMHS). The district's enabling legislation establishes its governing board, officers, and meeting requirements, while also prescribing its powers and duties.

Lee Memorial Hospital is a 367 bed acute care Level II trauma center, which serves the following counties: Collier, Charlotte, Hendry, Glades, Desoto, and Lee. It is the only trauma center covering southwest Florida with a total trauma registry patient census of 2079 in calendar year 2010. The majority of our patients are the result of blunt trauma (89 percent), followed by penetrating trauma (10 percent), and burn injuries (1 percent). Lee Memorial Hospital is the only trauma center between Tampa and Miami.

Age Demographics of people served by LMHS Trauma Service: CY2010

ALL TRAUMA REGISTRY PATIENTS: 2079 TOTAL ENTRIES	
Age in Years	Percentage of Patients
0 to 15	10.21
16 to 29	18.63
30 to 44	15.79
45 to 64	25.32
65 +	30.05
Total	100.00

TRAUMA ALERTS: 931 TOTAL ACTIVATIONS	
Age in Years	Percentage of Patients
0 to 15	7.53
16 to 29	26.91
30 to 44	22.82
45 to 64	26.16
65 +	16.58
Total	100.00

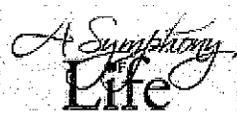
COUNTIES SERVED BY LMHS TRAUMA SERVICE: 931 TRAUMA ALERTS	
County of Injury	Percentage
LEE	55.21
COLLIER	17.19
CHARLOTTE	14.50
HENDRY	6.98
DE SOTO	3.44
GLADES	1.29
OTHER	1.39
Total	100.00

TRAUMA TEAM CLINICAL EXCELLENCE

Under the guidance and leadership of Dr. Andrew Mikulaschek, Trauma Medical Director, Lee Memorial Health System Trauma Service is a model of clinical excellence. All of our trauma surgeons have completed fellowships in trauma and surgical critical care. Our surgeons are Advanced Trauma Life Support (ATLS) instructors, and teach their peers on a regular basis. The Lee Memorial Health System Trauma Service Team is also supported by four trauma and critical care support trained physician assistants. Our trauma resuscitation nurses, ER nurses and Surgical ICU nurses are the core of our delivery of the highest quality of compassionate care. All certify in ACLS, TNCC, and ENPC with a high percentage of those becoming board certified in emergency or critical care nursing.

LEE MEMORIAL HOSPITAL LEVEL II TRAUMA CENTER - Fort Myers

LIFELINK COLLABORATIVE



Lee Memorial Health System continues to partner with Lifelink of Florida, OPO (Organ Procurement Organization). In 2010, Lee Memorial Health System had 19 organ donors. These gifts of life were distributed to 53 recipients.

In 2009, Lee Memorial Health System received two HRSA organ donation Medal of Honor awards for achieving a greater than 75 percent conversion rate. The conversion rate is based on the number of eligible donors and the families that have said "yes" to organ donation. Only 300 hospitals across the United States received this award.

In addition, Lee Memorial Hospital was also awarded a second Medal of Honor Award for their achievement of 4.3 organs per donor (OTPD). This is a testament of excellent patient management, as most of the Lee Memorial patients are products of severe traumas, with multiple injuries to many of the major organ systems.

The Lee Memorial Health System Lifelink Collaborative, which consists of physicians, nurses, and support staff, is committed to saving more lives through organ donation.

OUTREACH AND PREVENTION

Lee Memorial Health system takes great pride in our injury prevention and outreach programs. The Injury Prevention Program's mission is to work throughout Lee County and the trauma catchments to prevent unintentional injuries, and to decrease the number of injuries, deaths and disabilities through education, advocacy, and awareness. In 2010, Lee Memorial Trauma Injury Prevention Programs educated 515,231 participants in a total of 138 presentation.

PREVENTION PROGRAMS

- **Bike with Care** - It's just good sense! A helmet can save an adult's or child's life. Unfortunately, when people use their bikes, they don't always wear helmets. Serious head injuries resulting from cycling crashes are a primary cause of death and disabling injuries for children and adults alike. A helmet cannot prevent a bike crash, but it can save a life and help prevent permanent brain injury.
- **Dare to Care 2002** - Designed for teens, college students, and adults. The program discusses the consequences of underage alcohol use, binge drinking, drinking and driving, and seatbelt non-compliance. It shows the impact of this behavior on family, friends and



LEE MEMORIAL HOSPITAL LEVEL II TRAUMA CENTER - Fort Myers

others, and relates true stories about the tragedy of drinking and driving, and binge drinking.

- **H.E.L.M.E.T.**- We continue to conduct H.E.L.M.E.T. tours for area students – the students are given an age appropriate talk regarding helmet and seatbelt safety, as well as the debilitating results of drugs and alcohol. They then tour the Trauma Bay, OR, Surgical ICU (for high school students), and an ambulance. Several Lee Memorial employees are certified car seat safety technicians and set-up monthly scheduled fitting stations around the region. We also have an excellent older adult services program geared to our high elderly population here in southwest Florida.
- **High-Risk Driver Course** - We have recently instituted a high-risk driver course. In coordination with traffic court judges and local law enforcement, defendants are referred to the course in lieu of, or in addition to a fine for serious traffic infractions. It is felt that this is a very good example of how public and private agencies can work together to improve the safety and livability of our community.
- **Friday Night video** - This 15-minute video shows a mock-trauma code. See first hand as a coroner discusses her feelings on notifying a family about a teen's death.
- **Gun Safety: It's no Accident** - This program is designed to increase public awareness of firearm safety issues and reduce unnecessary preventable firearm injuries and fatalities. The program offers age-appropriate information for children in grades K-1, 2-3, and 4-6. A module for teens incorporates some of the challenges faced during adolescence today. A community module is provided for parents and other adults. Charlie Anybody for K-1, 2-3, and 4-6 and In a Flash video for grades 7-12.
- **Take Care 1 & 2**
- **Take Care 1 - Safe Medication Use and Falls Prevention for Mature Adults.** This program is aimed at the population of 65 and older; it focuses on the safe use of medication, alcohol and medication interaction, and the doctor/patient relationships. It contains a section about herbal medicines and their interaction with prescribed drugs, as well as a section on preventing falls in the senior population.
- **Take Care 2** - This program is also for the 65-year-old and older population. It discusses all aspects of highway safety, including drinking and driving, safety belt use, and pedestrian safety, along with making decisions about when to curtail or stop driving. There is also a section on physical fitness, including healthy walking guidelines.
- **Trauma Nurses Talk Tough** - This program was developed by trauma nurses in an effort to prevent senseless deaths. Kids continue to die once the injury happens no matter how skilled we are at trauma care. The best way to decrease senseless deaths caused by injuries is to prevent them. Injury is the biggest killer of everyone under the age of 44. The cure for these deaths is prevention! We have also come to realize that if we don't get the information to parents as well, we will be less successful in changing the attitudes of the kids. This program is designed for specific age groups, K-12.
- **Falls Prevention: Stepwise Lee - Community wide falls**

prevention program currently aimed at the mature adult, however is going to cover all ages in the near future.

- **Drug House Odyssey** - Walk through live drama depicting the possible outcomes related to personal choices to use drugs and alcohol and the consequences associated with these choices.
- **Young Driver Program (Three hours)** - Targets youth drivers to educate on the dangers faced by the new driver, and the consequences of inattentive and distracted driving.
- **G.A.T.E. Program Goals:** To interrupt youth violence and end the cycle of criminality. Protect young people from gangs, drugs, child abduction, and acts of violence perpetrated by other teens and adults through lectures, intervention, and parental contact. Young people deserve to lead safe healthy lives without the risk of gangs, drugs, and violence.

**The
Rehabilitation
HOSPITAL**

REHABILITATION: THE REHABILITATION HOSPITAL AT LEE MEMORIAL

The Rehabilitation Hospital occupies the fifth and sixth floors of the Medical Office Center and offers a 60-bed inpatient medical rehabilitation setting. The Rehabilitation Hospital is a specialized health care delivery system that provides comprehensive, cost effective, outcome oriented medical rehabilitation services to enable patients to live at their highest level of physical, social, and cognitive independence within the community. The Rehabilitation Hospital at Lee Memorial has recently been certified by the DOH Bureau of Brain and Spinal Cord Injury.

Our Mission

The Rehabilitation Hospital assists in the restoration of a person's ability to live at their highest potential level of physical, social, and cognitive independence within the community.

Number of Persons Served

In fiscal year 2010, (October 2009-September 2010) the Rehabilitation Hospital admitted 967 patients delivering over 11,120 days of patient care with an average length of stay of 11.5 days.

LEE MEMORIAL HOSPITAL LEVEL II TRAUMA CENTER - Fort Myers

Diagnoses Served

The case mix of impairment groups served by the Rehabilitation Hospital are listed below:

	Number of Patients	* TRH	** Nation
Stroke	226	23.4%	22.3%
Traumatic Brain Injury	33	3.4%	3.8%
Non-Traumatic Brain Injury	40	4.1%	5.3%
Traumatic Spinal Cord Injury	12	1.2%	1.4%
Non-Traumatic Spinal Cord Injury	25	2.6%	4.1%
Neurological Conditions	27	2.8%	9.2%
Fracture Lower Extremity (includes Hip Fracture)	194	20.1%	11.7%
Replacement Lower Extremity (Hip/Knee)	70	7.2%	11.4%

	Number of Patients	* TRH	** Nation
Other Orthopedic	79	8.2%	6.1%
Amputation Lower Extremity	27	2.9%	2.9%
Cardiac	42	4.3%	3.7%
Pulmonary	11	1.1%	1.3%
Major Multiple Trauma Without Brain/Spinal Injury	43	4.4%	2.6%
Major Multiple Trauma With Brain/Spinal Injury	10	1.0%	1.3%
Guillain Barré	4	0.4%	0.4%
Medically Complex	123	12.7%	10.3%

Patient/Family Satisfaction with Services

Satisfaction is measured by the independent Press Ganey Corporation's patient satisfaction survey that is sent five days after discharge to 60 percent of patients discharged from the Rehabilitation Hospital. In fiscal year 2010 (October 2009 - September 2010) our patients rated "Likelihood to Recommend the Hospital" at 88.8 percent.

Lee Memorial Health System Disaster Preparedness Initiatives

Lee Memorial Health System maintains a community wide commitment to disaster preparedness. Lee Memorial Health System maintains a full-time disaster preparedness coordinator who accumulates and maintains the resources necessary to respond to mass casualty events. The Mass Casualty Incident /Trauma Task force collaboration continues to refine responses and test our capabilities with the recent addition of a mass notification system that is currently under implementation. We are working extensively with our prehospital providers to predetermine surge capacity and patient distribution in a mass casualty incident. Lee Memorial Trauma Service in conjunction with Lee Memorial Health System administration has collaborated with the public health department, emergency medical service, emergency operations center, and community leaders to establish a unified response in the event of a disaster.

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Real People. Real Stories.



COLBY TURLEY SUCCESS STORY

"On March 25, 2005 I, Colby Turley, was run off the road by an aggressive driver on I-75 and Alico Road. My car flipped several times collapsing the roof. The driver then fled the scene. I had to be extricated from the vehicle and flown by MEDSTAR to Lee Memorial Trauma Center in Fort Myers, Florida.

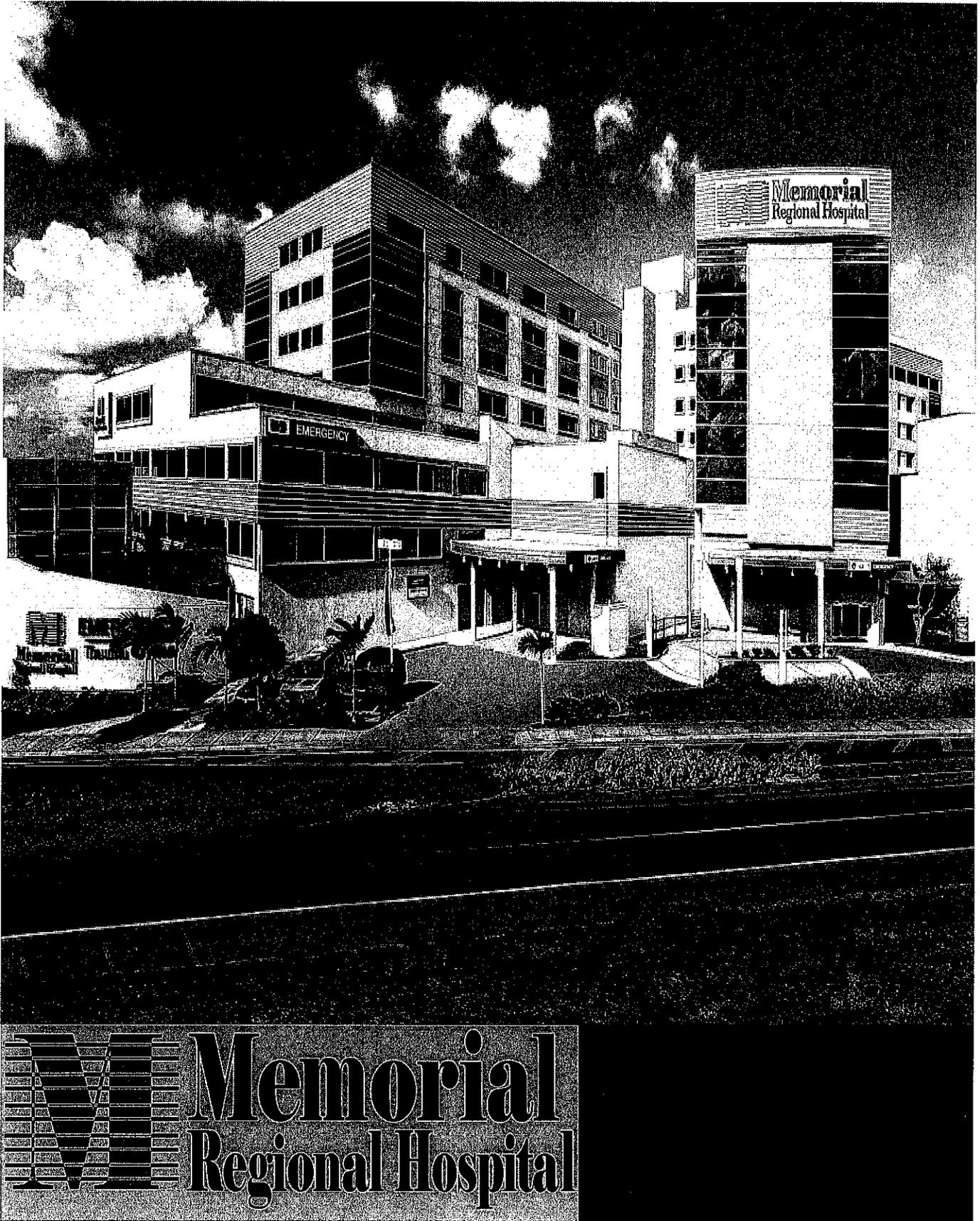
A week before my 21st Birthday I was told I had received a C5- C6 spinal cord injury and would be paralyzed from the chest down. I spent five days in SICU and an additional 43 days on the rehabilitation floor.

I have had to re-learn how to write, eat, brush my teeth, and brush my hair, and a million other things. But, what I kept was my voice and I decided to make it my goal to use it to help others and their families cope with life in a wheelchair.

Once I was strong enough, I trained with the Brain and Spinal Cord Mentoring Program of Florida. That was shut down do to funding, so I approached Lee Memorial Rehabilitation floor on my own and offered my services for all of their spinal cord injured patients. That led me to the Lee Memorial Trauma Center Mentoring Program which is where I feel I can make the most difference.

The woman I am today in the wheelchair, is because of highly trained paramedics on the ground and in the air and because I was lucky enough to be in Lee County which has a trauma center, if I had to be flown to a trauma center in Tampa or Miami, I may not be around to tell this story. The trauma center at Lee Memorial gave me a second chance; I will continue to repay by helping others."

**MEMORIAL REGIONAL HOSPITAL
LEVEL I TRAUMA CENTER - Hollywood**



**Memorial
Regional Hospital**

MEMORIAL REGIONAL HOSPITAL LEVEL I TRAUMA CENTER - Hollywood

Memorial Regional Hospital Level I Trauma Center is the flagship facility of Memorial Healthcare System. The hospital is one of the largest in Florida, with a distinguished reputation for advanced medicine and technology. Memorial Regional Hospital has evolved from 100 beds when it opened in 1953, to what is now a 713-bed, public community hospital, including 155 beds at the Joe DiMaggio Children's Hospital at Memorial. Altogether, Memorial Regional Hospital has more than 100 ICU beds, including dedicated units in neurosurgery, surgery, trauma, neonatology, pediatrics, cardiac surgery and medicine. Memorial is tax-supported as part of Memorial Healthcare System and governed by a seven member Board of Commissioners appointed by the governor.

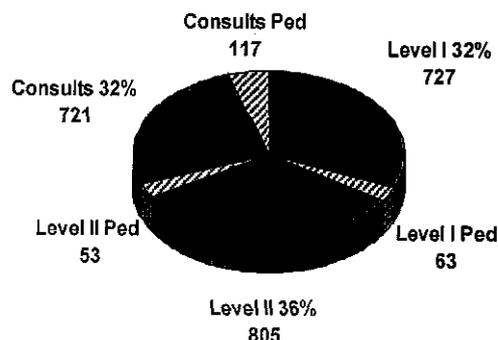
As the Level I trauma center for southern Broward County, Memorial and the Joe DiMaggio Children's Hospital pride themselves on providing trauma victims the most advanced care available. Memorial is on the cutting edge of providing the most recent technology and treatment available to our trauma patients.

The trauma service includes a comprehensive performance improvement program that constantly evaluates all facets of the trauma program. Memorial's vision is one of progress driven by commitment to provide the highest quality of trauma care to the community. Not only is the trauma center recognized as a leader in providing care to the critically injured, but also its commitment to the community is also evident in many other ways.

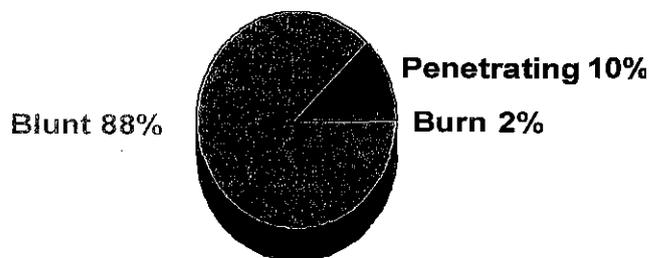
An important component of the trauma patient's continuum of care is rehabilitation. Memorial's Rehabilitation Institute of South Florida continues to be progressive, using some of the latest in advanced technologies within a modern yet homelike environment, while providing services including occupational, speech, physical, psychological and recreational therapy. Accredited by the Commission on Accreditation of Rehabilitation Facilities, Memorial offers an adult inpatient unit, pediatric rehabilitation facility, as well as outpatient treatment/services.

DEMOGRAPHICS AND CLINICAL STATISTICS

Memorial Regional Hospital is frequently recognized by national associations, and in local publications for its unsurpassed commitment to providing high-quality healthcare to the South Florida community and beyond. The Memorial Regional Hospital Level I Trauma Center and Emergency Department is staffed with experienced physicians and nurses specially trained in emergency medicine and trauma care to provide care 24/7/365 in 72 ED beds including three large trauma bays. In 2010, our emergency department served over 92,500 patients, including more than 2,200 critically injured trauma patients. The type of trauma patients and mechanism of injury are displayed in the graphs below: Mechanism of injury: 88 percent blunt injury; 10 percent penetrating injury; and two percent burns. Average age of trauma patient: 48 years old for adults and seven years old for pediatric trauma patients.



Mechanism of Injury



EDUCATION AND TRAINING

The Memorial Regional Hospital Trauma Program continues to provide high quality education and training to South Broward County and all trauma caregivers across the U.S., including physicians, paramedics, nurses, and community partners. We host monthly multidisciplinary trauma related educational activities, providing trauma education credits, such as:

- *18th Annual Trauma Symposium:* A three day symposium designed for individuals involved in the management of trauma patients. Recognized specialists present current topics and provide a forum for the exchange of knowledge and ideas on a variety of trauma issues.
- *Advanced Trauma Life Support Center:* The American College of Surgeons has approved our facility to provide the site sponsored course for the physician certification ATLS (Advanced Trauma Life Support).
- *Pre-Hospital Trauma Life Support Center:* The National Association of Emergency Medical Technicians has approved our facility to provide the site sponsored course certifications in PHTLS (Pre-Hospital Trauma Life Support).

MEMORIAL REGIONAL HOSPITAL LEVEL I TRAUMA CENTER - Hollywood

- *Trauma Nurse Education:* There are monthly mock traumas and trauma play dates for our nursing staff, as well as a virtual trauma series including interactive lectures on family presence in trauma, OB trauma, and a helicopter safety course. In addition, the TNCC, ENPC, ACLS, and PALS courses are offered several times a year.
- *Multidisciplinary Trauma Rounds:* Our bi-weekly trauma rounds provide our physicians, nurses, rehabilitation specialists, respiratory therapists, social workers, pharmacists, and other staff involved in the care of trauma patients with updated trauma education. Our trauma medical director conducts the weekly rounds along with the trauma program manager and the entire trauma team to ensure the delivery of quality care to all of our patients.

OUTREACH AND PREVENTION

Memorial Regional Level I Trauma Center is especially proud of our injury prevention and outreach programs, lead by our outreach coordinator. There is an extensive and diverse amount of programs and activities held throughout the community such as:

- *Trauma Awareness Day* is an annual safety event held during the month of May (National Trauma Awareness month) to promote awareness of trauma and injury prevention. Participants included trauma survivors, local EMS agencies, hospital administrations, physicians, nurses, and ancillary service staff. In 2010 there were over 150 participants, as well as numerous news organizations covering this event.
- *Prom Promise* is an annual dramatization of destructive decisions on prom night to educate high school students on the importance of safe driving and the consequences that can occur during prom night if destructive decisions are made. Prom Promise 2010 involves collaboration with our community partners (McArthur High School, EMS, Boyd Funeral Home, and State Farm Insurance), in which we created a video that was aired on a local television station and in all Broward County schools for the month of May. The video was distributed at the National SADD conference and events across the U.S.
- *Alcohol Misuse Brief Intervention* is a screening process initiated by the trauma team when a patient presents with an elevated alcohol level. The patient is screened using an alcohol misuse SBIRT screen and the patient is provided the necessary treatment and/or referral(s).
- *Previously called C.A.R.G.O. (Communities Addressing Responsible Gun Ownership), now Project Sentry,* is a community project involving various state and local agencies, such as the State District Attorney's Office, Broward County Sheriff's Office, the local offices of Bureau of Alcohol, Tobacco, and Firearms, as well as the North and South Broward Hospital District Division of Trauma Services. This program is geared for the middle and high school populations and after school programs such as the Diversion Program for First Offenders, outpatient drug programs, and intervention programs.
- *Playing It Safe with "Troo"* is a safety program geared for the elementary school population. The trauma center will bring a life-sized "Troo," the "Trauma Kangaroo," along with the American College of Surgeons' educational information and video into the elementary classroom to provide children with safe behaviors and/or play.
- *Destructive Decisions* is a program designed for the middle and high school populations to increase awareness of poor choices resulting from drinking, drug usage, texting and driving, etc. The focus is not on drug abuse but rather making good choices for healthy living.
- *SafeKids* is the first and only international nonprofit organization dedicated solely to preventing unintentional childhood injury. This organization focuses on one specific problem, that being more children ages 1 to 14 die from accidents due to motor vehicle crashes, fires, drowning, poisoning, and falls than any other cause. We are the proud sponsor for the Broward County SafeKids Coalition.
- *Seniors Learning Injury Prevention Strategies (S.L.I.P.S.)* is an educational program targeting seniors over the age of 65. The program consists of four parts: the normal aging process; falls and home safety; pedestrian/bike safety; and motor vehicle safety. Funding for this program included matching funds from Memorial Regional Hospital and the Florida Department of Health's Bureau of Emergency Medical Services Trust Fund.
- *Tough Trauma Talk* is a safety-related program for schools and other interested groups. The program is based on the original Trauma Nurses and Doctors Talk Tough Program, which originated in 1986 in Oregon. Tough Trauma Talk stresses several areas of injury prevention, including seat belt usage, appropriate care seat usage, air bag safety information, bike safety and helmet use, pedestrian safety, water safety, drinking and driving, as well as handgun and violence safety issues. The information is presented in an age-appropriate slide format. The target audiences for this program include: Middle and high schools, after school programs, (i.e., the Diversion Program for First Offenders), outpatient drug programs, and intervention programs.
- *WalkSafe™ Program:* A state wide program geared to educate the elementary population regarding pedestrian safety. Class room materials are reviewed prior to an actual walk to school day, incorporating parents, care takers, and families. This course is a combined effort between the University of Miami, Broward County School Board, Broward General Medical Center, as well as the Department of Transportation and other community partners.
- Community health fairs are events at which injury prevention literature including, coloring books on bike safety, safety reflectors, violence, seat belts, pedestrian safety, and impaired driving are available to the public. The Bicycle Helmet give Away Program makes helmets available to students who meet the free and reduced lunch program guidelines and who attend the Tough Trauma Talk presentations.

MEMORIAL REGIONAL HOSPITAL LEVEL I TRAUMA CENTER - Hollywood

RESEARCH

Memorial has an active research component and is involved in conducting pharmaceutical research and writing for publications. During 2010, the trauma center published several book chapters, articles, and presented abstracts. These included:

- *Septic Shock Syndrome Resulting From Snake Bite* – Dr. Carrillo, Magdalena Gonzalez PA-C, Dr. Sanchez. *Journal of Trauma* April 2010;68:1015.
- *Thyroid Carcinoma Secondary To Radiation Cloud Exposure From The Chernobyl Incident*, Andrew Atkinson, MSIII, Dr. Andrew Rosenthal. Accepted for publication by *Journal of Oncology Case Reports*, March 2010.
- *Delayed and Sudden-Onset of Diffuse Axonal Injury: A Case Report*- Dr. Rosenthal, Accepted for publication by *Journal of Neurological Sciences (Turkish)*, March 2010.
- Editorial Review of Articles: - Gerota's Fascia Flap: *A Technique for Autogenous Packing in Major Liver Injuries*- Dr. Carrillo, *Journal of Trauma*, April 2010.
- *-Blunt Cerebrovascular Injury is Poorly Predicted by modeling with Other injuries: Analysis of NTDB Data-* Dr. Carrillo, *Journal of Trauma*, April 2010.
- *Medical Student Evaluation of The Trauma Patient is Integral: A Case Study*- Poster presented at the American College of Physicians Conference, April 11, 2010 in Baltimore, MD.
- *Internal Hernia of the Falciform Ligament with Incarcerated Small Bowel*- Poster presented at the American College of Physicians Conference, April 11, 2010 in Baltimore, MD.
- *Anatomical Reconstruction of Complex Pelvic and Acetabular Fractures*- Presented at the 21st Annual Fellow, Resident and Medical Student Surgical Research Paper Competition, Mt. Sinai Medical Ctr, April 29, 2010. 2nd place winner.
- *Refractory chylothorax following a transhepatic gunshot wound to the abdomen requiring unorthodox surgical treatment* - Dr. Carrillo, Rosenthal, Pepe, Sanchez, and Lee- *Journal of Surgical Case Reports*. 2010 6:3, August 2010.
- Pharmaceutical/Device Trial: A Phase III, Randomized, Open-Label, Efficacy and Safety Study of Octaplex and Fresh Frozen Plasma (FFP) In Patients Under Vitamin K Antagonist Therapy With The Need For Urgent Surgery Or Invasive Procedures- Dr. Carrillo- study closed April 2010.
- Pharmaceutical/Device Trial: SAMMPRIS – Dr. H. Duong – study closed April 2010.
- *American College of Surgeons' Committee on Video-based Education Video Session: Bedside Abdominal Wound Care with Negative Pressure*- Video accepted for presentation at American College of Surgeons 96th Annual Clinical Congress, October 5, 2010. Video will be

put into ACS Video Library available online.

- *The Effects of Mild Hypothermia and Concurrent and Supplemental Infusion of Magnesium Sulfate in Severe Traumatic Brain Injury*- Dr. Carrillo, Dr. Zorman, Department of Defense Research Study, in progress August 2010.
- Annual Trauma Visiting Professorship - PAMPs, DAMPs and our evolving understanding of Sepsis and SIRS by Dr. Carl Hauser, Harvard Medical School, July 2010.

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MIAMI CHILDREN'S LEVEL I PEDIATRIC TRAUMA CENTER - Miami-Dade



DEMOGRAPHICS AND CLINICAL STATISTICS

Miami Children's Hospital (MCH) is a world leader in pediatric healthcare. Founded in 1950 by Variety Clubs International, Miami Children's Hospital® is South Florida's only licensed specialty hospital exclusively for children, from birth to adolescents, with more than 600 attending physicians and over 130 pediatric sub-specialists. Several pediatric specialty and sub-specialty services were ranked among the best in the nation in 2010 according to the U.S. News & World Report, in their "America's Best Children's Hospitals" issue, including the Heart and Heart Surgery Program, and the Neurology and Neurosurgery Program. The hospital is also home to the largest pediatric teaching program in the southeastern United States and has been designated an American Nurses Credentialing Center (ANCC) Magnet Facility, the nursing profession's most prestigious institutional honor.

In addition to the hospital clinical services, MCH supports more than 40 pediatric specialties and sub-specialties including the state-approved pediatric trauma referral center that admitted close to 600 pediatric trauma patients in 2010. The trauma center receives patients directly from the scene of the incident in Miami-Dade County and the Keys, as well as many inter-hospital trauma transfers from the South Florida area and Caribbean.

Miami Children's Hospital is licensed for 289 beds including 54 critical care/neonatal intensive care beds, ten OR suites, three bone marrow transplant beds, and 20 psychiatric beds. In addition, the hospital operates 30 observation beds. The Emergency Department (ED) has 32 acute care beds with an additional two dedicated trauma resuscitation beds. In 2010, the ED treated more than 87,000 patients with over 23,579 traumatic injuries ranging in severity from

MIAMI CHILDREN'S LEVEL I PEDIATRIC TRAUMA CENTER - Miami-Dade

minor abrasions/contusions to the critically injured multi-system trauma alert patients, who require full activation of the trauma team. The four most common mechanisms of injuries seen at Miami Children's Hospital are falls, motor vehicle crashes, pedestrian versus auto accidents, and sports-related injuries.

AGE DISTRIBUTION BY PATIENT VOLUME

Age in Years	Percentage
<1 year	8.9%
1-4 years	24.7%
5-9 years	27.7%
10-14 years	24.2%
15-17 years	13.5%
>17 years	0.87%

The MCH Trauma Team consists of four pediatric surgeons, three pediatric neurosurgeons, eight pediatric orthopedic surgeons, 18 emergency physicians, as well as sub specialties, highly trained nurses and ancillary staff to care for any critically injured child. Leading the Trauma Team are the trauma surgeons from the Division of Pediatric Surgery, who have primary responsibility of the pediatric trauma patients that are treated at MCH; however, multidisciplinary teams are frequently involved with trauma patients and meet collaboratively to ensure quality performance in trauma patient care. The excellence in care provided would not be possible without the dedication of these specialties, which includes: Trauma services; pediatric surgery; emergency medicine, nursing, intensive care, anesthesiology, respiratory therapy, neurosurgery; plastic surgery; orthopedics; numerous sub-specialists including ophthalmology and infectious disease; radiology; laboratory; child life specialists; social work patient family services and pastoral care; dietary; administration; quality resources; legal and risk management; and rehabilitation services.

EDUCATION AND TRAINING:

Miami Children's Hospital was recognized among the nation's "Top 125 Training Organizations" by *Training* magazine in 2010. In addition to the many professional, educational, and community training activities that are provided, we also provide monthly trauma conferences that are available to all surgical, medical and nursing staff of the hospital. Additionally, a 16-hour pediatric trauma course is offered twice a year for nursing staff to attend and learn how to best care for trauma patients using the most current treatments and evidence-based practice guidelines and recommendations from national resources. The learning needs of the participants are assessed frequently and the curriculum tailored to meet the individual needs of the staff as they are identified.

Emergency room nurses are also required to complete the Emergency Nurse Pediatric Course (ENPC) and PALS within their first year of employment in the ER, and are also encouraged to complete ACLS and TNCC. A few MCH nurses were selected to attend pediatric trauma symposiums hosted by the Children's Hospital of Philadelphia and Memorial Regional Hospital in Florida. Trauma specific orientation programs, training courses, in-services and evidence-based practice guidelines are utilized to promote quality patient outcomes. Additionally, to ensure ongoing education and reinforcement of skills, MCH staff members are scheduled to attend the simulation lab for hands-on training using trauma related scenarios; and monthly trauma mock codes and on-line courses/modules are also available to the staff.

INJURY PREVENTION AND COMMUNITY EDUCATION:

Community injury prevention activities are organized by the Miami-Dade County Safekids Coalition based at Miami Children's Hospital and is led by the Department of Preventive Medicine and supported with staff from trauma services, nursing, the Miami Children's Hospital Foundation and member organizations. This coalition is comprised of multiple organizations from the South Florida area that educates children and parents in the community on bicycle safety, gun safety, sports injury prevention including helmet safety, fire safety, and water and water-sports safety. In 2010, the SafeKids Program, Miami Children's Hospital Foundation and Miami Dade Parks and Recreation collaborated on a water safety initiative that taught on drowning prevention. Over 500 children and family members participated at this community event. The coalition also operates a permanent car seat fitting station located in the MCH parking garage, which allows certified technicians to educate parents on how to safely install a child safety seat; as well as educate parents and older children, too large for car seats, about the importance of proper seat position and seat belt use. MCH has eight staff members who are trained as certified child passenger safety technicians (CPSTs).



MIAMI CHILDREN'S LEVEL I PEDIATRIC TRAUMA CENTER - Miami-Dade

Miami Children's Hospital participates in the state-organized Florida Special Needs Occupant Program funded through a grant from the Florida Department of Transportation. This program provides the special needs population an avenue for evaluation of safe and approved methods to transport children on the roadways. The program allows for loaner special needs seats to be available for patients, whether the child has a short-term, need such as when placed in a Spica cast for a femur fracture, or long-term needs for chronic disabilities.

Miami Children's Hospital also participates in a childhood injury prevention partnership with the Kohl's Cares for Kids® Grant Program. This program educates children in the community on bicycle helmet safety by providing educational brochures and free helmet fittings; free bike helmets are also given to children in need. Throughout 2010, Miami Children's Hospital, in collaboration with the Miami-Dade Public School system and the Kohl's Grant, sponsored numerous community events that addressed the importance of bike helmet safety for injury prevention. These programs have successfully reached over 3400 children and family members, and have given away approximately 1780 helmets since its inception in 2009.

The Trauma Services Department collaborated with the Department of Highway Safety and Motor Vehicles on their Teen Drive with CARE program. Select Miami Children's Hospital trauma staff members were trained and have participated in educational and informational events at local high schools in Miami Dade County.

Miami Children's Hospital's trauma and emergency department staff provided outreach to the trauma community partners by recognizing our EMS provider and by hosting our annual Trauma Patient Reunion Party to commemorate with Trauma Awareness Day. In 2010 we hosted our Third Annual Trauma Patient Reunion. Many of our trauma survivors from 2004 through that present time came to visit and reconnected with surgical, medical and nursing staff that made a difference in their recovery. The EMS partners who provided pre-hospital care also came to attend the event.

RESEARCH:

Miami Children's Hospital is one of the leading entities in Pediatric head trauma research. Dr. Raul Herrera, Chief Research Officer, has built a successful Research Institute that makes Miami Children's Hospital a world leader in scientific research. With over 250 clinical studies and 150 clinical investigations in 115 subspecialties, the Research Institute provides patients and physicians access to the latest scientific approaches and technologies together with the study of head trauma. The institute was recently fully accredited by the Association for the Human Research Protection Program (AAHRPP) and has passed all private, federal and state audits, including FDA, NIH, and private companies.

Active clinical and translational research projects are ongoing at the Miami Children's Hospital Research Institute to develop novel treatment approaches for pediatric tumors and head trauma, as well as new surgical approaches for the treatment of epilepsy. We are actively involved in many trauma research studies including the Cool Kids Hypothermia Study for Children with Severe Traumatic Brain Injury, as well as the U.S. Department of Defense (DOD)

study for Mild to Moderate Traumatic Brain Injury. The DOD is also sponsoring at Miami Children's Hospital Research Institute, the first and most comprehensive multimodal brain monitoring system to treat patients requiring ICU admission.

COMMUNITY AND DISASTER PLANNING:

Miami Children's Hospital nursing leadership and staff alike demonstrated an unprecedented response of community action through their Haiti Disaster Relief Efforts. Over 100 members of the MCH community travelled to Haiti among the nine teams that responded on the ground for over eight weeks. Every team created firsts while caring for the pediatric population in Haiti which included the creation of a documentation system, pediatric operating room, pediatric intensive care, and a nursing infrastructure that was sustained throughout the mission with other pediatric hospitals. Initially, 93 percent of the 75 pediatric patient census was admitted with traumatic injuries which required surgical intervention. Those that travelled were supported by personnel at Miami Children's Hospital that ensured that supplies and logistical arrangements were coordinated so that the team in Haiti could focus on caring the pediatric population.

Miami Children's Hospital also participated in emergency preparedness initiatives as directed by the Miami-Dade County, Florida Division of Emergency Management Services, and Florida Department of Health, and local authorities. Miami Children's Hospital is a member of the Miami-Dade County Hospital Preparedness Consortium, and staff has held several co-chair positions on the consortium's committees.

Throughout the course of 2010, MCH conducted numerous internal disaster drills and participated in regional desktop drills. Additionally, the hospital sent representatives to attend the Radiation Emergency Medicine Course, (REACTS) sponsored by the Florida Department of Health, Bureau of Radiation Control, Emergency Response Program in April 2010. The training is intended for medical personnel who need to recognize the symptoms of radiation exposure and/or treat the victims of a radiological incident/ event, including a severe transportation accident, a nuclear power plant accident, or the detonation of a radiological dispersal device or an improvised nuclear device.

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NORTH BROWARD MEDICAL CENTER LEVEL II TRAUMA CENTER - Deerfield Beach



DEMOGRAPHICS

Broward Health North Broward Medical Center (NBMC) is an award winning, 409 bed community hospital featuring state-of-the-art technology and safe, high quality care, located in Deerfield Beach, just east of I-95 off Sample Road. Broward Health North Broward Medical Center has been supporting the needs of the physicians, employees and community since 1961.

NBMC Level II trauma center was established in 1992 and serves the northern third of Broward County. The NBMC trauma medical director and trauma program manager are active members of the Broward County Trauma Agency. NBMC has a strong collaborative relationship with the trauma agency, EMS, acute care hospitals, as well as other local trauma centers. NBMC is also an institutional member of the American Trauma Society and the Florida Committee on Trauma.

In addition to trauma care, NBMC provides a number of specialty services which include:

- **Neurological Institute:** Includes the Memory Disorder Center, Sleep Disorder Center, Dizziness and Balance Center, Audiology Center, Comprehensive Stroke Center, and Spine Care Center. NBMC was first in the nation to obtain Joint Commission Accreditation for Alzheimer's disease and first in Florida to obtain Joint Commission Accreditation for Stroke Rehabilitation. We are ranked in the top five percent in the nation for our stroke care program. *National organizations available on-site to patients through the Neurological Institute includes: The Americans' Parkinson's disease Association, the National Stroke Association South Florida Chapter, the Alzheimer's Association and the Brain Injury Association of South Florida.
- **Orthopedic Services:** Includes a total joint replacement program that is Joint Commission Certified for Total Hip and Total Knee Replacement and has performed over

1100 anterior hip replacements using the innovative Hana® table.

- **Comprehensive Cancer Center:** Approved Cancer Program by the Commission on Cancer of the American College of Surgeons and affiliated with the H. Lee Moffitt Cancer Center with Broward County's first Cyberknife, as well as IGRT and IMRT.
- **Imaging Services:** NBMC offers state-of-the art procedures including MRI, ultrasound, CT, interventional radiology, nuclear medicine, PET/CT and digital mammography. NBMC is home to the first hospital-based 128 multi-slice CT in Broward County.
- **The Inpatient Rehabilitation Unit:** NBMC has received the highest rating by the Commission Accreditation of Rehabilitation Facilities (CARF). It provides intensive rehabilitation therapy for those with brain injury, spinal cord injury, multiple traumas, orthopedic conditions, amputations, stroke and other neurological conditions. First in the State for Joint Commission Certification for Stroke Rehabilitation.
- **Wound Care Center:** Committed to the treatment of difficult, non-healing wounds utilizing the most up to date approaches to wound healing.
- **Cardiology Services:** Comprehensive line of diagnostic cardiac procedures.

CLINICAL STATISTICS

In 2010, NBMC treated 1212 trauma patients and 551 of these patients were admitted to trauma. Of these 1212 patients, 91 percent had blunt trauma, nine percent penetrating trauma and one percent had burns. Patients with significant burns are transferred to designated burn centers.

We have dedicated, highly trained in house trauma surgeons on staff 24 hours a day, 7 days a week to meet the needs of the communities we serve. We have a full complement of surgical specialist including anesthesiologists, neurosurgeons, plastic surgeons, and hand surgeons with microsurgery capability, orthopedic surgeons, thoracic, and vascular surgeons, maxillofacial surgeons and physicians who specialize in emergency medicine, rehabilitation, pulmonology, critical care and a host of other medical specialties.

EDUCATION AND TRAINING

Trauma services at NBMC hosts a dinner CME program on trauma related topics monthly. These programs are open to our physicians, nurses, EMS and neighboring hospitals in Broward County. Topics in 2010 included: Management of Complex Femur Fractures; DVT Prophylaxis; Interventional Radiology; Cervical Spine Trauma; Damage Control Surgery; Rhabdomyolysis and Renal Failure in the Trauma Patient; and DVT Prophylaxis in High Risk Surgery including Trauma.

NBMC staffs dedicated and highly trained trauma nurses. There are numerous educational opportunities provided including TNCC, CATN, and ENPC. Our trauma ICU nurses created the Gold Coast Chapter of the American Association Neuroscience Nurses (AANN); the membership

NORTH BROWARD MEDICAL CENTER LEVEL II TRAUMA CENTER - Deerfield Beach

has increased to over 150 in just eight years. In 2010, the Seventh Annual AANN Certification Review Course was held at NBMC with over 75 attendees.

Our weekly interdisciplinary trauma rounds provide physicians, nurses, rehabilitation specialists, respiratory therapists, social workers, dieticians, pharmacists, and other staff involved in the care of trauma patients with opportunities for collaboration, as well as education in the latest advances in trauma care. Our trauma medical director directs the weekly rounds with the trauma program manager to ensure delivery of excellent care to all our patients.

OUTREACH AND INJURY PREVENTION

Through Partners in Excellence, NBMC has a long-term relationship with area schools and has provided numerous trauma related educational events throughout the years. We are members of "SafeKids of Broward County." NBMC has a strong community presence through speaking engagements with various chamber groups, civic and religious organization, and condominium associations.

Injury prevention education and community outreach continues to be a primary focus at our trauma center. In 2010, we participated in many outreach and injury prevention events within our community.

The 2010 Injury Prevention and Outreach activities included:

- Seatbelt, Bicycle, Water, and Pedestrian Safety taught to elementary and middle school students at Willie Webb Recreational Center and James S. Rickards Middle School
- Water Injury Prevention at April Pool's Day for Norcrest Elementary School
- Career Day at Royal Palm Elementary
- Reducing Distracted Driving - includes signing pledges to not participate in distractions while driving on Trauma Awareness Day with the employees and visitors at North Broward Medical Center
- Reducing Distracted Driving - an interactive presentation presented at Deerfield High School where high school students were given steering wheels to hold and then assigned a distraction such as texting, talking on the phone, eating, etc., and had to watch for road signs and hazards throughout the presentation and see how many they missed because they were distracted.
- A Day in the Life – lecture to high school students who are interested in the health care field about trauma nursing
- Community Relations Council - a council composed of various community leaders to which the trauma medical director and the trauma program manager presented information about our program.

North Broward Medical Center maintains an active role in the community through programs such as the Community Relations Council, the Partners in Education Program, as well as numerous lectures, meetings, support groups, and screenings.

EMERGENCY PREPAREDNESS

North Broward Medical Center is actively involved in local, regional, state, and national emergency management planning, training, and education. Our trauma program manager and safety officer are actively involved in efforts with the local Emergency Operation Center.

The trauma program manager is an active member of the Health and Medical Coalition of the Region 7 Domestic Security Task Force. The objective of this coalition is to ensure healthcare providers are prepared to handle emergency situations related to breaches in domestic security.

For additional information, please contact:

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ORLANDO REGIONAL MEDICAL CENTER LEVEL I TRAUMA CENTER - Orlando



In 2010, Orlando Regional Medical Center (ORMC) / Arnold Palmer Hospital for Children (APHC) Level I Trauma Center cared for over 4,000 trauma cases, with MVCs and falls being the most common mechanisms of injury. The trauma program is under the direction of Dr. John Promes, Trauma Service Medical Director and Dr. Donald Plumley, Pediatric Trauma Assistant Medical Director. As Central Florida's only Level I trauma center, we provide the highest level of care and expertise and are staffed with multidisciplinary teams of board-certified physicians, nurses, and technicians ready at a moment's notice to treat the most seriously injured patients.

John Promes, M.D., Trauma Medical Director is a member of the Society of Critical Care Medicine, Eastern Association for the Surgery of Trauma, Southeastern Surgical Congress, Florida Society of Critical Care Medicine, and the H. William Scott Society Vanderbilt University Medical Center. He served on the American Board of Surgery as an Associate Examiner and has numerous publications and invited lectures to his credit.

Donald Plumley, M.D., F.A.C.S., Pediatric Trauma Medical Director, is a member of Eastern Association for the Surgery of Trauma, American Pediatric Surgical Association, Florida Committee on Trauma and the American College of Surgeons.

The trauma staff includes the chief nursing officer, trauma program manager, pediatric trauma clinical coordinator, trauma clinical improvement consultant, clinical specialty data manager, the trauma registry staff, and all of the nurses, respiratory therapists, techs, physicians, residents, chaplains and other personnel that work tirelessly to assure high quality, patient centered care in our trauma program.

DEMOGRAPHICS AND CLINICAL STATISTICS
Orlando Regional Medical Center has over 800 inpatient adult beds and 158 inpatient pediatric beds. Our

emergency department includes 58 adult beds, 29 pediatric beds, six adult trauma bays and four pediatric trauma bays. Included in our 800 inpatient adult beds at ORMC are 14 burn trauma ICU beds and 21 adult step-down tissue rehabilitation beds with average occupancy at 19 for step down beds and 14 for ICU beds.

The following is a breakdown of Orlando Health trauma cases identified in the registry for calendar year 2010:

A total of 4187 trauma cases were reported:

- 77% were identified as blunt trauma
- 12% were identified as penetrating trauma
- 4% were identified as burn

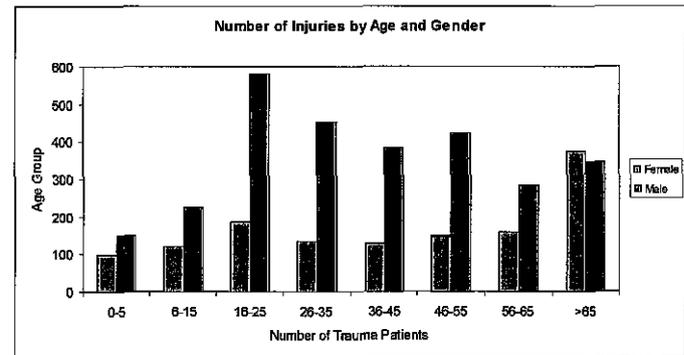
Dispositions:

- ICU 16.1%
- Telemetry/step down 15%
- OR 11.6%
- Home 5.9%
- Regular unit 49.6%

An overall mortality rate of 5.6% was identified

- 25% of mortalities were falls
- 19% of mortalities were MVC
- 17% of mortalities were gunshot wounds
- 12% of mortalities were auto vs. pedestrians
- Emergency department deaths accounted for 27% of all mortalities

Age and Gender



ORLANDO REGIONAL MEDICAL CENTER LEVEL I TRAUMA CENTER - Orlando

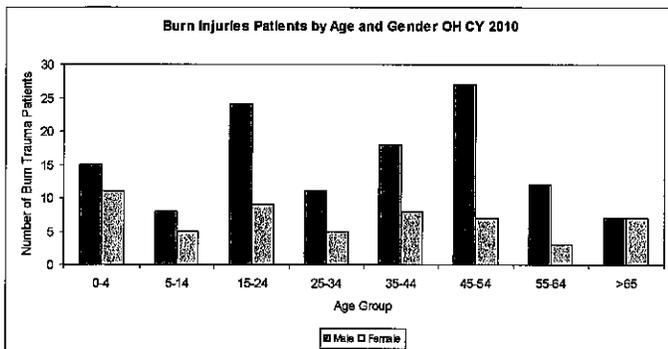
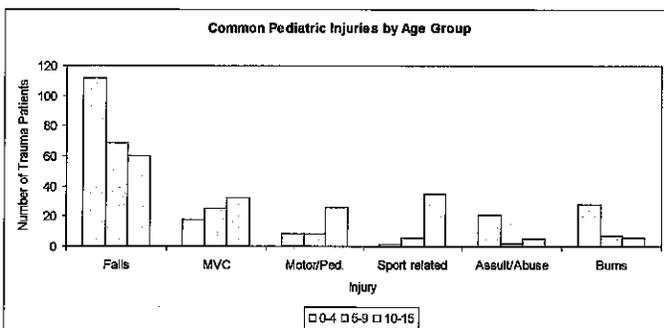
Burn Injuries

- 76% of all burns occurred in the home or place of residence
- 85% of females and 72% of males were injured in a home or place of residence
- 44% Of burn patients had an ISS score of less than or equal to 8
- 7% Of burn patients had an ISS score of Greater than 25
- Mortality rate among burn patients was 9%

PEDIATRIC TRAUMA

The Children's Emergency Trauma Room saw a total of 201 trauma patients in 2010. The most frequent mechanism of injury was falls followed by MVCs and Auto vs. Pedestrian.

Pediatric Injuries



PRESENTATIONS TO BE NOTED:

- Neuroscience Educational Seminar: Concussion Management: Dr. Greg Olavarria, March 2010
- Diffuse low grade gli-neuronal tumor: not oligodendrogliosis, American Assoc of Neuropathology: Dr. Greg Olavarria, 2010
- Dandy Walker Malformation: Handbook for Pediatric Neurosurgery: Dr. Greg Olavarria, 2010
- Neuroscience Educational Seminar: Facial Injury in Children: Dr. Ramon Ruiz, May, 2010

In 2007, our Pediatric Surgery Team opened a burn clinic that is offered to our pediatric patients five days a week from 0700 to 0930 for outpatient evaluation and treatment

of burns. The clinic was initiated by Jennifer Quilty, DNP, ARNP, with the support of our APH pediatric trauma surgeons. The clinic is staffed by ARNPs. They have access to consultation from the pediatric Trauma surgeons, PT, OT, as well as whirlpool services. In 2010, the clinic saw 154 patients, preventing those patients from lengthy hospital admissions and higher treatment costs.

AIR CARE TEAM – FLIGHT MEDICINE

In 2009, Orlando Health's Air Care Team celebrated 25 years of air medical transport service to the Central Florida community. Air Care has flown over 24,000 patients and 1.4 million miles accident free. During this past year, they received a record number of requests for service and completed over 1600 patient transports, including 65 percent directly from the scene of the emergency. During 2008, our fleet of three twin engine BK117 helicopter's was relocated from the Level I Trauma Center at Orlando Regional Medical Center to community hospitals surrounding the Orlando Metropolis in order to reduce time of transport. These aircraft have the capability of transporting two patients with a cruise speed of 150mph. Air Care-1 is based at St Cloud Regional Medical Center (Osceola County); Air Care-2 is located at South Lake Hospital in Clermont (Lake County); and Air Care-3 is based at South Seminole Hospital in Longwood (Seminole County).

EDUCATION AND TRAINING

Orlando Health is committed to medical education as part of its core mission. ORMC is the institutional sponsor of seven residency and 14 fellowship programs which serve as a substantial training site for medical students from the University of Central Florida, Florida State University, the University of Florida, and the University of South Florida, as well as from schools throughout the United States. Affiliation with these institutions further strengthens the research and teaching facets of our programs.

Additionally, ORMC Level I Trauma Center continues to provide high quality education and training for trauma caregivers in central Florida. Training conducted includes ATLS, TNCC, CATN, ENPC and Advanced Burn Life Support (ABLS). Air Care's "EMS Nite Out" Program, now in its fifth year, continues to be highly successful in providing up-to-date information to the EMS and emergency personnel. The educational sessions are presented by physicians and experts in the field of study.

Our corporate education team has a variety of programs which serve to orient our teams to units who care for trauma patients and each one of them pulls on the talents and education of our certified nurses, respiratory therapists, PT, and OT professions who care for our trauma population!

OUTREACH

Orlando Health Foundation hosted its Fifth Annual "ONE NIGHT," an event to celebrate excellence in trauma care. Designed to raise awareness and funds for the region's only level one trauma center, the event has become one of Central Florida's most prestigious events. The 2010

ORLANDO REGIONAL MEDICAL CENTER LEVEL I TRAUMA CENTER - Orlando



"ONE NIGHT" event, which is again presented by CNL Financial, Inc. was sold out for third year in a row. This year's theme is "One Call," highlights the trauma center's readiness and capability to handle life's most unexpected and often unthinkable calls. As part of the live program, a trauma patients' story will be presented through lights, sounds, live interaction and videos on the Mall at Millenia's 12 overhead screens. Through the dramatic retelling of the patients' story, the event showcases the trauma center team members and commitment to providing life-saving care when it matters most.

The Air Care Team continues to play a very active role in community education and outreach. An Air Care Team liaison attends all County EMS Multi Disciplinary Quality Assurance monthly meetings in their primary service area. Additionally, the Air Care aircraft is very popular at community events such as the Mock DUI's in Seminole and Orange counties and the visit to the Children's Burn Camp. This participation of our aero-medical services is not only popular; it makes a major impact on the thousands of people who realize the importance of trauma care and the need for immediate intervention that our flight program facilitates.

Orlando Regional Medical Center shows it's commitment to injury prevention in our community through many diverse programs. We participate in the Bicycle Helmet fitting clinics, the Car Fit Program for seniors, injury prevention through exercise with our wellness center, the Health Women events, and many more. Our team members often volunteer to assist with these events on their own time showing their commitment to the community they serve!

RESEARCH

ORMC/APMC is actively involved in both basic science and clinical research. Each resident and fellow is encouraged to conceive and implement a research project leading to presentation at a national meeting and subsequent publication on a yearly basis. Most residents complete the program having published at least one, if not multiple, papers in the scientific literature. This is due to strong

support from the academic faculty, all of whom are actively involved in scientific research. Clinical research is facilitated by full-time clinical research project managers in such areas as surgical/critical care, emergency medicine and orthopedics assisted by extensive computerized clinical databases. Experienced staff assists in subject recruitment, contracts, IRB requirements and all aspects of the research program. The Institutional Review Board review process is in compliance with good clinical practices (GCP) and included review of potential risks to subjects, risk benefit ratio, subject selection criteria and safety, content of the informed consent, confidentiality, and appropriate safeguards as required by the FDA. Below is some of the published work for trauma for 2010:

1. A multi-center, randomized, double-blind, trial of Ibuprofen for the treatment of fever and pain in the burn patient. Promes J, Safcsak K, Smith H, Pavliv L, Rock, A. *J Burn Care and Research* 31:S120, 2010
2. Alban RF, Nishi GK, Shabot MM. "When is ICU Admission Required for Post-operative Neurosurgical Patients? Identification of Candidates for Intermediate Care. *ICU Director*. 2010 Jan 1(1): 28-34.
3. Williams M, Alban RF, Hardy J, Garcia E, Rogers SO. "Measuring Communication in the Surgical Intensive Care Unit: Better Communication Equals Better Care". *J Amer Coll Surg*. 2010 Jan 210 (1): 17-22.
4. Is the evolving management of intra-abdominal hypertension and abdominal compartment syndrome improving survival? Cheatham ML, Safcsak K. *Crit Care Med* 2010; 38:402-407.
5. A Prospective, Observational Study of Xigris Use in the United States (XEUS). Steingrub J, Cheatham ML, Efron M, Wang T, and Woodward B for the XEUS Investigators. *J Crit Care*. 2010 Apr 30.
6. Intra-abdominal pressure measurement using a U-Tube Technique: Caveat Emptor! De Waele JJ, Cheatham ML, Balogh Z, Bjorck M, D'Amours S, Keulenaer B, Ivatury R, Kirkpatrick AW, Leppaniemi A, Mlabrain M, Sugrue M. *Annals of Surgery* 2010 252: 889-890.



ORLANDO REGIONAL MEDICAL CENTER LEVEL I TRAUMA CENTER - Orlando

7. A Novel Device for Measuring Intermittent and Continuous Intra-gastric Pressure in Patients with Intra-abdominal Hypertension. Cheatham ML, Safcsak K. Poster presentation at the 39th Educational and Scientific Symposium of the Society of Critical Care Medicine, January 9-13, 2010, Miami, Florida.
8. Transpulmonary pressure (PTP) is necessary to measure pulmonary distending pressure in the presence of Intra-abdominal Hypertension (IAH). Silva H, Hunley C, Jimenez E, Falk J, Cheatham ML, Jones P, Barba J, Nieman G, Johannesen Z. Poster presentation at the 39th Educational and Scientific Symposium of the Society of Critical Care Medicine, January 9-13, 2010, Miami, Florida.
9. Animal Age, Weight, and Anesthesia Affect Outcome in a Clinically Applicable Porcine Sepsis / Ischemia Reperfusion Model. Silva H, Jimenez E, Falk J, Barba J, Cheatham ML, Bailey J, Hunley C, Johannesen Z, Nieman G. Poster presentation at the 39th Educational and Scientific Symposium of the Society of Critical Care Medicine, January 9-13, 2010, Miami, Florida.
10. Promes J, Safcsak K, Smith HG, Rock A, Pavliv L: A Multi-center, Randomized, Double-blind Trial of Ibuprofen Injection for the Treatment of Fever and Pain in the Burn Patient. Poster Presentation at the American Burn Association meeting – Boston, MA, March 9-12, 2010.

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SACRED HEART HOSPITAL LEVEL II AND PEDIATRIC TRAUMA CENTER - Pensacola



Sacred Heart Hospital's (SHH) Level II Adult and Pediatric Trauma Center is the only comprehensive trauma center serving Northwest Florida. The SHH emergency/trauma center, which includes adult and pediatric emergency departments, is a 64-bed, state-of-the-art facility. In 2010, there were 87,660 patients treated at SHH's Emergency Trauma center, with 14,410 of those visits being injury related. Of those 15,089 injury related visits, 1,486 were attended to by SHH's Division of Trauma Services.

The trauma team is lead by four full-time trauma surgeons and six general surgeons that complement our team who coordinate the care of the trauma patient with more than 20 sub-specialty groups including neurosurgeons and orthopedic surgeons. The trauma team is available 24-hours a day to provide treatment for the seriously injured patient.

TRAUMA SERVICES

The SHH Trauma Team has evolved into a cohesive network of highly skilled healthcare professionals. The hospital is committed to providing essential advanced trauma training to nursing staff responsible for the delivery of care to the trauma patient. SHH also provides physicians and surgeons with advanced trauma training by serving as the regional ATLS re-certification course provider.

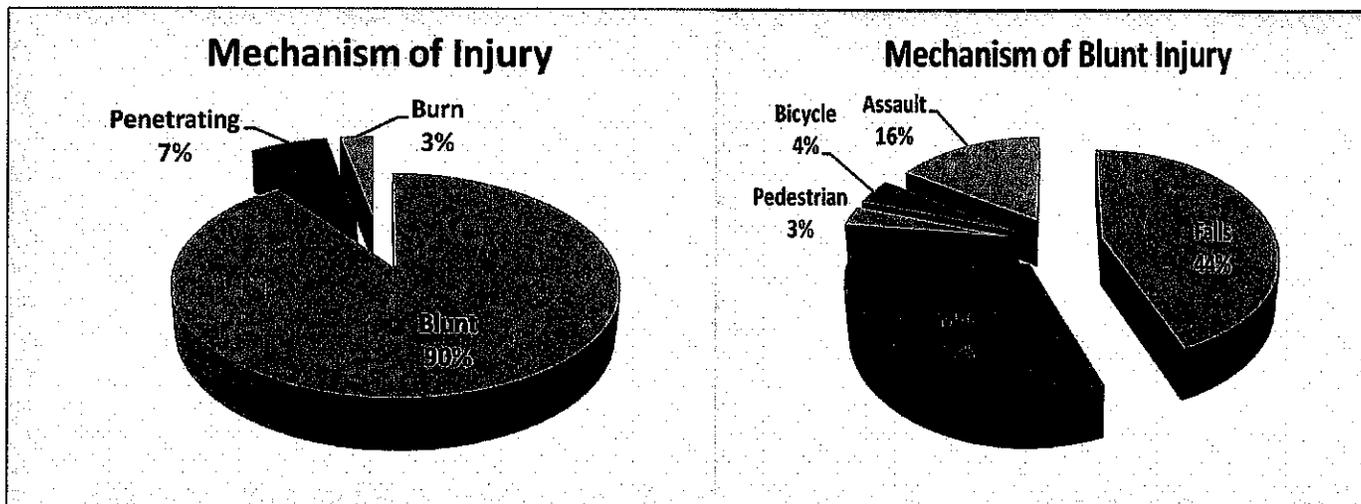
The SHH Division of Trauma Services is committed to exceeding patient care expectations, continuous

performance improvement and the quality management process for improved outcomes. Listed below are just a few statistics of interest.

- 6016 total hospital days for trauma patients
- Average hospital length of stay was 4 days
- Average adult ICU length of stay was 4.7 days
- Average pediatric ICU length of stay was 2.3 days
- Mortality rate was 3.1 percent
- 23 percent of trauma admissions had an injury severity score of 15 or greater

SHH serves as the only pediatric trauma center and children's hospital in Northwest Florida, and therefore provides the only Level III neonatal and pediatric intensive care units in the area. In 2010, the SHH Trauma Program services admitted approximately 320 pediatric patients.

Sacred Heart Children's Hospital provides a range of children's services in partnership with Nemours Children's Clinic, which provides many pediatric specialists to the region. The trauma surgeons work together with pediatric intensivists and other pediatric specialists to form a strong team for the benefit of the pediatric patient. The Florida State University Pediatric Residency Program is based at SHH in Pensacola and pediatric residents are involved in managing the critically injured child



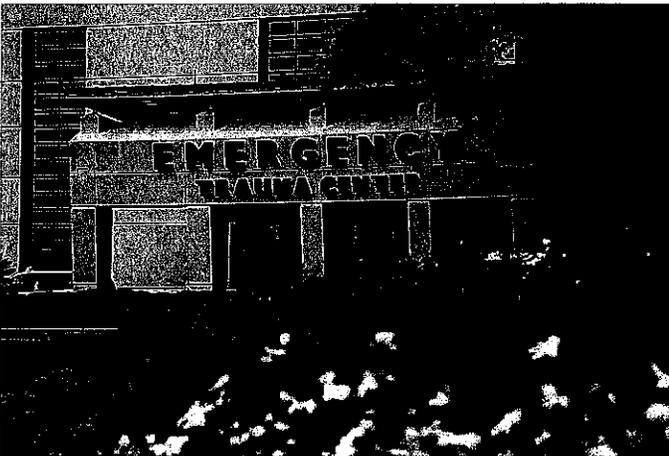
SACRED HEART HOSPITAL LEVEL II AND PEDIATRIC TRAUMA CENTER - Pensacola

LEADERSHIP

Dr. Karan Gill, SHH Trauma Medical Director, has been a key member of the SHH team for more than 20 years and has dedicated over 30 years to providing specialized care to the seriously injured patient. At the state level, he serves as the chairman for the Florida Committee on Trauma, as a medical consultant to the Department of Health Office of Trauma, is a member of the State Trauma System Plan Implementation Committee, and is active in many other national organizations related to his field.

The administrative component of the SHH Trauma Program consists of the following:

- Vice-President of Perioperative, Trauma, Emergency and Cardiovascular Services
- Trauma Program Manager (1.0 FTE)
- Pediatric Trauma Coordinator (1.0 FTE)
- Trauma Performance Improvement Coordinator (1.0 FTE)
- Trauma Education/Outreach and Injury Prevention Coordinator (1.0 FTE)
- Trauma Registrar (1.0 FTE)
- Assistant Trauma Registrar/Secretary (1.0 FTE)



EDUCATION

Sacred Heart Hospital regards continuing education as a key success factor. Listed below are a few of the trauma focused educational offerings provided at SHH:

- **Trauma Basics:** A bi-monthly six-hour course in basic elements of functioning as a trauma nurse at SHH
- **TNCC-P and TNCC-I:** Held routinely throughout the year
- **ENPC-P and ENPC-I:** Held routinely throughout the year
- **ACLS and PALS-P and I:** Held routinely throughout the year
- **CATNII:** Held annually
- **ATLS refresher courses:** Held bi-annually
- **Annual Trauma Conference:** Held in conjunction with two other area trauma centers with over 300 in attendance
- **Monthly multidisciplinary educational conferences**
- **Monthly dedicated trauma team education and in-services**
- **TEAM (Trauma Evaluation and Management) for residents:** Held annually
- **FCCS COURSE-** Held 4-6 times per year

In 2010 we continued to offer an on line educational service, Live Grand Rounds. Through live video streaming, we provide free access and free CME/CEU to our monthly multidisciplinary grand rounds. The participant can log on to www.livegrandrounds.com, complete a brief registration process, and either view the live conference (third Monday of the month from 0730-0830 CST), or visit our archives. The participant can view the speaker while simultaneously viewing the media presentation. Upon completion of the video, and a five-question post test, the participant can print a certificate of completion.

SHH piloted the first in the state ACS Rural Trauma Team Development Course (RTTDC) in 2008. This course is designed to provide trauma training to hospitals in rural communities that is tailored to meet the needs of the trauma patient utilizing and maximizing current resources. It combines all disciplines involved in the care of the trauma patient including, pre-hospital, nursing, physicians, and ancillary support SSH provided this course to critical access hospitals in TSA 1. In 2009 and 2010, our commitment continued and SSH worked with the Department of Health to hold five more courses to critical access hospitals in TSA 2, 3 and 4. We partnered with the local trauma centers to train their trauma program staff to be course coordinators as well. This strategy will pave the way for completing our overall mission, every rural and critical access hospital trained in Rural Trauma Team Development in conjunction with their local trauma center.

OUTREACH AND INJURY PREVENTION

At SHH, we strive to increase injury awareness while sharing knowledge of innovation, intervention, and prevention of "Trauma - the neglected disease of modern society." (Accidental Death and Disability - The Neglected disease of Modern Society, Institute of Health - 1966).

Injury Prevention Activities:

- Public speaking at local colleges and schools
- Conferences and symposiums
- Local television public education broadcasts
- Participation in Injury Prevention Coalitions on the local and state level
- Local Injury Prevention events.

In 2010, SHH hosted a community focused awareness event on Gang Violence Prevention. Over 100 attendees, made up of parents, children, grandparents, and community stakeholders were provided information on identification of gangs, signs of gang activity, and prevention strategies. A panel of community leaders, including sheriff's and superintendents of education from two counties, answered questions from the participants.

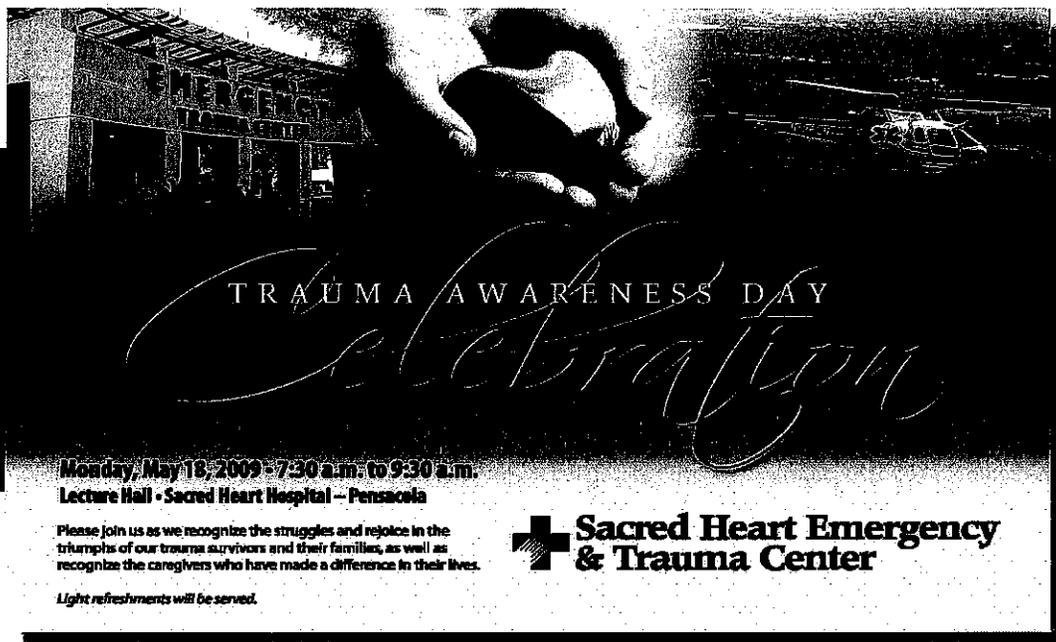
SHH also hosted a Senior Falls Prevention event with over 100 attendees which were provided information on prevalence, mechanism, common injury types, and prevention. The SSH Trauma Program worked with the local Council on the Aging and the SHH Senior Spirit Program to make this event a success.

SACRED HEART HOSPITAL LEVEL II AND PEDIATRIC TRAUMA CENTER - Pensacola

In 2010, the SHH Division of Trauma services participated in the National Trauma Awareness Week by hosting a special event where trauma victims from the past year came to give their testimony of survival. There is a reception following where directly involved healthcare professionals are invited to interact with the survivors. The heartfelt event gives participants a renewed sense of purpose and tears of joy are always in abundance. Through media coverage and support, the event assisted in providing awareness of the importance of an organized state wide trauma system, as well as recognized the trauma team at SHH for their lifesaving skills and expertise.

PREPAREDNESS INITIATIVE

SHH is actively involved in local, regional, state, and national coordination for providing training and medical care for bioterrorism and mass casualty incidents. SHH participates in the NDMS exercises, as well as several community wide exercises. In addition, SHH has committed to train physicians, nurses, and ancillary staff regarding evaluation and management of burn patients in the event of a mass casualty situation.



TRAUMA AWARENESS DAY
Celebration

Monday, May 18, 2009 - 7:30 a.m. to 9:30 a.m.
Lecture Hall - Sacred Heart Hospital - Pensacola

Please join us as we recognize the struggles and rejoice in the triumphs of our trauma survivors and their families, as well as recognize the caregivers who have made a difference in their lives.

Light refreshments will be served.

 **Sacred Heart Emergency
& Trauma Center**

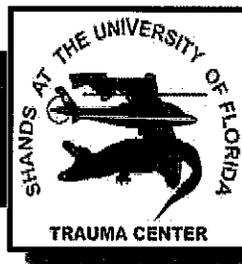
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SHANDS AT THE UNIVERSITY OF FLORIDA LEVEL I TRAUMA CENTER - Gainesville



The Department of Surgery of the University of Florida, College of Medicine established the Division of Acute Care Surgery in July, 2003; later that same year the Trauma and Emergency Surgery Services Department was established. Provisional Level I status as a trauma center was granted effective October 1, 2004, confirming the University of Florida and Shands commitment to excellence in trauma care.

From October 1, 2004 through December 31, 2010, Shands at the University of Florida has cared for 14,403 trauma patients; nearly seven trauma patients daily. During that same time period the population in the Shands at UF 12 county trauma service area has grown from 850,000 in 2004 to just over 1 million people. Twenty-nine percent of the trauma patient population are critically injured with an injury severity scores greater than 15.

On November 1, 2009 Shands at the University of Florida opened the new UF South Campus Hospital across the street and is the home of the Shands Cancer Hospital and Critical Care Center. The 500,000 square foot building has 192 additional private inpatient rooms and was designed to deliver the most advanced care for patients in areas of oncology, surgery, critical care and emergency/trauma.

The Shands Critical Care Center located on the first floor has a 64 bed Emergency Department with a designated shock trauma resuscitation area with six bays; four suites are dedicated for the care of critically injured adult and pediatric trauma patients. The Critical Care Center is supported by a helipad on the roof to ensure that transport of critically ill and injured patients is efficient, speeding treatment when seconds count.

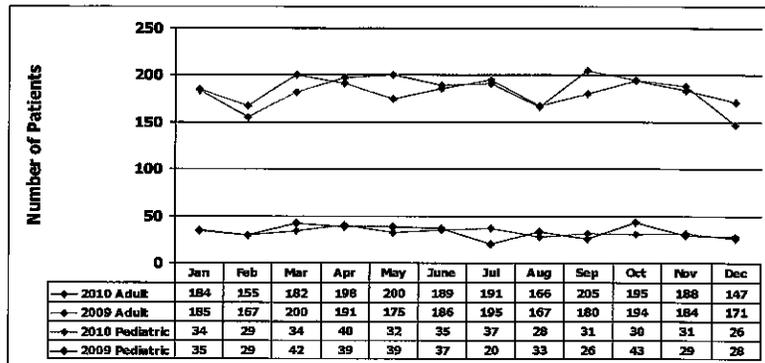
SHANDS AT THE UNIVERSITY OF FLORIDA LEVEL I TRAUMA CENTER - Gainesville

TRAUMA STATISTICS FOR CY 2010

SHANDS
HealthCare

- ▶ 2,603 total trauma patients
 - 1,101 (42%) Trauma alert patients
 - 2,215 (85%) Adult trauma patients
 - 388 (15) Pediatric trauma patients
 - 705 (27%) ISS > 15
- ▶ Impact on Patient Outcomes
 - 4.5% Overall mortality rate
 - 0.93% Mortality index
 - 5.88% Days average hospital length of stay
 - 0.92% Hospital length of stay index
 - 6.81% Days average ICU LOS

All Trauma Patients Discharged by Month



2010 N= 2603 Adult= 2214 (85%), Peds= 388 (15%)

2009 N= 2595 Adult= 2195 (84%), Peds= 400 (16%)

TRAUMA COMMITTEE GOALS 2010



- Enhanced quality assessment and improvement with weekly service mortality and morbidity, weekly pre-operative conference, and monthly problem-based journal club.
- Develop process that restricts transportation of critical care patients for emergent OR procedures from the south campus hospital to the north campus hospital.

INJURY PREVENTION AND COMMUNITY AWARENESS

Injury prevention measures and activities were aimed at "Distracting Driving" throughout 2010. Two trauma awareness days and over fifty activities and events on campus and within Alachua County were held collaboratively with UF and Shands to promote injury prevention awareness to over 5,000 persons in the community.

PROFESSIONAL EDUCATION/OUTREACH

Shands at the University of Florida offers many opportunities for nursing continuing education through the Trauma Program, Nursing Education Department, ShandsCair and Critical Care Medicine. The following is a list of regular conferences and continuing education conferences and courses:

- Advanced Trauma Life Support (ATLS) Student and Refresher
- Advanced Trauma Operative Management (ATOM)
- Annual Swamped with Knowledge is a two-day critical care statewide conference offered every February by the critical care nurses at Shands UF
- The Advances in Critical Care Conference is one-day statewide conference sponsored by ShandsCair every May
- Disaster Management and Emergency Preparedness Course (DMEP)
- Rural Trauma Team Development Course (RTTDC)
- Trauma Tracks, a 4- hour basic curriculum for nurses, prehospital providers and other health care professionals is held every other month
- Trauma Resuscitation Nurse Course (TRNC), a four hour course consisting of didactic lectures and a lab is held six time throughout the year
- Verification courses held on a regular basis at UF and Shands include: TNCCP, ACLS, PALS, and ENPC
- Clinical rotations for physician extender students from Shands at the University of Florida PA School and College of Nursing are offered on a regular basis



SHANDS AT THE UNIVERSITY OF FLORIDA

LEVEL I TRAUMA CENTER - Gainesville

RESEARCH:

Research: Start Date	Title	Primary Investigator	In Progress or Submitted to IRB
October 2008	Prospective Evaluation of the Effects of Topical Therapy with Sulfamylon® for 5% Topical Solution on Autograft Healing in Subjects with Thermal Injuries Requiring Meshed Autografts: A Comparison to a Historical Control	David W. Mozingo, MD	In Progress WIRB # 2006-1347
October 2008	Incidence of Venous Thromboembolism in High-Risk Trauma Patients with Retrievable Inferior Vena Cava Filter Prophylaxis: A Pilot Feasibility Study	Anita Rajasekhar, MD Lawrence Lottenberg, MD (Sub-Investigator)	In Progress UF IRB # 517-2008
November 2008	NeuRx Diaphragm Pacing System (DPS, RA/4 Respiratory Stimulation System) Humanitarian Device Project	Lawrence Lottenberg, MD	In Progress UF IRB # 585-2008
February 2009	Burn Injury in the State of Florida	Winston T. Richards, MD	In Progress UF IRB # 59-2009
December 2009	Prospective Study Examining Clinical Outcomes Associated with the Management of the Open Abdomen with ABThera Open Abdomen Negative Pressure Therapy System and Barker's Vacuum Packing Technique	Lawrence Lottenberg, MD	Closed December 2010 WIRB # 2009-1839
May 2010	Epicel (Cultured Epidermal Autografts) Humanitarian Device Project	Winston T. Richards, MD	In Progress UF IRB # 225-2010
August 2010	A Retrospective Single Center Study Characterizing the Incidence of Herpes Simplex Virus Infection As Well As Outcomes in Patients Post Herpes Simplex Virus Infection After Thermal Injury	David W. Mozingo, MD	In Progress UF IRB # 309-2010
October 2010	A Comparative Study of the ReCell Device and Autologous Split-Thickness Meshed Skin Graft in the Treatment of Acute Burn Injuries	David W. Mozingo, MD	In Progress UF IRB # 410-2010
October 2010	A Randomized Clinical Trial of Restrictive vs. Traditional Blood Transfusion Practices in Burn Patients	David W. Mozingo, MD	In Progress UF IRB # 120-2010
December 2010	Burns on Home Oxygen: What is the Cost developing Tool? What is the Cost State Wide	Winston T. Richards, MD	Approved 09/2011 UF IRB
December 2010	An Observational Study to Determine the Safety and Effectiveness of Intraosseous Vascular Access for the Delivery of Ct Contrast Dye	Lawrence Lottenberg, MD	Submitted WIRB
December 2010	Extra-Peritoneal Pelvic Packing: Description and Analysis	Lawrence Lottenberg, MD	Submitted WIRB
09/30/01-8/31/11	NIH/NIGMS, U54 GM-62119-08, "Inflammation and the Host Response to Injury" Identify patients who will succumb to multisystem organ failure.	Lyle L. Moldawer, Ph.D. (Steering Committee, P.I. Proteomics Core)	In Progress UF IRB #s 189-2002, 09-2002, 168-2002, 623-2002

SHANDS AT THE UNIVERSITY OF FLORIDA LEVEL I TRAUMA CENTER - Gainesville

RESEARCH:

Research: Start Date	Title	Primary Investigator	In Progress or Submitted to IRB
07/1/99-06/30/2014	NIH/NIGMS, T32 GM-08721-11 "Molecular Biology and Gene Therapy in Burns and Trauma" a grant to provide experience studying aspects of burn/trauma research.	Lyle L. Moldawer, Ph.D.	n/a
05/01/08 – 02/28/12	NIH/NIGMS, R01 GM-081923-02 "Myeloid Suppressor Cells in Sepsis and Trauma" This is intended to elucidate the role that these cells play in sepsis.	Lyle L. Moldawer, Ph.D.	n/a
08/01/88-4/30/2012	NIH/NIGMS, R01 GM-40586-21 "Cytokine Regulation in Sepsis and Inflammation" Studies will focus on T-effector cell populations, NK cells, regulatory T cells and dendritic cells.	Lyle L. Moldawer, Ph.D.	n/a
09/15/09 – 08/31/2011	NIH/NIGMS, R01 GM-40586-21S1 SUPPL "Cytokine Regulation in Sepsis and Inflammation" This supplement focuses on examining the role of blood products modulating the immune response to trauma and sepsis.	Lyle L. Moldawer, Ph.D.	n/a
2011	A regionalized strategy for improving national driver fatality and crash outcomes.	Darwin Ang, PhD	UF IRB # 126-2011
2009	Benchmarking Complication Rates among Level 1 Trauma Centers	Darwin Ang, PhD	UF IRB #299-2009
2009	Complications after Emergency Intubation of Obese Trauma Patients	Darwin Ang, PhD	UF IRB #163-2009
2008	An Investigation into the Medical Practices and Genomic Expression of complications in the Critically Ill and Acutely Injured.	Darwin Ang, PhD	UF IRB #666-2008
2009	Epidemiology of Viral Infections in the ICU	Darwin Ang, PhD	UF IRB # 527-2009
2010	Department of Surgery Outcomes database.	Darwin Ang, PhD	UF IRB #339-2010
June 2011	Video: Blast and Crush Injury: Initial assessment and Care	David Mozingo, MD Florida DOH, Division of EMO, COT	Video
June 2011	Video: Mild Traumatic Brain Injury and Mass Casualty Incidents: Approach to Emergency Care	Gregory Murad, MD Florida DOH, Division of EMO, COT	Video
February 2010	All-terrain vehicle safety in Florida: Is legislation really the answer? Am Surg. 2010 Feb; 76(2); 149-53.	Winfield RD, Mozingo DW, Armstrong JH, Hollenbeck JI, Richards WT, Martin LC, Beirle EA, Lottenberg L	Article
February 2010	A massive pulmonary embolism treatment protocol: how trauma performance improvement affects outcome throughout the hospital system. Am Surg. 2010 Feb; 76(2): 145-8	Velopulos CG, Zumberg M, McAuliffe P, Lottenberg L, Layon AJ	Article

SHANDS AT THE UNIVERSITY OF FLORIDA LEVEL I TRAUMA CENTER - Gainesville

RESEARCH:

Research: Start Date	Title	Primary Investigator	In Progress or Submitted to IRB
January 2010	Traditional resuscitative practices fail to resolve metabolic acidosis in morbidly obese patients after severe blunt trauma. J Trauma. 2010 Jan;76(1): 101-6	Winfield RD, Delano MJ, Lottenberg L, Cendan JC, Moldawer LL, Maier RV, Cuschieri J.	Article
January 2010	Mortality and Management of 96 Shark Attacks, Severity Scoring System. Am Surg.2010 Jan; 76:101-106.	Lentz AK, Burgess GH, Perrin K, Brown JA, Lottenberg L, Mozingo DW	Article
January 2010	Differences in outcome between obese and non-obese patients following severe blunt trauma are not consistent with an early inflammatory genomic response. Crit Care Med. 2010 Jan; 30(1): 51-8.	Winfield RD, Delano MJ, Dixon DJ, Schierding WS, Cendan JC, Lottenberg L, Lopez MC, Baker HV, Cobb JP, Moldawer LL, Maier RV, Cuschieri J	Article
January 2010	Pulmonary Embolism prophylaxis with inferior vena cava filters in trauma patients: a systematic review using the meta-analysis of observations studies in epidemiology (MOOSE) guidelines. J Thromb Thrombolysis. 2011 Jan.	Rajasekhar A, Lottenberg R, Lottenberg L, Liu H, Ang DA	Article
July 2011	"Beta Cells Enhance Early Innate Immune Responses During Bacterial Sepsis," Journal of Experimental Medicine 208(8), p1673-1682.	Moldawer, L., Delano, M., et al.	Article July 11, 2011
	Impact of a Critical care Orientation Course on Proficiency of Graduate Nurses in the Adult Intermediate Care/Intensive Care Setting	Rebecca Norton, Betty Jax, MSN, Kim Mueller, Robert Catlow	Data Collection
	The Relationship of Risk Level Identification between the Braden and Braden Q for Patients Aged 8-17 years: Multisite Study	Jeanette Green, MSN, ARNP, Gale Danek, PhD, RN, et al	Data Collection
2009 - 2010	Placement Confirmation of Enteral feeding Tubes placed at Bedside with Utilization of the Cortrak System—An Electromagnetic Guided Placement Device.	Kevin McCutcheon, BSN, Peggy Marker, BSN, et al	Interim analysis completed IRB 72509 Poster presentation at Swamped with Knowledge, 2010 and AAST, 2011
2010	Implementation of the Progressive Upward Mobility Protocol (PUMP) in Adult ICU/IMC Patients	Lynn Westhoff, BSN Peggy Guin, PhD	Data Collection
March 2011	Determining Critical Drivers of Delays in the Discharge Process	Colleen Counsell, MSN Julie Smith, BSN	Submitted IRB
March 2011	Patients' Perception of the Admission Process to a Trauma Unit	Colleen Counsell, MSN Julie Smith, BSN	Submitted IRB
2011	Non-Human: Factors in Perioperative Period Associated with Pressure Ulcer Development Postoperatively	G. Avigne, BSN	Approved 2011

For additional information, please contact:

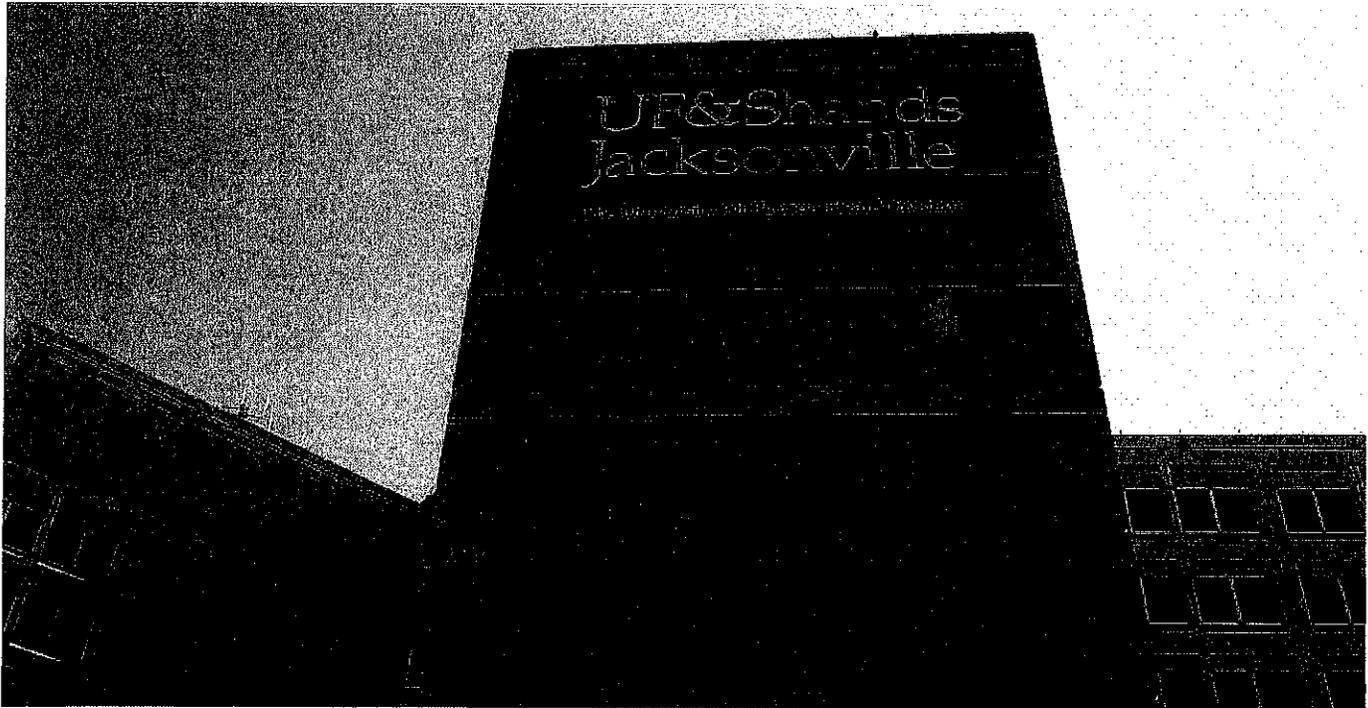
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TRAUMAONE AT SHANDS-JACKSONVILLE

LEVEL I TRAUMA - Jacksonville



**UF&Shands
Jacksonville**
The University Of Florida Health System

TraumaOne at Shands Jacksonville Medical Center, affiliated with the University of Florida Health Science Center in Jacksonville continues to serve as the only trauma and referral facility for northeast Florida and southeast Georgia. Resuscitation volume for 2010 was 3,909 with 2,205 trauma admissions with an average daily census of 42.8. In summary, the trauma program serves 30 counties in Florida and Georgia and is responsible for saving thousands of lives in its near 27 year history through the efforts of trauma care, clinical research and education. TraumaOne at Shands Jacksonville operates two air medical helicopters for transport of sick and injured victims in southeast Georgia and northeast/central Florida. The Jacksonville aircraft is based at Shands Jacksonville Medical Center and the Lake City aircraft is based at the Lake City airport. Operational administration and dispatch communications are handled by the TraumaOne Communications Center at Shands Jacksonville. The TraumaOne Flight Program transports an estimated 850 patients per year, the greatest proportion being scene flights for victims of trauma.

In 2010, Shands Jacksonville TraumaOne hosted its Fourth Annual Night for Heroes gala fund raising event focusing on the health care benefits provided to Duval County and

the surrounding area of UF and Shands Jacksonville while providing an opportunity for community education and support. In addition to fund raising, the goal of this annual affair is to celebrate the men and women in our community who care for trauma victims and provide support to their families. These heroes included UF physicians, Shands Jacksonville nurses, technicians, therapists, psychologists, fire rescue, and law enforcement personnel. Approximately, 500 guests attended the gala to support TraumaOne. These funds supported housing for families of trauma victims at Shands Jacksonville.

RESEARCH

The University of Florida College of Medicine-Jacksonville, Department of Surgery has added additional attending trauma surgeons within the last year to help promote its commitment to the further development and growth of our program in order to provide outstanding clinical service and meet our urban community needs. The Department of Surgery is dedicated to teaching and research. We have a basic science research laboratory with basic scientists that are presently working in the field of urinary and prostate cancer, with plans to begin basic science research in the area of ventilator associated pneumonia. The Clinical Research Division consists of a research administrator

TRAUMAONE AT SHANDS-JACKSONVILLE

LEVEL I TRAUMA - Jacksonville

(RN), one clinical research coordinator (RN), and a research coordinator. The Department of Surgery is very committed to the transfer of clinical observation to new methods of enhanced bedside patient management. To that end, the Department of Surgery faculty maintains an extensive investigational commitment to all aspects of the spectrum. Many faculty are also participants in multi-institutional clinical trials, National Institute of Health trials, and the National Trauma Institute trials. Our trauma surgeons serve as principal investigators in national research initiatives. The Department of Research Committee meets bi-weekly in collaborative efforts with other departments and divisions to combine strengths for furthering and mentoring research efforts.

During this review period, we continued looking at the effects of traumatic brain injury. One trauma resident and an acute care surgeon collaborated on "The Effect of Age on Blunt Traumatic Brain Injured Patients." Their work was selected for publication in *The American Surgeon 2010*. Traumatic brain injury is still pursued by a critical care fellow researching the use of ultrasound to measure the optic nerve in correlation to ICPs.

Further investigations by residents, fellows, and faculty were strongly being evident in further assessment of mechanically ventilated patients, pulmonary embolism, and a review of the services of the Helicopter Emergency Medical Services.

In review of the respiratory efforts, an attending trauma resident and acute care surgeon further investigated "Mixed Flora: Indication for Therapy or Early Warning Sign?" Their efforts were recognized with presentation at the 30th Annual Scientific Meeting of the Southeastern Surgical Congress in February 2010 and were published as well in *The American Surgeon* in 2010. An additional project was completed this year and was recognized this year for presentation at the Florida Committee on Trauma "A Retrospective Review of the Use of Epoprostenol (Flolan™) at UF/Shands Jacksonville in Intensive Care Unit (ICU) Patients with Acute Respiratory Distress Syndrome (ARDS)." We are pursuing the use of Flolan vs. Nitric Oxide for Acute Respiratory Distress Syndrome and will be compiling data to compare outcomes and cost effectiveness.

One trauma resident was recognized for his research on pulmonary embolism and presented "Characterization of Pulmonary Embolism in high risk trauma patients despite aggressive prophylaxis" at the 23rd Annual Meeting of the Florida Vascular Society. The Acute Care Surgery Division is pursuing this endeavor with a randomized, prospective trial for the risk of DVTs/Pulmonary Embolism.

Another trauma resident won first place with the Florida Committee on Trauma for her research and presentation "An Evaluation of the disposition of Trauma Patients Arriving by Helicopter Emergency Medical Services."

Numerous projects have been completed during this review period and are included in the individual curriculum vitae of the principal investigators that are members of the active

trauma faculty. We are presently collaborating with other departments and divisions looking further into traumatic aortic descending dissection, flail chest injuries, blunt splenic injuries, as well as ventilator associated pneumonia.

PUBLICATIONS

Qureshi I, Kerwin A, McCarter Y, Tepas J. Mixed Flora: Indication for Therapy or Early Warning Sign? *The American Surgeon* 2010. Accepted for Publication

Roberts E, Bhullar IS. The Effect of Age on Blunt Traumatic Brain Injured Patients. *The American Surgeon* 2010. Accepted for Publication.

PRESENTATIONS

Update of Practice Management Guideline: Evaluation of Blunt Abdominal Trauma. Burns JB, Bhullar I, Kerwin AJ, et. al. Presented at Twenty-Third Annual Scientific Assembly of the Eastern Association for the Surgery of Trauma. Phoenix, Arizona, January 23, 2010.

Qureshi I. Mixed Flora: Indications for Therapy or Early Warning Sign. 20th Annual Scientific Meeting of the Southeastern Surgical Congress. February 23, 2010. Savannah, GA.

Qureshi I. Mixed Flora: Indications for Therapy or Early Warning Sign. Annual of Meeting of Florida College of Trauma. Tampa, FL Garcia AJ. Characterization of Pulmonary Embolism in high risk trauma patients despite aggressive prophylaxis. 23rd Annual Meeting of the Florida Vascular Society. April 2010. Naples, FL.

Garcia AJ. Characterization of Pulmonary Embolism in high risk trauma patients despite aggressive prophylaxis. Annual Meeting of the Florida Chapter, American College of Surgeons. Jacksonville, Florida.

Griffin R. Early protocol base IVC filter placement in high risk trauma patients may result in decrease incidence of P.E. Annual Meeting of the Florida Chapter, American College of Surgeons. Jacksonville, Florida.

Knofsky M. Pediatric Trauma Patients are More Likely to be Discharged from the Emergency Department After Arrival by Helicopter Emergency Medical Services. Annual of Meeting of Florida College of Trauma. Tampa, FL.

Tabrizi M. Inhaled prostacyclin improves oxygenation in severe hypoxemia. Annual Meeting of the Florida Chapter, American College of Surgeons. Jacksonville, Florida.

POSTERS

Roberts E, Bhullar IS. The Effect of Age on Blunt Traumatic Brain Injured Patients. 2010 Southeastern Surgical Association Annual Scientific Meeting. February 2010.

Garcia AJ, Dennis JW, Schinco MA. Bullets: They don't read the books. Southeastern Surgical Congress. February 2010. Savannah, GA.

TRAUMAONE AT SHANDS-JACKSONVILLE

LEVEL I TRAUMA - Jacksonville

Garcia AJ, Dennis JW. Characterization of Pulmonary Embolism in high risk trauma patients despite aggressive prophylaxis. American Association for Surgeons of Trauma, 69th Annual Meeting. September 2010. Boston, MA.

INJURY PREVENTION

Shands Jacksonville's injury prevention educator is responsible for the development, management and implementation of educational programs and campaigns within the community and hospital setting. The adult and pediatric trauma registries are often utilized to help guide the development of injury prevention programs based on specific community needs and trends. Many of these educational programs are developed and directed at high school and elementary school aged students who are at risk for traumatic injury.

The injury prevention educator is an active member of the Duval Community Traffic Safety Team, a multiagency committee dedicated to reducing the number and severity of traffic related injuries and deaths. Agency partners include the Jacksonville Sheriff's Office, Florida Highway Patrol, Department of Transportation, local public health department, SafeKids, and many other organizations collaborating to sponsor community safety events. The injury prevention program participates in both local and national prevention initiatives. In addition, Shands Jacksonville continues its role as the central coordinating agency for the Jacksonville Pediatric Injury Control System. The following is a list of current trauma prevention initiatives:

Trauma Prevention Presentations/General Safety - Presentations include a variety of trauma prevention efforts and are offered to hospital staff as well as the general public including elementary, middle and high school students and teachers. These age appropriate programs utilize audiovisual material, discussion, and volunteer participation to emphasize the initial and long-term effects of trauma related injuries. Topics include bike safety, seat belt usage, and swimming safety, encountering weapons in school, avoidance of texting/drinking and driving.

Turning Point: Rethinking Violence - The University of Florida Health Science Center in Jacksonville and the local Juvenile Justice Division in the State Attorney's Office have implemented a program to reduce recidivism among first time juvenile offenders involved in violent crimes. The court mandates these offenders and their parents to participate in a program designed to expose them to the consequences of violence via didactic sessions, interactive victim impact panel, and a video.

Child Passenger Safety (CPS) - A collaborative initiative between the Duval Community Traffic Safety Team, law enforcement, EMS, public health, rehab, SafeKids, and other agencies to promote safe usage of car seats through educational lectures, hands on demonstration, car seat and booster seat check points. Certified car seat technicians are present to check and properly install the child safety seats.

W.H.A.L.E. (We Have A Little Emergency) - An education and identification program for parents who have children in booster and car seats. Parents or guardians are given a W.H.A.L.E. packet that includes a comprehensive brochure, one information label, two logo stickers, and a window cling for the inside rear window of the vehicle to alert emergency personnel of vital information regarding the child's identity, emergency contacts, and special medical needs. In addition valuable information explaining proper seat installation is included in the packet.

Think First for Teens - Shands Jacksonville is a local chapter for the National Think First Program. Our program has four main teaching components and is designed to educate and motivate high school students to take preventative action for their own health and safety.

Walk Your Child to School Day - This day was established to encourage children and their parents to walk to school together while learning safe walking behaviors. Children learn a safe route to school, how to cross the street at cross walks and be alert to hidden dangers along the way. The program is designed to raise public awareness about how easy and enjoyable it is for adults and children to spend healthy active time together.

Home Safety - Children and their parents have an opportunity to experience "hands-on" safety education in an 8X20 home safety trailer designed to simulate three main living areas; kitchen, bedroom, and living room. Topics include fire safety, practicing fire drills, poison prevention, stove and microwave safety, seat-belt, helmet, and water safety.

Injury Free Coalition for Kids - Shands Jacksonville is a member of the Injury Free Coalition for Kids national network which works to create safer communities for children and their families through population-driven, hospital-based and community-focused programs.

The Great First Coast Hang-up - Shands Jacksonville and First Coast News partnered on a campaign to encourage drivers to make a pledge to put away their phones while driving. This means no texting or talking unless it was hands-free. This year-long campaign had multiple media events as well as television Public Service Announcements (PSA'S) all with the message to be safe, don't get distracted just hang-up and drive!

2010 TRAUMA PREVENTION ACTIVITIES

Program	# Participants	Programs
Think First	500	8
W.H.A.L.E./CPS	3,000	13
General/Home Safety	5,100	27
Bike/Pedestrian	1,500	12
DUI /Text MOCK Crashes	1,639	5
Violence Prevention	150	8
Health/Safety Fair	2,000	5
Helmet Fittings	555	6
Total	14,444	84

TRAUMAONE AT SHANDS-JACKSONVILLE

LEVEL I TRAUMA - Jacksonville

Alcohol Screening - Screening is a part of the routine physical examination and history on admission to Shands Jacksonville. Along with questions of tobacco and illicit drug use, patients are asked about alcohol use on the current history and physical form. All adult patients are screened using the Alcohol Use Disorders Identification Test (AUDIT). Assessment for alcohol use disorders will be completed to determine maladaptive pattern of alcohol use to include the extent of alcohol-related symptoms. If an alcohol use disorder is determined then recommendations including negotiations of drinking goals, group help, referral to addiction specialists, and follow-up will be provided.

NURSING EDUCATION

The trauma program provides an array of venues for nursing staff to receive high level training and education in trauma care. The following is a list of training and education conducted in 2010

Nursing Case Study Investigation (CSI) - This is a monthly course that offers one hour of continuing education to the nursing staff. The session goal is to demonstrate how nurses can become agents of change by motivating nurses to both learn and teach. Our CSI program utilizes a Morbidity and Mortality (M&M) style forum to review two similar cases from our unit. Trauma surgical staff nurses then are assigned a topic based on data from the patient cases. They prepare a lecture reviewing relevant pathophysiology, pharmacology, evidence-based practice, research findings, and best practices related to the cases presented. The lecture is open to all hospital nurses and CEU's are obtained; the process is overseen and assisted by the CSI committee.

Trauma Core Day - This a one-day course that offers 8 hours of continuing education with topics in trauma related disease/injury. This course is offered three times a year.

Trauma Morbidity and Mortality Conference - This conference is offered the last Wednesday of every month providing one-hour of continuing education to nurses, physicians and other staff. This service related conference is designed to evaluate patient outcomes using a multidisciplinary approach.

Advanced Trauma Course for Nurses Certification (ATCN) - Certifications in Trauma Care are offered on campus throughout the year. The courses provide education and advanced training in the management of trauma patients using a team approach. ATCN and are offered three times throughout the year in conjunction with ATLS.

OUTREACH EDUCATION

TraumaOne at Shands Jacksonville continues to offer many opportunities for continuing education to in house staff and the prehospital community. The program has continued its commitment to take education from the clinical setting to the field to improve patient outcomes and advance the knowledge of EMS providers in the region. The following is a list of class offered through TraumaOne in 2010.

- Advanced Cardiac Life Support: 18
- Pediatric Advanced Life Support: 10
- Advanced Trauma Life Support: 9
- Advanced Trauma Course for Nurses: 2
- Core Disaster Life Support: 3
- Disaster Management Emergency Preparedness: 1
- Helicopter Landing Zone Safety: 5
- Continuing Education Learning Programs: 5
- Prehospital Trauma Life Support: 2
- Emergency Pediatric Care Course: 11

Emergency/Disaster Preparedness-The Emergency and Disaster Preparedness program continues to develop training and conduct exercise to prepare for CBRNE events.

- Conduct All Hazard Awareness and victim decontamination training to UF and SHANDS employees
- American College of Surgeons' Disaster Management Emergency Preparedness Course continues to be offered for regional preparedness to CBRNE events
- We partnered with NAS Jax, the City's EOC and our local DOH in September of 2010 for a plane crash at NAS Jax during an air show. This was a full scale exercise where we practiced our Level 1 sub capabilities: Partnership/Coalition MOU's and our Interoperable Communications.

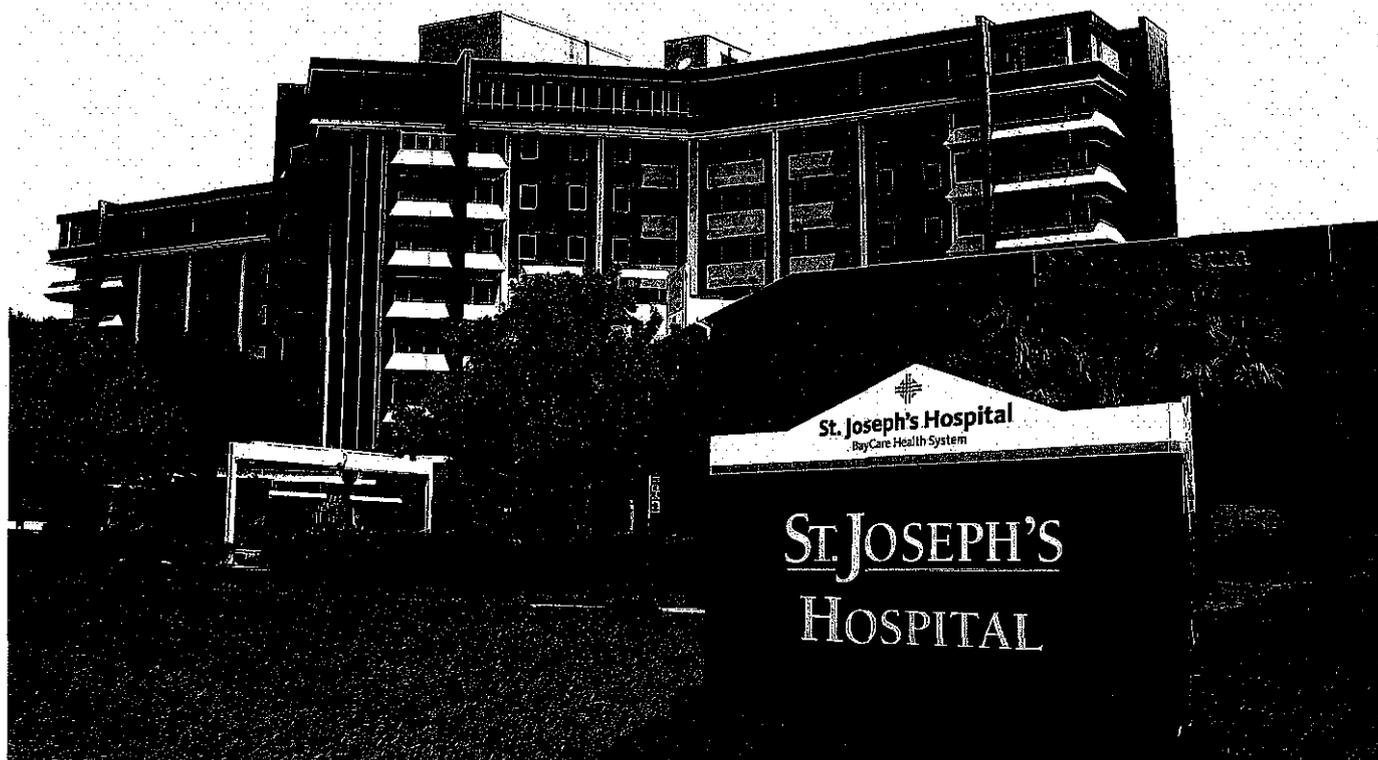
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Trauma Program Medical Director

Julia Paul, MSN, RN,
Trauma Program Manager

ADD REST OF ADDRESS HERE

ST. JOSEPH'S HOSPITAL LEVEL II AND PEDIATRIC TRAUMA CENTER - Tampa



ST. JOSEPH'S HOSPITAL

Founded in 1934, St Joseph's Hospital (SJH) is one of two trauma centers located in Hillsborough County. It is the largest not-for-profit health care provider in the county and currently has a total of 991 beds. The main hospital has 527 beds including a recently completed expansion with state of the art private rooms and intensive care units. Also located on the main campus is the SJH Children's 164 bed hospital which has earned a national reputation for being one of the best children's hospitals in the country, providing high-tech pediatric health care in a kid-friendly environment. Across the street with 192 beds, St. Joseph's Women's Hospital was specially designed and dedicated to the care of women from birth through mid-life and is currently undergoing an expansion which includes physician offices and a new neonatal intensive care unit. St. Joseph's Hospital is a member of the BayCare Health System, which consists of nine of the leading not-for-profit hospitals in the Tampa Bay area.

The hospital features medical expertise in more than 120 subspecialties, a renowned child advocacy program and a state-of-the-art pediatric and neonatal cardiac center. St. Joseph's Cancer Institute, an affiliate of the H. Lee Moffitt Cancer Center and Research Institute, diagnoses and treats more Hillsborough residents for cancer than any other facility in the region. The Cancer Institute, Heart Institute, Neuroscience/Stroke Program, Advanced Center for Atrial Fibrillation, as well as the trauma center offer the most "Advanced Care in the Right Hands" in the Tampa Bay area. The hospital has been designated a Center of Excellence for Cancer, Heart and Neuroscience, has the Joint Commission's Gold Seal of Approval for Primary Stroke Care and is recognized as a Comprehensive Stroke Center by the Florida Agency for Health Care Administration. Patients and families can have complete confidence in the high-technology and quality medical care provided, while also taking comfort in the St. Joseph's philosophy of family focused care.

ST. JOSEPH'S HOSPITAL LEVEL II AND PEDIATRIC TRAUMA CENTER - Tampa

DEMOGRAPHICS

The Emergency Center at St. Joseph's Hospital is a Level II and Pediatric trauma facility providing care for some of the most seriously injured patients in the Tampa Bay area. It is staffed by an outstanding team of board-certified emergency medicine physicians, nurses, and paramedics who provided care to 90,649 adults, and 45,539 pediatric patients in 2010.

DEMOGRAPHICS	
STATUS	VOLUME
Discharged	105,424
Admitted	30,764
Total	136,188



Trauma care is provided by eight full-time trauma surgeons; six adult and two pediatric surgeons, and three ARNPs. The trauma team includes trauma surgeons, emergency physicians, physician assistants, nursing staff, trauma nurse practitioners, and a wide variety of specialty physicians available as needed. The SJH Trauma Services Department staff includes the trauma program manager, a quality assurance coordinator, and two trauma registrars. Additional resources available for trauma patients include case management, social work, child life services, pastoral care, and a nationally recognized rehabilitation department.

The SJH Emergency Department includes separate adult and pediatric emergency facilities. The Steinbrenner Emergency/Trauma Center for Children has a separate triage, registration and waiting area, as well as a sibling playroom. A child advocate is available in the emergency center to assist parents and siblings immediately when an injury occurs and a team of patient advocates are available in the Emergency Department to provide support to patients, as well as their family members.

The SJH Emergency Department and hospital serve as a tertiary referral center for pediatric trauma and surgery, adult trauma, orthopedics, cardiac

surgery, cardiology, interventional radiology, and acute stroke intervention. In 2010, the Patient Access Center received 3,469 requests from other hospitals to transfer patients to our facility; 2,969 were accepted in transfer (1,218 adult patients and 1,751 pediatric patients) including 490 trauma patients. A total of 2,689 trauma patients were admitted to the main hospital, including trauma alerts and non-trauma alerts. Seventy percent of trauma patients' injuries occurred within Hillsborough County; thirty percent of the trauma patients' were injured outside of Hillsborough County coming from 14 surrounding counties.

CLINICAL STATISTICS

Trauma alert patients arrive from within the county and also are flown in from several surrounding counties and occasionally from other states and countries. Seventy percent of the trauma patients in the trauma registry were injured in Hillsborough County; of the remaining 30 percent, most were injured in the surrounding counties of Hernando, Citrus, Pasco, Pinellas and Polk.

In 2010 SJH received and treated 604 trauma alert patients (550 adult and 54 pediatric patients), 83 of them were discharged home from the ER, 521 were admitted for treatment. The number of non trauma alert trauma patients admitted was 2084 (1672 adult and 412 pediatric patients), continuing the trend of the last few years of fewer trauma alerts but a higher number of non trauma alert patients.

Blunt trauma accounted for 91.1 percent of the injuries, 8.4 percent were penetrating injuries and 0.5 percent were burns. Ten percent of all trauma patients (trauma alerts and non trauma alerts) seen had an injury severity score (ISS) greater than 15; however, 28 percent of the trauma alerts had an ISS greater than 15 and 13 percent of those patients had an ISS greater than 25.

ISS Range	Non Trauma Alerts	Trauma Alerts
1-8	64%	44%
9-14	31%	28%
15-24	4%	15%
25 or >	1%	13%

ST. JOSEPH'S HOSPITAL LEVEL II AND PEDIATRIC TRAUMA CENTER - Tampa

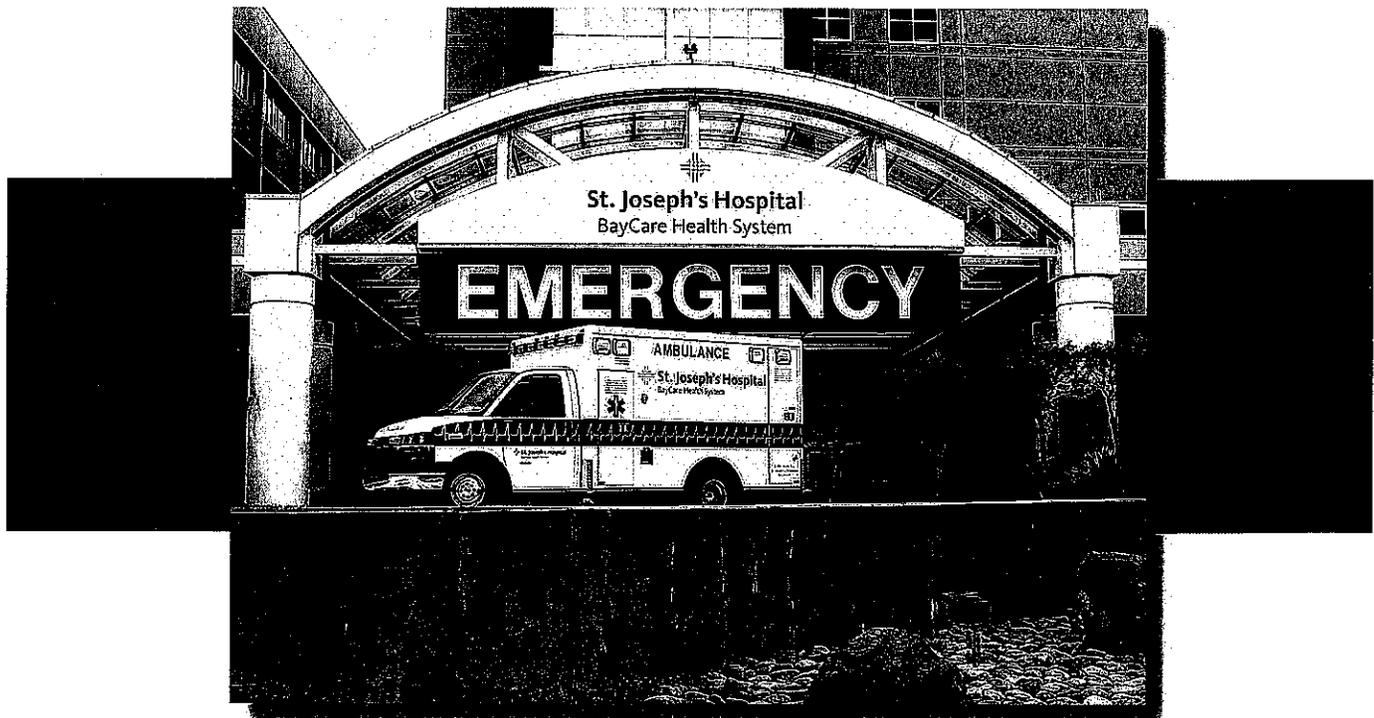
The most frequent cause of injury for trauma alert patients was motor vehicle crashes, while for non-trauma alerts the most frequent cause was falls.

CAUSE	TRAUMA ALERTS (N=604)	NON TRAUMA ALERTS (N=2084)	ALL TRAUMA PTS IN REGISTRY (N=2688)
FALL	22%	62%	53%
MVA	29%	11%	15%
OTHER	2%	7%	6%
MCA	10%	4%	5%
ASSAULT	4%	5%	5%
PED VS AUTO	10%	2%	4%
STAB	8%	1%	3%
GSW	7%	1%	3%
SPORTS	1%	2%	2%
BICYCLE	2%	2%	2%
ATV	2%	1%	1%
CRUSH	1%	1%	1%
ANIMAL	0%	1%	1%
BURN	0%	1%	1%

EDUCATION – HEALTHCARE PROFESSIONALS

The St. Joseph's Hospital Trauma Program provides a wide variety of methods for team members to advance their knowledge and skills in trauma care. Team members on 16 different nursing units and departments are required to complete mandatory annual trauma continuing education hours. Training and educational opportunities include:

- **Multidisciplinary Conferences** are offered monthly, providing one hour of continuing education for nurses, physicians, and other team members. Topics include case studies and various other subjects identified through quality management activities or requested by team members.
- **The Trauma Nurse Core Course (TNCC)** was offered throughout the year. TNCC is a two-day course that provides core level trauma knowledge and psychomotor skills. Completion of TNCC is required for all Emergency Department Team members who care for adult trauma alert patients and it is also attended by the ICU staff.
- **The Emergency Nurses Pediatric Course (ENPC)** was offered through BayCare. The ENPC Course is required for all Emergency Department Team members who care for pediatric trauma alert patients.
- **Internship Program** – An internship is in place for new hires providing intensive training for nurses who are inexperienced in the Emergency Department. The internship program includes all aspects of emergency care including trauma.
- **Trauma Inservices** – Trauma in-service programs are offered by the Emergency Department throughout the year and are available to all hospital employees. Topics include injury prevention, mechanism of injury, treatment, psychosocial aspects of trauma, and trauma complications.



ST. JOSEPH'S HOSPITAL LEVEL II AND PEDIATRIC TRAUMA CENTER - Tampa

- **Hospital Intranet** - The intranet provides numerous educational opportunities for trauma education that can be completed at the learner's own pace and on their schedule. Training available includes the state Disaster Preparedness Burn Care Curriculum, Disaster Core Competencies, and various other trauma related topics.
- **Online Education** - The hospital purchases an online CE program that is available for unlimited use by all nursing team members. Among the many offerings available are over 130 hours of adult and pediatric trauma related continuing education topics.

INJURY PREVENTION AND COMMUNITY EDUCATION

Outreach and injury prevention activities are a vital part of St. Joseph's Hospital's commitment to serving the needs of the community. Programs we participate in and/or provide for the community include:

- **Child Advocate in the Emergency Department** – Staff who provide on the spot education and injury prevention information to parents and siblings when a child is injured.
- **Health Fairs** – The hospital participates in health fairs throughout the year held at various locations to provide screening and information on various topics including injury prevention.
- **Safety Bulletins** – Frequent news media stories featuring safety and injury prevention tips
- **AARP 55** – Drive Alive – A refresher and safety course on driving for senior citizens.
- **CPR** – Basic Life Support and Adult Heart Saver Classes
- **Adult First Aid** – Covers first aid, medical emergencies, and injury emergencies
- **Pediatric First Aid** – Covers first aid, medical emergencies, and injury emergency for children
- **Safe Sitter** – Provides information on how to be a good babysitter, including identifying minor problems and life threatening conditions, how to contact EMS and what to tell them, safety hints, and accident management.
- **Teen Talk** – Physical and emotional challenges of puberty and adolescence
- **SafeKids Tampa** – Individuals and organizations committed to reducing the incidence of preventable childhood injuries. The Children's Advocacy Center is the lead organization for the SafeKids Tampa Coalition. Educational programs provided include:
 - **Bicycle Safety** is a comprehensive program which teaches bicycle safety and distributes bicycle safety helmets.
 - **Pedestrian Safety** is a program which provides information and education to elementary school children.
 - **Water Safety** is a program which provides water safety public service radio announcements and distribution of water safety whistles. The Child Life Department has an active drowning prevention program which is targeted at the areas within the county where most incidents occur.
 - **Child Passenger Safety** is one of the largest car seat inspection and distribution programs in the nation for child care safety.

- **Over the River and Through the Woods** is a workshop for grandparents to learn or refresh their knowledge of childbirth practices, newborn care and safety, and the role of grandparents in the family.
- **Boot Camp for New Dads** is a program which provides new fathers with information on how to care for infants.
- **Sibling Class** is a program which provides children with information on becoming a big brother or sister.
- **Healthy Families Hillsborough** is a home visitation program designed to enhance family strength through education and support. One goal of the program is to reduce the incidence of child abuse.

RESEARCH

To encourage nursing research, the hospital has a Nursing Research Committee to fund research projects at the bedside level. Several research initiatives were funded last year. In addition, the orthopaedic physician services have multiple ongoing research projects in various stages, including publication in peer review journals, which include trauma research. We also participate in an ongoing study to identify early biomarkers of severe trauma.

COMMUNITY AND DISASTER PLANNING

St. Joseph's Hospital participates in the statewide disaster preparedness program coordinated by the Florida Department of Health. Physicians and nursing team members have attended the Disaster Emergency Preparedness Course. Hospital wide, team members completed the FEMA disaster courses online and many have also completed county offerings on disaster preparedness and weapons of mass destruction. We participate in state, regional, and local disaster planning and continually update and revise our disaster plan. Disaster preparedness is a frequent education topic including subjects such as core competencies, bioterrorism, and weapons of mass destruction. Annual mandatory training on disaster preparedness ensures a continued state of awareness and readiness on the part of team members. We participate in regional disaster drills and also in the statewide DASH plan, providing personnel, equipment, and supplies to areas that have suffered natural disasters.

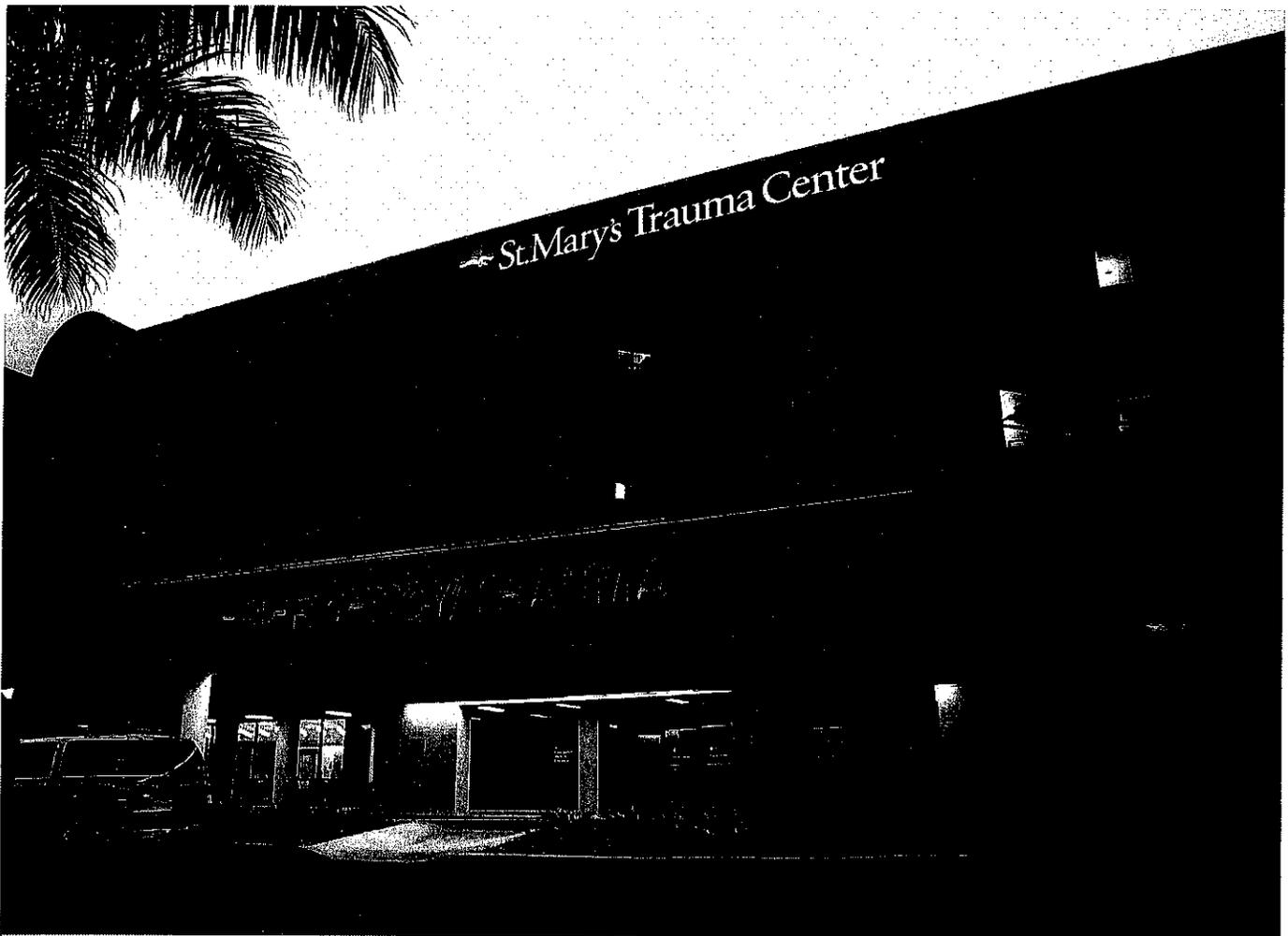
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ST. MARY'S MEDICAL CENTER LEVEL II TRAUMA CENTER - West Palm Beach



DEMOGRAPHICS AND OVERVIEW

Located in West Palm Beach, St. Mary's Medical Center is a faith-based, 463 acute care hospital. St. Mary's has served the medical and health care needs of the community since 1938. The hospital offers a broad array of services including medical, surgical, obstetrics, pediatrics, orthopedics, and emergency/trauma services. Since 1991, St. Mary's specialty services include a state verification for a Level II trauma center, a pediatric trauma referral center, and a state verified brain and spinal cord injury center. St. Mary's Medical Center Trauma Division serves the central and northern portion of Palm Beach County. A total of 1,357 trauma patients were treated in 2010, resulting in 1,079 admissions to the hospital. Trauma patients are treated by our team of in-house trauma professionals dedicated to providing comprehensive trauma care 24-hours per day.

The mission of our trauma center is to save lives and reduce disability for the people of our community by providing comprehensive trauma services from the moment of arrival through discharge. Since inception in 1991, St. Mary's has had a team of professionals dedicated to providing comprehensive, compassionate, individualized care. A core group of highly trained experts in trauma resuscitation, nursing, surgery, interventional radiology along with a dedicated multidisciplinary team of trauma ARNP's, case managers, social workers, rehabilitation therapists (physical, occupational, and speech therapy), neuropsychologist, pharmacists, respiratory therapist, and other specialties to manage the most complicated injuries. In addition to providing care for the injured patient, the team provides support and care to their families every day.

ST. MARY'S MEDICAL CENTER LEVEL II TRAUMA CENTER - West Palm Beach



St. Mary's 24-hour physician coverage includes specialists in:

- Adult Emergency Medicine
- Pediatric Emergency Medicine
- Trauma Surgeons
- Anesthesiologists
- Neonatologists
- Pediatric Intensivist
- Obstetrician/Gynecologist
- Hospitalists

St. Mary's Medical Center Children's Hospital offers a wide array of specialized services including a Pediatric Intensive Care Unit, Pediatric Neurosurgery, Cystic Fibrosis Center, Diabetes Program, Epilepsy Program and Cancer Center, the Level III Neonatal Intensive Care Unit, Regional Perinatal Intensive Care Unit, High-risk Obstetrical Unit, Paley's Advanced Limb Lengthening Institute, and Child Life Specialists. We are pleased to announce construction is underway for our Pediatric Open Heart Unit which is scheduled to open in the fall of 2011.

St. Mary's Medical Center offers the CARF Accredited Rehabilitation Institute; a state designated Comprehensive Stroke Center; interventional neurology services; the Memory Disorder Center, cancer and radiation therapy, the Wound Center, the Hyperbaric Medicine Center, the Schwartz Dialysis Center, and the Institute for Mental Health.

St. Mary's commitment to quality pledge is:

Quality is the cornerstone of everything we do. It is our passion to provide exceptional care to every patient we serve. It is our mission to deliver safe, cost effective care to the community and patients we serve. We strive to provide the best and safest medical care possible. Commitment to Quality is designed to enhance the overall quality, control and productivity of our care delivery process. Commitment to Quality consists of a comprehensive set of initiatives that address issues surrounding patient safety and reporting, physician and nursing excellence and patient throughput.

The three pillars on which St. Mary's Medical Center stands as a trauma center are:

- Outstanding, dedicated medical staff, nursing professionals and ancillary medical personnel who provide 24-hour care to our trauma patients;
- Excellent trauma community and education for healthcare providers; and
- Superior injury prevention strategies and programs.

St. Mary's Medical Center provides trauma care to a large catchment area which includes seven counties to the north and west of the hospital. The two helicopter landing pads located in front of St. Mary's Emergency Department aids in facilitating the seven aero medical agencies that

ST. MARY'S MEDICAL CENTER

LEVEL II TRAUMA CENTER - West Palm Beach

transport patients to and from St. Mary's Medical Center. St. Mary's Medical Level II Trauma Center's Trauma Team consists of more than nine disciplines for each trauma alert including 24 hour in-house board-certified trauma surgeons, emergency room physicians, anesthesiologists, dedicated trauma resuscitation nurses, radiology, phlebotomy and lab technicians, respiratory therapy, and a hospital chaplain. Our highly skilled and experienced physicians and nursing staff number more than twenty, and has one of the highest retention rates in South Florida. Available and ready to respond once summoned, are our board certified specialist including neuro, orthopedic, and spine surgeons.

St. Mary's Medical Level II Trauma Center takes pride in our Trauma After-Care Clinic, once released from the acute care setting, specialized care is provided with our dedicated team of trauma surgeons, nurse practitioners, and registered nurses. The patients are followed in the hospital's Trauma Clinic until they reach maximum medical improvement, and are released from care by the trauma surgeon. This comprehensive treatment allows for consistent and quality care to our patients.

The Health Care District of Palm Beach provides administrative support, oversight, and evaluation of the trauma program at St. Mary's Medical Center. The district is funded by ad valorem taxes received from Palm Beach County residents.

CLINICAL STATISTICS 2010

Adults

- 34,114 adult emergency department visits
- 1,357 patients treated by the trauma service
- 1,168 trauma patients admitted to the hospital
- 269 trauma patients admitted to the ICU
- 249 trauma patients admitted to the step-down unit

Pediatrics

- 22,987 Pediatric emergency department visits
- 482 Pediatric patients treated by the trauma service
- 131 Pediatric trauma patients admitted to PICU

OTHER STATISTICS:

- Average Injury Severity Score – 11

County of Injury:

- 962 Injured in Palm Beach County
- 116 Injured Out of County

Injury types:

- 82% Blunt Injury
- 15% Penetrating
- 3% Burns



ST. MARY'S MEDICAL CENTER

LEVEL II TRAUMA CENTER - West Palm Beach

TRAUMA EDUCATION AND TRAINING

Education and injury prevention is a vital part of the trauma program at St. Mary's Medical Center. Through our commitment to quality, we work to share knowledge and best practices with other healthcare providers. St. Mary's Trauma Services Division hosts monthly multidisciplinary trauma conferences for physicians, nurses, paramedics, and community health professionals to support educational opportunities and foster professional growth. The conferences offered are multidisciplinary based trauma-specific presentations. Topics addressed include lectures pertaining to organ procurement, brain injury, the pregnant trauma patient, facial trauma, abdominal trauma, periorbital and ocular trauma, spine and orthopedic grand rounds, and pediatric trauma cases.

In 2010, the trauma nurses initiated a St. Mary's Resuscitation Nurse Council which meets every other month. The nurses present trauma case studies that were interesting and/or challenging. Review includes the role the resuscitation nurse has during the alert phase, anatomy and physiology, with comparison made to the complications and obstacles they encountered. This council enhances the knowledge base of the nurses and provides an opportunity for open discussion and aids in mentorship to the newer nurses. Trauma surgeons participate with the council and assist in education by presenting review of the equipment used during emergent procedures.

In addition to our multidisciplinary conferences, the trauma service hosts a physician driven Journal Club/Research conference that meets each month to discuss current recommendations for trauma care. The focus of this conference is to review the current literature pertinent to trauma care which assists us in changing our practices if needed, to be consistent with the current evidence based practices.

St. Mary's Medical Level II Trauma Center also provides trauma education to the EMS providers within the multi-county catchment area providing opportunities to learn about the trauma program, offers specific feedback on injury patterns, their effectiveness in using the trauma alert criteria and performance improvement issues relating to pre-hospital care. St. Mary's Level II Trauma Center is proud to sponsor the Emergency Nurses Association Trauma Nurse Core Curriculum (TNCC) and Emergency Nurses Pediatric Course (ENPC) for our employees and local health care professionals.

COMMUNITY OUTREACH AND INJURY PREVENTION

St. Mary's Medical Level II Trauma Center offers ongoing community education and injury prevention which we consider to be a vital component of our trauma center. The hospital devotes a significant amount of time and resources towards promoting public safety and trauma awareness in our community. Our outreach and injury prevention efforts reached an excess of 21,000 participants in attendance.

PREVENTION PROGRAMS

- Drive with Care – distracted driving focus
- Falls Prevention - and the Elderly
- South Florida H.E.A.T. Conference – trauma lectures presented
- Disaster Drill- Airplane crash tabletop
- Injury Prevention – SafeKids Coalition Palm Beach County
- Shattered Dreams – Pre-prom presentations
- Injury prevention – Drivers education conferences, seatbelt presentations
- Kids Left in Cars – Pediatric hyperthermia awareness
- Thoracic Trauma – Community hospital outreach
- Concussions in youth athletes
- Gang violence prevention
- Pedestrian safety and risk factors
- Health and Safety Fairs – Injury prevention and give-aways for all ages
- The Dori Slosberg Foundation – Active partners in safety events
- High School Medical Academies – Presentations, tours, and committee members

COMMUNITY DISASTER TRAINING AND PLANNING

In January 2010, the Haiti earthquake tested St. Mary's Medical Center's ability to respond and treat victims of mass casualty. Located just 644 nautical miles north of Port Au Prince, Haiti, and St. Mary's Medical Center received a total of 14 patients ranging in age from 5-60 years old. Injuries ranged from minor lacerations and abrasions to septic shock and the most devastating cervical spine fractures with spinal cord injuries resulting in paralysis and quadriplegia. St. Mary's was living the mission by caring for these patients and their families. This unfortunate tragedy confirmed our commitment to being prepared in times of disaster.

In 2010, St. Mary's participated in seven Emergency Management Disaster Drills and Exercise trainings for all employees and including countywide HERC drills.

RESEARCH PROJECTS

The Trauma Service Division is currently working on the following research studies:

- Implementation of the Bladder Scanner to reduce Urinary Tract Infections
- Safe Glycemic control in the ICU setting

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TMH *Your Hospital for Life*



Tallahassee Memorial Hospital (TMH) was founded more than 60 years ago and has served the healthcare needs of the Northwest Florida community since. TMH is a private, not-for-profit community health care system and is the largest healthcare provider in our region with a total of 770 acute care hospital beds. TMH is the eighth-largest hospital in Florida, with a medical staff of 500 physicians representing 50 different specialties, and 3,130 colleagues. Our scope of services includes eight service lines: cardiovascular, oncology, medicine, orthopedics and neurology, women's and children's, behavioral health, surgical, and emergency services.

Mission Statement: With caring hands and hearts, we honorably serve our community and maintain positive, collaborative relationships, by providing compassionate, leading edge, patient-centered health care for all. We pursue perfection in a trusting and learning environment, thus enhancing the quality of life of those we serve.

Vision Statement: Our vision is to be recognized as a world class community health care system.

TMH Trauma Service: TMH is a Level II trauma center. Our service area includes Calhoun, Franklin, Gadsden, Jackson, Jefferson, Leon, Liberty, Madison, Taylor, and Wakulla counties. In 2010, TMH received patients from 36 different counties.

TRAUMA SYSTEM BUDGET

The trauma service is focused on providing the best care possible to our community. The trauma team includes trauma surgeons, emergency physicians, neurosurgeons, anesthesiologist, adult and pediatric intensivist. The orthopedic team is lead by the trauma orthopedic medical director. The Trauma Services Department also includes a full-time trauma physician assistant, trauma program manager, administrative assistant, performance improvement/trauma nurse registrar, and part time trauma nurse registrar, and data analyst registrar. In addition, a wide variety of specialty physicians are available as needed. Rehabilitation, social services, and spiritual care are an integral part of the mission of TMH. We are committed to providing services that treat patients with respect, dignity, and trust through responsibility and excellence in holistic care.

QUALITY ASSURANCE AND IMPROVEMENT ACTIVITIES

In the panhandle region of Florida, we work with numerous agencies to optimize quality and improvement for our trauma patients. Agencies such as North Florida/South Georgia Regional Emergency Medicine Group, North Florida Domestic Security Task Force, TLH Multi-Modal, and Leon County HealthCare Provider Disaster Coalition are some of the organizations that meet on a quarterly basis to discuss trauma care matters which include Trauma Transport Protocols. At the monthly trauma multidisciplinary meeting we review the pre-hospital and in-hospital care provided, discuss any missed trauma alerts, and participate in educational programs. The trauma program manager contacts the facilities that transferred the trauma patients into the hospital and trauma alert patients that are admitted to our ICU are provided specific feedback to improve care. An example of feedback for quality improvement is 266 transfer thank you letters and 176 EMS contacts.

INJURY PREVENTION, EDUCATION AND TRAINING

TMH has very active and vibrant Outreach and Injury Prevention programs. The neuroscience center at TMH provides numerous services that compliment the trauma service for example; stroke, multiple sclerosis, Parkinsonism, rehabilitation education, and the Brain and Spinal Cord Injury Prevention Program. A summary of the trauma programs are listed below. Trauma education reached 4,737 people in 2010. Of this amount, 3893 were provided to our community while 844 were our professional colleagues. The educational programs reached every age from the Mother and Baby Fair, to the Preventing Falls in the Over 65 Population Program.

- **Think First** is an age appropriate prevention program aimed toward school age children. Focus is on helmet use, awareness and safety. Think First programs include: General safety, bicycle, car, sports, concussion, drinking and driving.
- **Head Smartz Seniors** is an injury prevention program focused on senior safety.
- **Trauma Center Case Studies** are an annual education update working with Leon County Emergency Medical Services to improve care through case study discussions and updates.
- **Car Fit** is an education program focused on the community for car seat safety.

TALLAHASSEE MEMORIAL HEALTHCARE LEVEL II TRAUMA CENTER - Tallahassee

- **Trauma Survivors Celebration** is an annual event for our trauma survivors to celebrate their successes and also to encourage one another. This outreach opportunity discusses prevention and offers hope. We have special guests that have "made it" through come to share their story. Our third annual program was held on May 21, 2010.
- **Annual Trauma Symposium** is an outreach to our nursing and pre-hospital colleagues; free Trauma education is offered regularly. The Third Annual Trauma Symposium was held on May 21, 2010. The program provided 555 combined trauma continuing education hours. A new fall program was added on November 10 resulting in an additional 108 trauma continuing education hours provided for 2010. The 2010 trauma symposiums provided a total of 663 free continuing trauma education hours.
- **American College of Surgeons Courses Rural Trauma Team Development and Disaster Management Emergency Preparedness** courses provided to our surrounding community.

EDUCATION AND OUTREACH

The Emergency Center, Trauma Services, and Clinical Care areas all have departmental standards, which outline staff orientation, skill validation, and required education/training. Our staff working in the Critical Care areas, (BEC, VNICU, CV-MSICU, PICU, PACU and Respiratory Care) maintain current ACLS and/or PALS certification. Training and educational opportunities include:

- **Trauma Nurse Core Course (TNCC)** is a nationally and internationally recognized trauma certification course designed for registered nurses that provide care for trauma patients. A total of 56 Registered Nurses completed TNCC in 2010.
- **Trauma Nurse Core Course Instructor** is designed to prepare Instructors to teach the TNCC course. A total of 5 Registered Nurses completed the TNCC Instructor course in 2010 to increase the TMH Instructor base to 12.
- **Emergency Nurse Pediatric Course** is a nationally and internationally recognized pediatric trauma certification course designed for registered nurses that provide care for pediatric trauma patients.
- **BEC new graduate program** is an intensive emergency center program for new graduates that prepare them to work in the emergency department, taught by the BEC educator. The program includes all aspects of emergency care including trauma.
- **Trauma in-services and continuing education** – Trauma in-service programs are offered by the Emergency Department throughout the year and are available to all hospital employees. Topics included injury prevention, mechanism of injury, treatment, psychosocial aspects of trauma, and trauma complications.
- **Hospital Intranet Healthstream** – The intranet provides educational opportunities for trauma education that can be completed at the learner's own pace and on their schedule. Training available includes the state Disaster Preparedness Burn Curriculum and various other trauma related topics.

- **Online Education** – The hospital also has provided wireless access throughout the hospital for team members and visitors and has, in addition, installed multiple computers which allow access to the internet.
- **Neuro Grand Rounds** – presented monthly at TMH Rehabilitation Center focusing on neurologic education.

CLINICAL STATISTICS AND DEMOGRAPHICS

TMH is located in the capital city of Florida. The population of Leon County in 2010 was 275,487. It is 85 percent urban and 15 percent rural. There are two major universities in Tallahassee; Florida State University, and Florida Agricultural Mechanical University. The community also has junior colleges and vocational schools. In comparison to the general population in Florida we maintain a higher percentage of 18-24 year olds and a lower percentage of 65 and older population.

In 2010, TMH received and treated 1,042 trauma patients. A total of 434 (42 percent) met the state of Florida trauma alert criteria while 609 (58 percent) were trauma registry patients.

Pediatric Patients (<16)	Adult Patients (16-64)	Geriatric Patients (>65)	Totals
166	722	154	1042

Blunt trauma accounted for 85 percent of the patients, 13 percent was due to penetrating injuries while two percent were burn related.

Injury Severity Scale 2010 Trauma Registry		Injury Severity Scale 2010 Trauma Alerts	
Mean	Median	Mean	Median
12.9	9.0	18.4	9.0

Injury severity scales of >15 reveal severely injured patients. In 2010 TMH cared for 280 patients with ISS scores >15 or 26.8 percent of our trauma population.

In 2010, Saturday had the most frequent trauma alerts and 5:00 p.m. had the highest number of trauma alert calls. The slowest day for trauma alerts was Tuesday and the slowest time was 7:00 a.m.

The most frequent cause of injury for all trauma patients in 2010 was motor vehicle crashes followed closely by falls.

TALLAHASSEE MEMORIAL HEALTHCARE LEVEL II TRAUMA CENTER - Tallahassee

AWARDS AND RECOGNITION

- **2010 Outstanding Philanthropic Organization** - The Tallahassee Memorial HealthCare Foundation was named 2010 Outstanding Professional Philanthropic Organization at the National Philanthropy Day Celebration.
- **2010 2911 Consumer Choice Award** - For the sixth year in a row, TMH is the recipient of the National Research Corporation's Consumer Choice Award. The award identifies hospitals that healthcare consumers have chosen as having the highest quality and image in over 300 markets throughout the United States.
- **Stevie Award** - TMH's Human Resources Team was awarded with the 2010 American Business' Stevie Award citing our colleague activities, and reward and recognition programs. The award recognizes outstanding performance in workplaces worldwide.
- **Thomson Reuters 2010 Healthcare Advantage Award** - TMH was presented with a Thomson Reuters 2010 Healthcare Advantage Award for achievement in the area of Strategy and Growth. One of four organizations in the country to be honored in this category, TMH was specifically recognized by Thomson Reuters for its physician practice profile model, a unique initiative for creating greater physician alignment and integration.
- **National Psychologically Healthy Workplace Award** - TMH is the first hospital in the country to receive the Psychologically Healthy Workplace Award from the American Psychological Association in recognition of its workplace practices promoting employee wellbeing and organizational performance. TMH was honored with the Florida Psychological Association's Psychologically Healthy Workplace Award in July of 2009, qualifying it to be nominated for the APA award.
- **Cancer Program Accreditation**- The American College of Surgeons' Commission on Cancer granted TMH another three year Accreditation with Commendation for its cancer program, maintaining our tradition of being the longest continuously accredited cancer program in Florida. TMH is also the only accredited community hospital cancer program in the Big Bend area.
- **Quality Respiratory Care Recognition** - For the fourth consecutive year, TMH earned Quality Respiratory Care Recognition from the American Association for Respiratory Care.

TRAUMA EDUCATION & OUTREACH

Date 2009-2010	Time	Class/Seminar	Audience	Location	Attendance
1/13/2010	8.00	Trauma Nurse Core Course – Instructor	Professional	Trauma Classroom	3
1/13/2010	1.50	Ground Rounds - Baclofen Pumps	Professional	TMH Rehab Center	55
1/20/2010	2.00	Preventing Falls in the Over 65 Population	Community	TMH Adult Day Care	15
1/23/2010	3.00	Mother and Baby Fair	Community	Leon Co. Civic Center	300
1/21-22/10	14.42	Trauma Nurse Core Course – Provider	Professional	TMH Auditorium	12
2/15/2010	2.00	Preventing Falls in the Over 65 Population	Community	Premier Health Club	27
2/16/2010	3.00	Brain Injury Association of Florida press conf.	Professional	Capitol	100
2/27/2010	4.00	Trauma Outreach - "Stomp out Diabetes"	Community	Tom Brown Park	300
3/16/2010	1.00	TBI Advocacy Group	Community	TMH Rehab Center	15
3/22/2010	2.00	Preventing Falls in the Over 65 Population	Community	TMH Adult Day Care	6
3/16-17/10	2.00	Sorting Patients in a Multiple Casualty Disaster	Professional	Trauma Classroom	17
3/16-17/10	0.25	Miami J C-Collar In-service	Professional	Various nurse stations	153
3/18/2010	1.00	Trauma in the Field	Professional	TMH Rehab Center	62
3/20;23-25/10	1.00	Trauma	Professional	Leon Co. EMS	112
5/11-15/10	2.25	Wilderness First Aid	Community	Red Cross	8
4/13/2010	1.00	Operation Prom Night	Community	Leon High School	850
4/29/2010	1.50	Trauma 101	Professional	Bryan Robinson Library	25
5/12/2010	1.00	TBI	Professional	TMH Rehab Center	48
5/14/2010	1.00	Think First	Community	Florida High	135

TALLAHASSEE MEMORIAL HEALTHCARE LEVEL II TRAUMA CENTER - Tallahassee

TRAUMA EDUCATION & OUTREACH

Date 2009-2010	Time	Class/Seminar	Audience	Location	Attendance
5/21/2010	9.00	Trauma Symposium	Professional	TMH Auditorium	555
7/12/2010	1.50	Brain Injury Support Group	Community	TMH	12
7/29-30/10	14.42	Trauma Nurse Core Course - Provider	Professional	Trauma Classroom	13
8/10/2010	3.00	Trauma/Brain/Spinal Cord Seminar	Professional	Keiser University	10
8/18/2010	1.00	Concussion in the High School Athlete	Community	Chiles High School	170
9/9/2010	1.50	Cognitive Exercises	Community	Celebration Baptist	45
9/30/2010	7.75	Trauma Nurse Core Course - Recertification	Professional	Trauma Classroom	4
10/2/2010	2.00	Start Triage	Professional	Trauma Classroom	38
10/4/2010	7.50	Trauma Nurse Core Course - Instructor	Professional	Trauma Classroom	2
10/5/2010	3.00	Trauma/Brain/Spinal Cord Seminar	Professional	Keiser University	10
10/14/2010	14.42	Trauma Nurse Core Course - Provider	Professional	Trauma Classroom	13
11/4/2010	14.42	Trauma Nurse Core Course - Provider	Professional	Trauma Classroom	14
11/10/2010	4.00	Trauma Symposium	Professional	TMH Auditorium	27
11/10/2010	1.00	FSUS Science Academy Dedication Ceremony	Community	FSUS	50
11/14/2010	4.00	CPR Day	Community	Doak Campbell Stadium	205
12/4/2010	8.25	DMEP	Professional	Apalachicola City Hall	11

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Real People. Real Stories.



UPDATE ON ASHLEY MOORE'S SUCCESS STORY

Ever since my accident in 1998 I have made a committed effort to be a completely normal female going through elementary, middle, and high school, even though I am a quadriplegic. Throughout elementary and middle school I was able to have fun and be successful with the help of an immense support system of family, friends, and nurses.

After a promising move to the suburbs of Central Florida during my freshman year of high school, I had a difficult four years in and out of the hospital with stomach issues. Even with the amount of school I missed and having to be switched back and forth from home schooling to physically going to school at Hagerty High School, I graduated on the Honor's Roll on time.

I decided I wanted a typical university experience for college and applied to the University of Central Florida. During my first year, I juggled around the idea of either getting my degree in computer engineering or film. I have always enjoyed most of my mathematics classes and assumed engineering would be enjoyable. I ended up deciding my mind was more imaginative than logical and I would be more passionate perusing a creative field like film. I also realized near the middle of that year that I have always had a talent for writing and would love to make a profession out of it. So why not combine my passion for film and my talent for writing into one career goal...screenwriting.

After an entire year of taking classes, some of which were film, at UCF I felt like I was not receiving enough specialized, hands on experience in the film industry. My father told me about a private college across town called Full Sail University, which specialized in media arts like film. I went to an orientation and was immediately hooked. I instantly fell in love with the amount of experience this school could give me and the assistance I would receive after I graduate and apply for jobs. I have always been a very determined individual and my main goal is to be employed in a career that I am passionate about.

Now we are up to my current state of affairs. I have been attending Full Sail University for almost twenty months and have loved every minute of it. I plan to graduate this December with a bachelor's degree in film and go on in January to pursue my master's degree in creative writing at Full Sail University. I am hoping to apply for as many jobs in writing or casting for production companies everywhere by this time next year. I am looking forward to my future in the film industry as a writer as well. I have already begun writing a few scripts which I intend to pitch to major film production companies one day and transform my creations into feature films audiences. My role models have always been actors, directors, or anyone involved in the creation of a mind blowing cinematic masterpiece and my ultimate goal is to be one of these people.

My sincere appreciation for all the caring and compassionate people involved in Florida's trauma care!

Warmly,

Ashley Moore



**TAMPA GENERAL HOSPITAL
LEVEL I TRAUMA CENTER - Tampa**



TAMPA GENERAL HOSPITAL LEVEL I TRAUMA CENTER - Tampa



Tampa General Hospital (TGH) is a Level I regional trauma center for West Central Florida and has completed another year of advancement. The University of South Florida College of Medicine and Tampa General Hospital are strongly aligned and dedicated to provide administrative support and excellent clinical care to ensure success. With our partners at the University of South Florida, we have worked hard to optimize patient care, education, and continued performance improvement.

During 2010, the TGH Trauma Program continued to develop both its clinical trauma care and institutional trauma program. The relationships and collaboration between disciplines were strengthened to enhance patient care and

improve patient outcomes. The monthly trauma meeting structure was enhanced to include case reviews six times per year. In addition, the TGH Trauma Program has updated and improved its trauma and burn resuscitation team practices, and developed a massive transfusion protocol that has saved lives.

With the recruitment of a new trauma program manager and additional faculty, the program continues to flourish. TGH and its partners continue to collaborate closely with our colleagues from pediatric surgery, neurosurgery, orthopedics, and the many other surgical and non-surgical specialties involved in trauma care and are reflected in our patients' outcomes.

2010 Statistics	Total	Percent
Total Trauma:	2950	
Adult Total Trauma	2600	88%
Pediatric Total Trauma	350	12%
Total Male Trauma	2007	68%
Total Female Trauma	943	32%
Total Trauma Transfers	965	33%
ISS > 15	678	23%
Trauma Alerts:		
Total Trauma Alerts	979	33%
Total Pediatric Alerts	123	35%
Mechanism of Injury:		
Total Blunt Trauma	2271	77%
Total Penetrating Trauma	264	9%
Total Burn Trauma	415	14%
Trauma Admissions:		
Trauma Admission	2157	73%
Trauma ICU Admissions	823	28%

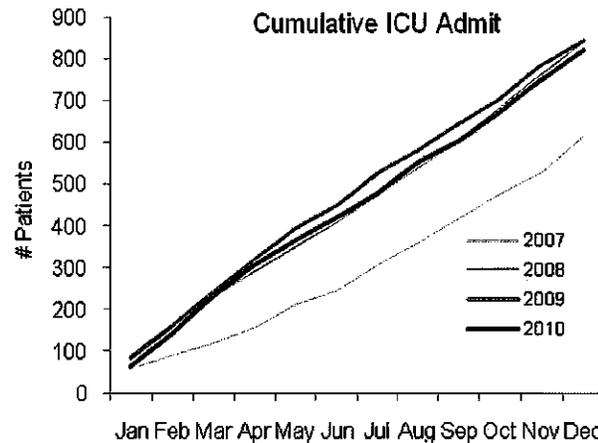
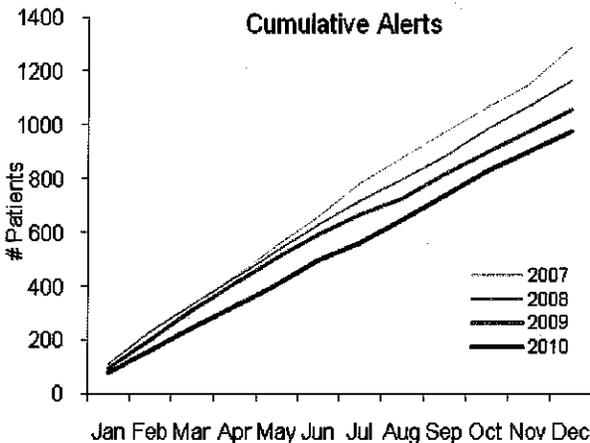
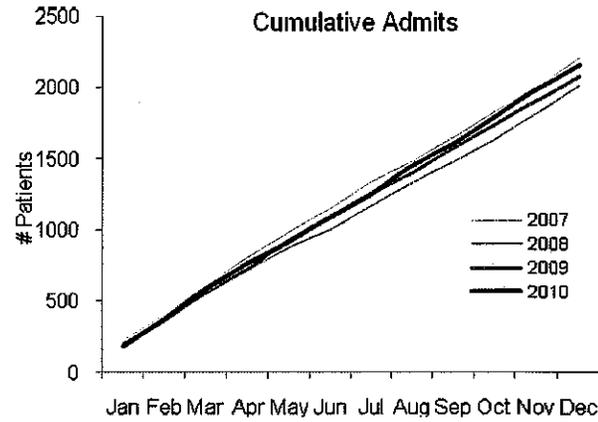
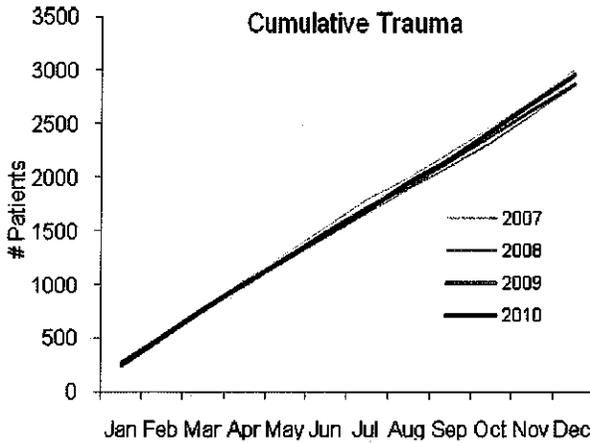
Tampa General Hospital's Trauma Program proudly maintains the Joint Commission Disease Specific Certification in Multi-System Trauma and continues to be recognized as a Magnet facility for nursing excellence.

DEMOGRAPHICS AND CLINICAL STATISTICS

- TGH Total Acute Care Licensed Bed Capacity is 1004
 - 257 Total Trauma Beds

10	ER Trauma Bay Beds
27	Adult Trauma Surgical ICU Beds
32	Adult Neuroscience Trauma ICU Beds
49	Adult Trauma Medical Surgical Beds
30	Adult Ortho Trauma Beds
39	Adult Neuroscience Trauma Medical Surgical Beds
6	Adult Burn ICU Beds
12	Adult Progressive Burn Beds
9	Pediatric ICU Beds
43	Pediatric Medical Surgical Beds
257	Total Trauma Beds

TAMPA GENERAL HOSPITAL LEVEL I TRAUMA CENTER - Tampa



EDUCATION FOR HEALTHCARE PROFESSIONALS

Tampa General Hospital produced more than 20 trauma related educational courses in 2010 including Trauma Updates, Trauma Symposium, Trauma Unit Based Nursing Education, ATLS®, ATCN®, and ABLIS®. Trauma Updates and Trauma Nursing Unit education courses are produced through trauma office in collaboration with our unit based educators. Tampa General Hospital organized and hosted one ATLS® instructor course, four ATLS® provider courses, five ATLS® recertification courses, one ATCN® course, and two ABLIS® courses. Our Fourth Annual Trauma Symposium, Tracks of Trauma was offered on April 23, 2010 at Bush Gardens with over 250 provider attendees from the state of Florida. In 2010, TGH performed an injury prevention course with care providers in the *Violence Against Women: Empower Yourself to Empower Others* in February of 2010.

The Society of Critical Care Medicine's (SCCM) internationally renowned two-day FCCS Course is the go-to resource for training non-intensivists, house staff, nurses, or other critical care practitioners how to manage critically ill and injured patients effectively and was inaugurated at TGH in August 2009. In calendar year 2010 five courses were organized (March, April, May, August, and November). These courses educated the following population: Six attending physician; 17 surgical residents; 48 nurses; eight respiratory therapists; and one pharmacist.

The Tampa General Hospital Trauma Program is integral to both undergraduate and graduate medical education. Over 15 medical students and 35 residents rotated on the trauma service in 2010, including 10 senior surgery residents. The program continues to participate as a training site for military medical providers. Special Operations Combat Medics (SOCM) and Naval Special Warfare Medics complete a medical rotation at TGH for their clinical experience prior to deployment.

The TGH Trauma Office continues to value education and awarded another Trauma Nursing Scholarship to a staff RN working in one of our trauma units to assist her in continuing her education.

INJURY PREVENTION AND COMMUNITY EDUCATION

Tampa General Hospital partners, MORE HEALTH, provides health and injury prevention education to children, teens, and adults. Over the past 20 years, MORE HEALTH has established strong partnerships with public school districts and private schools in the Tampa Bay area to enhance their health education programs. MORE HEALTH has provided education in the majority of all schools in the Tampa Bay area serving over two million students since 1989. MORE HEALTH provides safety lessons, including "Trauma is No Accident" with an emphasis on distracted driving, pedestrian and bicycle safety, safety and first-aid, Supersitters, firearm safety, brain health, and injury

TAMPA GENERAL HOSPITAL LEVEL I TRAUMA CENTER - Tampa

prevention are presented to students in the classroom setting. This year, the demand for lessons reached a record number with teachers and school administrators in 350 elementary, middle, and high schools requesting MORE HEALTH lessons; reaching 224,000 students this school year alone. School district administrators, principals, and teachers report high levels of satisfaction with the engaging curriculum and the MORE HEALTH instructor's presentation in their classrooms. Additionally, MORE HEALTH provides health and injury prevention education to parents and members of the community through workshops, health events, evening programs at the schools, and classroom teacher trainings.

RESEARCH AND OTHER SCHOLARLY ACTIVITIES

Tampa General Hospital participates in an ongoing research utilizing data from the National Trauma Registry and AHCA database to evaluate prehospital information, patient demographics, trauma characteristics, and Injury Severity Score. Both medical and nursing staff participates in trauma related research endeavors and present them at regional and national conferences.

Presentations

Ciesla, D. J. (Nov 7, 2010) American Society of Abdominal Surgeons Annual Meeting. *Trauma of the liver, biliary tree, pancreas and spleen*. Tampa, Florida.

Ciesla, D.J. (Nov 7, 2010) American Society of Abdominal Surgeons Annual Meeting. *Mass casualty care*. Tampa, Florida.

Ciesla, D.J. (Oct 19, 2010) Distance Learning CBBW. *Introduction to trauma: Global burden of disease, hemorrhage and early traumatic deaths, and hemorrhage control*. Sao Paulo, Brazil.

Ciesla, D.J. (June 1, 2010) Tampa Police Department. *Trauma Systems and effects of penetrating trauma on human tissue*. Tampa, Florida.

Llerena, L. (January 2010) Eastern Association for the Surgery of Trauma – Annual Scientific Assemble: Plenary Session - Practice Management Guidelines, *Teen Driving: Evidence Based Review*. Phoenix, Arizona.

In addition, there is a high degree of collaboration among specialty surgical services on current research projects. Ongoing collaborative research include evaluating open fracture antibiotic use and infection rates, and evaluating the use and indications for the initiation of anticoagulant therapy for traumatically brain injured patients and their outcomes.

COMMUNITY AND DISASTER PLANNING

Tampa General Hospital is the Tier 1 hospital for Region 4 of the Florida Regional Domestic Security Task Force (RDSTF). It is the primary receiving hospital for a nuclear, biological, or chemical attack within the region. The RDSTF is the state plan for how all agencies will be coordinated

in the event of a terrorist event within this region. Tampa General Hospital is proud to be a part of the planning and exercises for this region.

Tampa General Hospital is also the leading hospital for the Tampa Bay Metropolitan Medical Response System (MMRS). The MMRS hosts monthly free training at the Hillsborough County Emergency Operations for all hospital staff on nuclear, biological/chemical weapons, decontamination, and coordination of resources in the event of a terrorist attack.

The Hillsborough County Hospital Disaster Planning Committee meets monthly to share information, discuss hurricanes and other disaster topics, as well as plan for the annual Hillsborough County Disaster Full-function Exercise event. Tampa General Hospital is proud to participate in this committee, and this past year Tampa Bay Technical School supplied nearly 700 high school students as participants for the exercise. Tampa General Hospital also has its own active Hospital Emergency Management/Disaster Committee that meets the last Wednesday of each month in an effort to better prepare for a mass casualty event.

TGH is also an active member of the Hillsborough County Trauma Advisory Committee that meets the last Tuesday of each month. The mission of the Hillsborough County Trauma Agency (HCTA) is to reduce the incidence of death, disability, and complications from injuries by planning, coordinating, and evaluating the county's trauma care system, which includes public access, prehospital care (air and ground ambulance services), acute hospital care, and rehabilitation services. These activities, together with injury prevention efforts, can greatly lessen the human and societal costs of trauma.

Tampa General Hospital in conjunction with our USF partners has recently begun offering the American College of Surgeons' (ACS) Disaster Management & Emergency Preparedness (DMEP) Course. The DMEP Course objective is to assist providers in developing the skills necessary to effectively respond to mass casualties in disaster events. We are very excited about this program and plan to offer this course frequently in the future.

For additional information, please contact:

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2010 FLORIDA APPROVED TRAUMA AGENCIES

FLORIDA TRAUMA AGENCIES

Section 395.40, *F.S.* provides the DOH with the authority to develop appropriate roles for trauma agencies, to assist in furthering the operations of trauma systems at the regional level. "Trauma Agency" means a department approved agency established and operated by one or more counties, or a department-approved entity with which one or more counties contract, for the purpose of administering an inclusive regional trauma system. The following DOH rules govern the formation and operation of trauma agencies:

64J-2.007 Trauma Agency Formation, Continuation, and Plan Requirements

64J-2.008 Trauma Agency Plan Approval and Denial Process

64J-2.009 Trauma Agency Implementation and Operation Requirements

As a first step in developing a trauma agency, a county government or an agency appointed by the county government must develop a trauma systems plan for their geographical area and have it approved by the state before it can function and operate as a trauma agency. The agency plan describes how the trauma agency will carry out its mission and achieves the goals and objectives specified in the agency plan. The plan will as well act as a guide for the development and ongoing evaluation of the trauma system within the agency's service area. The plan must be updated at least every five years and can be updated as needed through resubmission to the state for approval.

A trauma agency is charged with the responsibility of recommending the number and location of trauma centers within its service area and conducting an annual evaluation of the trauma system within the area served by the agency, sharing the results with the state. This is done through its approved agency plan and annual reports to the DOH, Office of Trauma. Also, all applications from hospitals requesting trauma center status within the service area must demonstrate that their application is consistent with the agency plan.

The agency can develop uniform trauma transport protocols (TTPs) to which all EMS providers in the service area must adhere (s. 395.4045, *F.S.*). With the approval of the state, the uniform TTPs can be implemented. If the trauma agency does not elect to develop uniform TTPs, they will have the opportunity to review and comment to the department on any proposed TTPs of EMS providers operating in their geographical area. County commissions can enact ordinances concerning the transport of trauma patients upon the recommendation of the trauma agency.

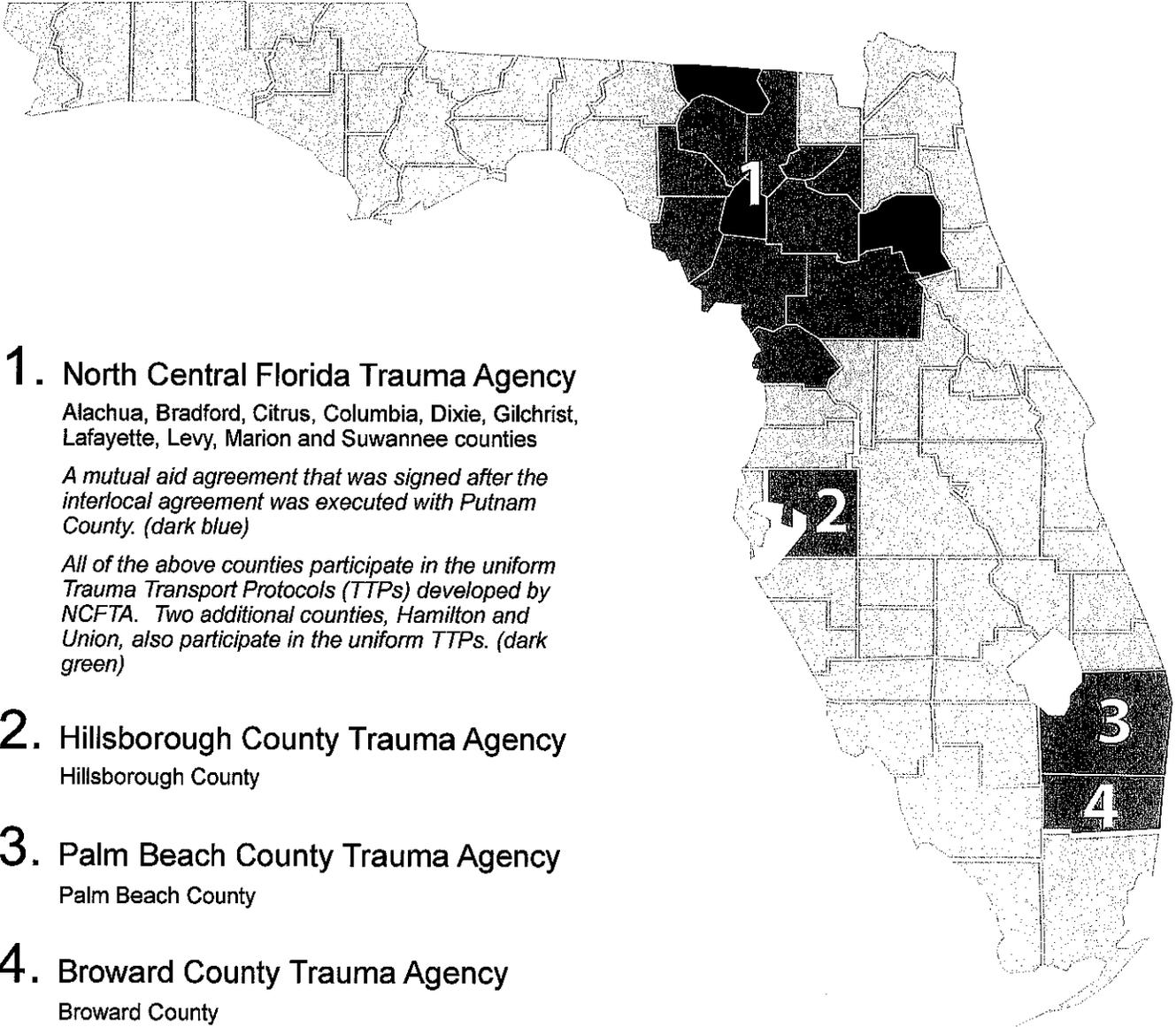
Sections 395.50 and 395.51, *F.S.* empowers trauma agencies to carry out quality assurance activities and is afforded protection from discovery or having its proceedings entered as evidence into civil administrative action. They are empowered to collect data from participants in the trauma system in order to conduct its quality assurance activities and to conduct a systems evaluation.

Of great importance is the trauma agency's role in the coordinating the delivery of care between pre-hospital and hospital trauma care providers. The trauma agency acts as a vital link.

Currently, there are four trauma agencies that cover only 16 of the 67 counties in the state. One of these trauma agencies serves 13 counties; however, two of these counties are served through only the trauma agency's uniform trauma transport protocols.

Broward County Trauma Agency
Hillsborough County Trauma Agency
North Central Florida Trauma Agency (multi-county agency)
Palm Beach County Trauma Agency

2010 FLORIDA APPROVED TRAUMA AGENCIES



1. North Central Florida Trauma Agency

Alachua, Bradford, Citrus, Columbia, Dixie, Gilchrist, Lafayette, Levy, Marion and Suwannee counties

A mutual aid agreement that was signed after the interlocal agreement was executed with Putnam County. (dark blue)

All of the above counties participate in the uniform Trauma Transport Protocols (TTPs) developed by NCFTA. Two additional counties, Hamilton and Union, also participate in the uniform TTPs. (dark green)

2. Hillsborough County Trauma Agency

Hillsborough County

3. Palm Beach County Trauma Agency

Palm Beach County

4. Broward County Trauma Agency

Broward County

BROWARD COUNTY TRAUMA MANAGEMENT AGENCY - Fort Lauderdale

The Broward County Trauma Management Agency (BCTMA) was established in 1991 by the Broward County Board of County Commissioners. The agency provides oversight for the Broward County Trauma System, providing services to a population of over 1.7 million and covering an area of approximately 1,320 square miles. In 1996, the Broward County commissioners consolidated similar government operations under one entity. This decision resulted in merging of the Trauma Management Agency with the operations of the County Medical Examiner's Office. Following the merger the agency became a section within the Broward County Office of Medical Examiner and Trauma Services.

Presently, there are three trauma centers serving the citizens of Broward County. Broward General Medical Center in Ft. Lauderdale and Memorial Regional in Hollywood are both Level I trauma centers; the North Broward Medical Center in Deerfield Beach, serves as a Level II trauma center. All of the trauma centers offer 24 hour a day in-house trauma surgeons and provide a full-scale community outreach program. In addition to the trauma facilities in Broward County, there are thirteen (13) hospitals that provide emergency department services and acute care.

The Trauma Services Section of BCTMA has the additional responsibilities of staff support for the Broward Regional Emergency Medical Services (EMS) Council, the EMS County Grant funds for Broward County, and the licensing and certification (Certificate of Public Convenience and Necessity) of all EMS providers and non-emergency medical transportation service providers for Broward County.

TRAUMA SYSTEM BUDGET

The Trauma Management Agency's budget for 2010 was \$283,970 with funding being provided through the Broward County Board of County Commissioners' General Fund Operations Account. BCTMA experienced an approximately 50 percent decrease in funding from \$445,240 in 2009 to \$283,970 in the 2010 budget. Three full-time positions were eliminated during this last budget cycle. The eliminated positions performed statistical analysis and quality improvement assignments; contract monitoring, and served as the agency's systems network analyst. Additionally, the contract to have the hospital's Trauma Plan coordinated and completed by a private vendor was eliminated.

Although the agency has experienced considerable budget cutbacks, capital funds for FY2010 have been earmarked to provide a significant upgrade in the computer data system allowing for increased ability to obtain updated and accurate statistical data more readily.

QUALITY ASSURANCE AND IMPROVEMENT ACTIVITIES

During 2010 BCTMA participated in the annual Statewide Hurricane Conference and hurricane drill as well as two original exercises to expand the use of the EMS systems within the county. The trauma services section of the Office of Medical Examiner and Trauma Services continues to conduct monthly Trauma System Quality Improvement Committee (TSQIC) meetings with the local trauma facility medical directors, trauma center program managers, pre-hospital EMS providers and their medical directors, pre-hospital paramedics, emergency department medical directors, and the Broward County Medical Examiner. Agency representatives also attend each of the county's trauma centers Trauma Quality Improvement (QI) meetings. The agency familiarized itself with each of the 260 cases presented and continues to work towards improving and updating the county's trauma system through active participation at these meetings.

PUBLIC AND HEALTHCARE PROFESSIONAL EDUCATION

Over the past few years, the Trauma Systems Quality Improvement Committee's focus on trauma airway intervention has resulted in improvements in pre-hospital airways through state of the art courses on difficult airway management and utilization of state of the art equipment. BCTMA periodically issues position papers with recommendations and/or clarifications for providing uniformity of care throughout the system. During 2010 an educational paper was distributed to all primary care providers alerting them to inform any of their patients on anti-platelet medications, who subsequently sustain a head trauma, to contact their primary care provider, or 9-1-1 for immediate assessment. EMS providers as well as their medical directors were included in the notification process.

INJURY PREVENTION AND OUTREACH PROGRAM

BCTMA and the trauma facilities participate jointly in community outreach programs. These programs include injury prevention related programs with specific school related activities for prom night; bicycle safety; high risk behaviors associated with drinking and driving; the importance of safety seat belts; drowning prevention for programs such as Swim Central; ALS competitions; and local EMS educational conferences.

PRE-HOSPITAL AND HOSPITAL COMPLIANCE

BCTMA and its community partners started the process of updating and revising the unified Trauma Transport Protocols (TTPs) at the beginning of 2009 and the countywide new and improved protocols were submitted to the State of Florida, Division Emergency Medical Services, Office of Trauma for approval in December 2009. The submitted protocols were approved by the state with no changes. The updated TTPs were made operational during 2010, as well as updates to the Broward County Interfacility Trauma Transfer Protocols for non-trauma centers. September 2011, the Trauma Quality Improvement Committee will begin the process of reviewing and updating

BROWARD COUNTY TRAUMA MANAGEMENT AGENCY - Fort Lauderdale

the current TTPs, incorporating the use of new medications and equipment as appropriate within our community.

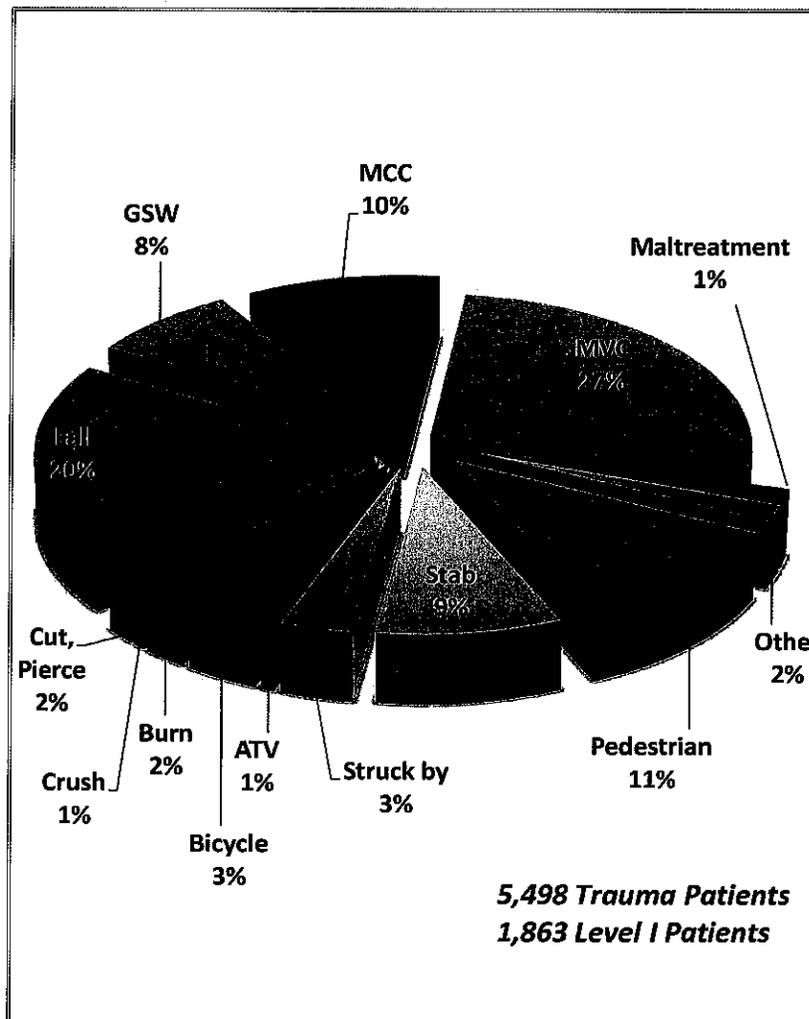
DEMOGRAPHICS AND CLINICAL STATISTICS
During 2010, 5,498 trauma alert patients in Broward County were transported to trauma centers. In 2010, 1,863 Level 1 injuries were addressed by the centers. Of these, 27 percent were classified as injuries due to motor vehicle crashes, 20 percent due to falls, 11 percent pedestrian trauma, 10 percent motorcycle crashes, 8 percent gunshot wounds, and 2 percent classified as burn injuries.

A total of 2,453 Level 2 injuries were addressed by the trauma centers during 2010, a decrease from the 2,710 seen in 2009. Of these, 38 percent were the result of falls, with 30 percent being the result of motor vehicle crashes, seven percent the result of motorcycle crashes, and four percent bicycle accidents.

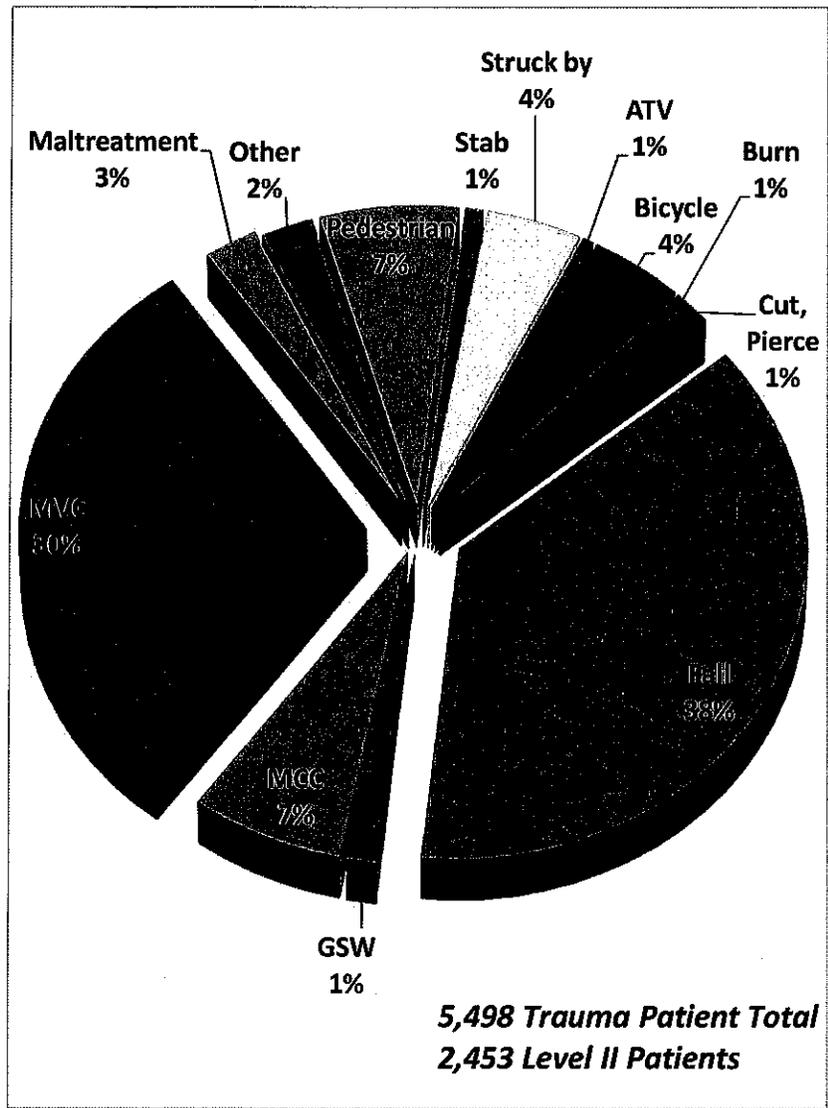
Overall, 37 percent of all trauma injuries in Broward County were sustained in motor vehicle (includes motorcycles) crashes. Additionally, 30 percent of Broward's trauma injuries were related to falls. This type of injury has shown to be a growing trend nationwide causing an increase of public awareness to injury severity caused by falls and the increased use of anti-coagulants in persons over 55 years of age.

The three trauma centers admitted over 50,000 patients of which 5,498 were trauma victims. There were 319 trauma patients with an ISS greater than 15 and 938 with an SSI between nine and 15. Both of these groups' statistics, clearly indicate that the trauma centers located within Broward County meet the nationally recognized standards for patient treatment ratios for Level I (Broward General Medical Center and Memorial Regional Hospital) and Level II (North Broward Medical Center) and properly administer acute care consistently.

2010 Broward County Trauma Statistics Level I



**2010 Broward County Trauma Statistics
Level II**



For more information, please contact:

Broward County
Trauma Management Agency
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HILLSBOROUGH COUNTY TRAUMA AGENCY - Hillsborough County

HISTORY

In 1987, the local Emergency Medical Planning Council (EMPC) advocated for the development of a countywide trauma system to the Hillsborough County Board of County Commissioners (BOCC). During the same period, the Florida Legislature passed a bill to establish trauma systems at the local or regional levels. In the following year, the BOCC appropriated money to study the proposal further, followed by authorization of matching funds with a State EMS grant to establish a local trauma system. As a result of these efforts, the Hillsborough County Trauma Agency (HCTA) was created in 1989. The matching grant subsidy supported the trauma agency until 1992 when a restructuring of its operations could be accomplished and funding secured from Hillsborough County's General Fund (property tax revenue).

Over its span of operation, the HCTA has been positioned as a section under several different departments within the county organization, but continuously so under the Department of Family and Aging Services since 2002. Staffing remains at one full-time employee, the manager, and a part-time consultant medical director. In 2010, the agency marked the 20th year in its ongoing mission to reduce the incidence of death, disability, and complications from injuries by planning, coordinating, and evaluating the county's system of trauma care.

Hillsborough County, a single county trauma service area located on the west central coast of Florida is the fourth most populous county in the state, with an estimated over 1.2 million residents. Four public ALS agencies serve three municipalities and the unincorporated county over an area of greater than 1000 square miles. Two hospital-based air medical programs and four BLS agencies provide further EMS support. The county's acute care medical institutions include two trauma centers: Tampa General Hospital, a university-affiliated Level I, St. Joseph's Hospital, a Level II adult/ pediatric facility, eight community hospitals and one Veterans Administration facility.

TRAUMA SYSTEM BUDGET

The HCTA's budget of \$131,593 is derived entirely from general revenue funds. This covers salaries, overhead, equipment, office supplies, and travel. Although a weak economy has spurred cut-backs across all sectors of government, ever-evolving technological innovations have helped preserve service levels through increased efficiencies.

Since its inception, the trauma system constituents have voluntarily borne the personnel costs to provide records or reports, respond to inquiries, and participate with other trauma caregivers in meetings in support of the HCTA's system-wide quality improvement activities. While in the execution of its mandate, the agency's operations may indirectly impact the prehospital and hospital providers' costs for provision of patient care; it would be difficult to calculate such incremental expenditures for system performance improvement activities. The outcome of these efforts: Lives saved, complications prevented, and

injuries averted can be directly attributed to the feedback, education, and training processes initiated under its auspices.

QUALITY ASSURANCE AND IMPROVEMENT ACTIVITIES

Hillsborough's Trauma Audit Committee (TAC) meets monthly to conduct quality assurance activities in a confidential, multidisciplinary, system-wide forum. Participating system components include all of Hillsborough County's emergency medical service (EMS) agencies (air and ground transport), its acute care hospitals, and the area's trauma centers.

The HCTA also assists the trauma centers and prehospital providers with their respective QA programs. Additionally, more than a dozen surrounding counties' hospital and prehospital providers routinely refer patients to Hillsborough County facilities, many of which interface with the HCTA for operational and outcomes feedback. The county's secure server facilitates HIPAA-compliant exchange of incident-level data with all of these provider entities. This secure file transfer capability, coupled with the ALS services' electronic patient care reporting software, has enhanced and simplified quality improvement operations across the entire continuum-of-care.

The HCTA has on-line access to the Hillsborough County Medical Examiner's Office database and performs electronic review of autopsy reports on all in-hospital trauma-related deaths to assess preventable nature and to identify any patterns amenable to intervention and system improvement. Autopsy findings are used as teaching tools for TAC case presentations and EMS provider in-service training.

PUBLIC AND HEALTHCARE PROFESSIONAL EDUCATION

The HCTA draws from a rich pool of local subject matter experts to keep TAC members abreast of the ever changing medical, technological, legislative, and political arenas affecting trauma care. Accordingly, trauma surgeons, EMS medical directors, local emergency management staff, and local health department emergency preparedness officials share their knowledge and expertise with the area's trauma care providers during the monthly TAC meetings. Some of the timely and diverse topics presented during 2010 included air medical transportation utilization/safety, indications for inter-facility trauma transfers, burn care, trends in pediatric care, lessons learned from the Operation Haiti Relief effort, Orange County's experience in field implementation of a unique patient identifier numbering system, and expectations for the Next Generation 9-1-1. In turn, the trauma agency manager regularly attends the trauma centers' educational offerings provided for its staff, as well as the trauma staff and emergency medicine residents.

HILLSBOROUGH COUNTY TRAUMA AGENCY - Hillsborough County

INJURY PREVENTION AND OUTREACH PROGRAMS

Due to resource limitations, the HCTA manager does not independently coordinate formal programs in injury prevention and safety promotion. However, the manager maintains active working relationships with public health, traffic safety, disaster and emergency planning entities in the county, the region, and at the state level. Also, the manager participates in various city and county groups organized to maintain readiness for mass casualty events and local/regional disasters, such as Hillsborough County's MMRS Committee, RDSTF-4 Health and Medical Sub-Committee, Hospital Disaster Committee, and Emergency Medical Planning Council.

The trauma agency provides administrative support to the county's hospitals for the state subsidized Intermedix EMResource and EMTrack web applications. Each facility posts its emergency department's diversion, surgical subspecialty availability and in-patient bed statuses on-line daily to support real time transport and transfer destination decisions.

PRE-HOSPITAL AND HOSPITAL COMPLIANCE

Both trauma centers submit data from their trauma registries to enable the trauma agency to perform system evaluation. The eight non-trauma centers each provide the trauma agency with an electronic data file of all admissions containing one or more ICD-9CM trauma diagnosis codes between 800-959.9. Injury severity scoring software allows the data to be further filtered to monitor over and under triage. The four public ALS services submit incident level data to the state's EMSTARS database and aggregate data to the HCTA. All EMS providers are required to report trauma transport protocol deviations to the trauma agency.

The crude community over-triage rate (proportion of trauma alerts discharged from the trauma center EDs among all trauma alerts treated) was 12.7 percent during 2010. The relative stability of this metric over time is a reflection of consistency of the TAC's quality improvement efforts: provider education and feedback.

DEMOGRAPHICS AND CLINICAL STATISTICS

For the third year in a row, Hillsborough County's two trauma centers treated fewer trauma alert patients than the preceding year. In-hospital trauma deaths were also down more than twenty per cent in 2010 from the year before [371 vs. 292]. These declines in morbidity and mortality mirror an even longer downward trend in the number of traffic crashes, resultant injuries and fatalities, which historically contribute to about half of trauma patient volumes, as shown in the table below.

Hillsborough County	2006	2007	2008	2009	2010
Crashes	23,971	22,613	20,162	18,168	17,480
Crash Injuries	20,174	20,198	17,970	17,582	17,123
Crash Fatalities	191	183	182	141	153
Trauma Alerts	2,125	2,267	2,047	1,730	1,593

(*2010 Traffic Crash Statistics Report, Florida Department of Highway Safety and Motor Vehicles).

This positive course is undoubtedly influenced by many factors: Economic forces, vehicular safety enhancements, injury prevention initiatives, traffic safety legislation, but is also a validation of the commitment of our local and regional partners to ongoing trauma care quality improvement activities.

For more information, please contact:

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HEALTH CARE DISTRICT OF PALM BEACH COUNTY TRAUMA AGENCY - West Palm Beach



TRAUMA AGENCY HISTORY

Following enabling legislation approved by the Florida Legislature in 1987, a new solution to providing health care services for trauma victims and financially needy residents was created in Palm Beach County. The Health Care District of Palm Beach County was established as an independent taxing district by special statute and approved by the voters of Palm Beach County on November 8, 1988. Unique to both the state of Florida and the nation, the Health Care District was created to provide access to quality health care services and to administer a trauma system that serves all residents and visitors of Palm Beach County.

The Palm Beach County trauma system was implemented on May 1, 1991. The agency was established by the Palm Beach County Commission on May 7, 1987 and operated by the Health Care District. It provides planning, oversight, leadership, and administrative support for the trauma system. The mission of the Health Care District of Palm Beach County Trauma Agency is to reduce the incidence of death, disability, and complications from injuries by

planning, funding, coordinating, and evaluating Palm Beach County's Trauma System.

The operational components of the trauma system consists of an enhanced 911 communications and dispatch system, 11 local EMS and pre-hospital providers, two Trauma Hawk aeromedical helicopters, 12 acute care hospitals, two Level II trauma centers, both of which are designated Pediatric Referral Centers, two associated comprehensive rehabilitation centers, as well as a Health Care District supported long-term care facility.

The district has contracts with Tenet Healthcare Corporation for the operation of two state verified trauma centers at Delray Medical Center and St. Mary's Medical Center. Both centers are also certified as Pediatric trauma centers. In addition, provider contracts are maintained with two acute rehabilitation centers, over 350 trauma physicians, and other ancillary health care providers.

HEALTH CARE DISTRICT OF PALM BEACH COUNTY TRAUMA AGENCY - West Palm Beach

- The district owns and operates two state of the art aeromedical helicopters for trauma patient transports. These Trauma Hawk helicopters have become the most recognizable representation of the district's core program. After 19 years of operation the Palm Beach County trauma system has evolved to a "mature" trauma system and is recognized at the state and national level as a model trauma system.

Palm Beach County is considered a nucleus county (which is defined as a county providing trauma care to a large percentage of its own residents and visitors, as well as trauma care to neighboring counties); and is designated as its own trauma service area with two state verified Level II trauma centers.

TRAUMA SYSTEM BUDGET

The trauma agency is a division of the Health Care District of Palm Beach County. The Health Care District, developed by Florida Statute, is an independent county taxing district funded by ad valorem taxes. The FY 2009/2010 budget for the Palm Beach County trauma system was \$31,339,045 million. This figure included: \$5.4 million budgeted to pay for trauma care for uninsured and underinsured patients at the two combined Level II trauma centers and Pediatric trauma centers; \$16.4 million budgeted for physician fees; and \$750,000 for rehabilitation costs. In addition, nearly \$2 million was allocated for professional liability insurance for slot malpractice coverage policies for all trauma physicians. The trauma agency has five full-time personnel on staff at an operating cost of under \$625,149. Palm Beach County has a total area of 2,386 square miles, making it the largest county by area in Florida. With such a large service area it is critical that air transport be available to trauma victims within the "Golden Hour." The Health Care District also funds and operates an Aeromedical Program with a budget of \$5.7 million.

Quality Assurance and Improvement Activities: The Trauma Quality Improvement Committee (TQIC) convenes for the purpose of addressing hospital and pre-hospital provider quality of care issues concerning trauma, including the overall performance and coordination of the trauma care system. This committee supplements the individual trauma centers' performance improvement process to ensure the operational components of the trauma system function as a cohesive unit. The scope of concern for the TQIC includes, but is not limited to, review of pre-hospital provider treatment, coordination and transfer of care between agencies, all trauma deaths, uniform system-wide trauma transport protocols and exceptions to same, trauma care and compliance with the Florida Trauma System Standards at the centers and interfacility transfer guidelines at non-trauma centers. TQIC usually meets monthly, and evaluates system function for opportunities for quality improvement.

The following minimum representation is requested:

- Chief of Trauma from each designated trauma center
- Emergency physician (not affiliated with a trauma center)
- Physicians with specialties and/or affiliations in

- pediatrics, neurosurgery, orthopedics,
- Anesthesiology, general surgery
- Physician who is a representative of the Palm Beach County Medical Association
- Trauma nurse coordinator from each designated trauma center
- Medical examiner
- Program directors, chief flight nurses and Medical Directors from the air medical programs
- Administrators, training officers and Medical Directors from the City and County ground ALS

The trauma agency is an active member of the Healthcare Emergency Response Coalition whose mission is to develop and promote the healthcare emergency response and recovery capability of Palm Beach County. The purpose of the coalition is to:

- Provide a forum for the healthcare community to interact with one another and other response agencies at a county, regional, and state level to promote emergency preparedness;
- Coordinate and improve the delivery of healthcare emergency response services;
- Foster communication between local, regional, and state entities on community-wide emergency planning, response and recovery;
- Ensure overall readiness through coordination of community-wide training and exercises;
- Promote preparedness in the healthcare community through standardized practices and integration with other response partners;

PUBLIC AND HEALTHCARE PROFESSIONAL EDUCATION

The trauma agency supports positions at the trauma centers that foster professional growth for physicians, nurses, paramedics, and community health professionals through monthly multidisciplinary trauma conferences. These conferences include Grand Round trauma-specific presentations and unit based education programs. Both centers offer Trauma Nurse Core Curriculum (TNCC), Emergency Nurses Pediatric Course (ENPC), as well as Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS).

INJURY PREVENTION AND OUTREACH PROGRAMS

The Health Care District of Palm Beach County Trauma Agency supports an active component at both trauma centers in the county providing community outreach and injury prevention. This is achieved through the trauma centers by focusing on various age groups to provide age appropriate, specific education. The centers also participate in multiple community safety events throughout the community, as well as local coalitions.

HEALTH CARE DISTRICT OF PALM BEACH COUNTY TRAUMA AGENCY - West Palm Beach



PRE-HOSPITAL AND HOSPITAL COMPLIANCE

The Trauma Registry Committee consists of individuals skilled in clinical care, database management and/or evaluation methods to formulate the study questions to be answered using the agency's centralized trauma registry. This group is sensitive to the issues of confidentiality, independence, and free market enterprise between the trauma centers. This committee usually convenes monthly and pre-hospital, inter-facility transfer, pre-hospital, and hospital care issues identified in this committee are forwarded to the TQIC. The composition of the Trauma Registry Committee is as follows:

- Agency Administrator
- Agency Registry Coordinator
- St. Mary's Trauma Program Manager
- Delray Medical Center's Program Manager
- Emergency Medical Services Liaison
- St. Mary's Performance Improvement Coordinator.
- Delray Medical Center's Performance Improvement Coordinator
- The Trauma Center Registrars

DEMOGRAPHICS AND CLINICAL STATISTICS

During 2010, 2,787 patients were transported to trauma centers in Palm Beach County compared to 2,841 in 2009. Blunt injuries consisting primarily of falls, and motor vehicle crashes comprise 86 percent of the trauma workload. Penetrating injuries are responsible for approximately 12 percent of workload with burns accounting for the remaining two percent. This represents a two percent decrease in total workload from the previous year.

For additional information, please contact:

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NORTH CENTRAL FLORIDA TRAUMA AGENCY - Gainesville

The North Central Florida Trauma Agency (NCFTA), established in 1990 through an interlocal agreement, is a partnership of healthcare professionals whose mission is to support and promote excellence in trauma care for residents and visitors of North Central Florida. NCFTA's vision is a fully integrated system of trauma care that minimizes preventable injury, reduces mortality and morbidity, and provides optimal care through evidence-based practice, education, and clinical research.

The following 10 counties participated in the NCFTA interlocal agreement:

1. Alachua
2. Bradford
3. Citrus
4. Columbia
5. Dixie
6. Gilchrist
7. Lafayette
8. Levy
9. Marion
10. Suwannee

A mutual aid agreement that was signed after the interlocal agreement was executed with Putnam County.

All of the above counties participate in the uniform Trauma Transport Protocols (TTPs) developed by NCFTA. Two additional counties, Hamilton and Union, also participate in the uniform TTPs.

According to the interlocal agreement and current bylaws, NCFTA's purposes are:

- To carry out regional trauma planning in the participating counties in accordance with Chapter 395.031, *Florida Statutes*, known as the Trauma Care Act of 1987, and rules and regulations as may from time to time be adopted pursuant to such legislation;
 - To develop, review, and revise as necessary a regional trauma plan;
 - To assemble and analyze data concerning the incidence of trauma and trauma-related death and disability in the trauma service area;
 - To assemble and analyze data concerning the status of the trauma care system in the service area;
 - To ensure that each emergency medical services (EMS) provider within the service area meets the trauma scorecard methodology as specified in state rule;
 - To ensure that the trauma transport protocol requirements specified under State Rule are met;
 - To provide assistance to the Florida Department of Health, Division of Emergency Medical Services, as is customary, necessary, and as may be delegated by law of regulation to the regional trauma agencies;
 - To implement activities to increase public awareness of trauma care services and emphasize advantages of personal habits that help prevent accidental injury and death; and
- To inform the general public and appropriate agencies and organizations about regional trauma agency's process and activities.

TRAUMA SYSTEM BUDGET

NCFTA is unique in that it's the state's only multi-county trauma agency. Because it covers more than one county, NCFTA cannot be funded by a taxing authority without the agreement of every county represented. Funding is dependent on the following annual membership dues structure:

- EMS agencies: the greater of two percent of the county award funds or \$250.00
- Flight programs: \$250.00
- Hospitals: \$350.00
- Private ambulances: \$250.00

QUALITY ASSURANCE AND IMPROVEMENT ACTIVITIES

As reflected by the NCFTA minutes, Shands at UF Level I Trauma Center participates regularly in NCFTA quality assurance and quality improvement activities. This year, WellFlorida Council assisted NCFTA in developing a more robust quality assurance plan compiled through information gathered from in-depth qualitative interviews of stakeholders and trauma agency peers as well as research.

Based on the discussions that ensued after the quality assurance/improvement plan was developed, the NCFTA Board unanimously agreed to pursue the following aims:

1. Combine with Coalition of Rural EMS Providers (CoREMS) and change the "R" in the CoREMS to stand for "Regional" instead of "Rural." This decision was made by the NCFTA Board because they understand that in order for the organization to remain cohesive, rural, and urban stakeholders must participate and coordinate their efforts. The addition of CoREMS also brings more value to the meetings for EMS providers.
2. Find ways to participate in the state's Direct Secure Messaging (DSM) system and the Florida Health Information Exchange (HIE) to improve pre-hospital and hospital communications, quality reporting, and documentation. This action also ensures that there is a "feedback loop" to improve trauma care. DSM and HIE can be used to transfer patient information needed in real time at all levels of trauma care delivery and provide quality assurance in an electronic, documented format. DSM is a free, secure email system designed to improve provider-to-provider communications and patient health information exchange.
3. Develop a website that is adjoined to the CommunityHealth IT website to have an interactive learning community and to provide trauma care related data that are accessible to the public.

NORTH CENTRAL FLORIDA TRAUMA AGENCY - Gainesville

PUBLIC AND HEALTHCARE PROFESSIONAL EDUCATION PROGRAMS

Shands at UF Level I Trauma Center held healthcare professional educational classes regarding STEMIs and stroke in November 2010 (Suwannee and Lafayette counties), February 2011 (Dixie County), and June 2011 (Hamilton County). Two eight hour Rural Trauma Team Development Courses were held in Lake Butler (Union County) on March 11, 2011 and Live Oak (Suwannee County) on May 13, 2011.

INJURY PREVENTION AND OUTREACH PROGRAMS

NCFTA prevention and training activities are performed through our members. For example, injury prevention and education that has occurred in Putnam County in the last year includes:

Distracted Driving and Impaired Driving Simulation using a golf cart and a closed circuit course.

Students had to perform simple tasks with vision impairment goggles such as catching and throwing a ball, walking in a straight line, and navigating a golf cart while trying to avoid cones. They were also given the opportunity to text and drive to demonstrate the dangers of that as well.

Vision Impairment Program. A fake crash scene was set up and a scenario was given to the participants; this program received front-page newspaper coverage. Participants of all ages wore goggles to see how dangerous it is to drive impaired.

Student Programs. Free bike helmet fitting, helmets, and bike safety classes were provided to students. Other student programs covered important safety issues such as driving with distractions, seatbelt use, speeding, and DUI.

Car seat safety events.

Celebrate Safely Campaign. This successful program was held again this year with many restaurants and bars participating by giving free non alcoholic beverages to designated drivers during the holiday season.

Fire Safety and burn prevention programs for elementary school students. These programs include stop drop and roll, stay low and go, EDITH drills and the difference between tools and toys. These programs also included visits to schools with Shabookey the Safety Clown. Major Putnam County businesses request Shabookey to entertain the kids and fire trucks and ambulances to answer questions.

Career day activities at schools and camps during the summer. These opportunities are used to speak about safety topics as well.

The following programs were held by Shands at UF Level I Trauma Center in conjunction with other NCFTA and non-NCFTA organizations:

Pediatric: Magnolia Park Safety Fair in March 5, 2011. Safety Fair at Lawton Chiles Elementary School on April 28, 2011

Adult: Orange/Blue Game – “Don’t text and drive” on April 9, 2011 Falls Prevention at T-shirt sale for the public on May 26, 2011

PRE-HOSPITAL AND HOSPITAL COMPLIANCE

Monitoring the effectiveness of trauma alert criteria with regard to determination of appropriate destinations and compliance with trauma scorecard and TTP requirements is performed in conjunction with clinical case studies. As part of the NCFTA Quality Assurance Plan, key trauma alert criteria will be reported on the NCFTA/Community Health IT interactive website that is under development.

DEMOGRAPHICS AND CLINICAL STATISTICS

In 2010, the following items were reviewed at NCFTA meetings:

February 2010: The number of trauma alerts per month at Shands UF was discussed. Deaths from 2006 to 2009 showed a decrease to 4.2 percent with a decrease in mean time from injury to hospital by 30 minutes. The over-triage rate was acceptable by standards. Under-triage was also examined, and the paramedic discretion for trauma alert calls was drilled down by county. Shands at UF Level I Trauma Center provided feedback to EMS on 150 trauma agency patients on a weekly basis and in response to questions.

April 2010: NCFTA reviewed 54 under-triage patients that were identified at Shands at UF Level I Trauma Center during 2009. Of those, 43 were blunt injuries, and 10 were penetrating injuries. The vast majority, 82 percent, of the under-triaged patients arrived from the scene. Results showed that five of the under-triaged patients died; the fatality cases were reviewed.

TOP 10 MECHANISMS OF INJURY	TOTAL	PERCENT
1. MVC	703	26.7%
2. FALL	657	24.9%
3. BURN	384	14.6%
4. MCC	136	5.2%
5. GSW	100	3.8%
6. ASSAULT	87	3.3%
7. PEDESTRIAN	73	2.8%
8. ATV	55	2.1%
9. HORSE	50	1.9%
10. STAB	37	1.4%

NORTH CENTRAL FLORIDA TRAUMA AGENCY - Gainesville

SHANDS TRAUMA PATIENTS DISCHARGED FROM 1/1/2010 TO 12/31/2010

2634	100.0%	TOTAL INPATIENT TRAUMAS
2239	85.0%	ADULT
395	15.0%	PEDS 0-16
1651	62.7%	SCENE
892	33.9%	XFER FROM OUTSIDE HOSPITAL
91	3.5%	OTHER (WALK-IN, POV, CLINIC)
1801	68.4%	AMBULANCE
563	21.4%	AMB & HELICOPTER
151	5.7%	PRIVATE/OTHER
112	4.3%	HELICOPTER
7	0.3%	FIXED WING
1109	42.1%	ADULT TRAUMA ALERTS
117	4.4%	PEDIATRIC TRAUMA ALERTS
1408	53.5%	NON-ALERTS
2043	77.6%	BLUNT
395	15.0%	BURN
196	7.4%	PENETRATING
1936	73.5%	ISS SCORE <16
698	26.5%	ISS SCORE 16 OR GREATER
120	4.6%	DEATHS
2514	95.4%	LIVED (VARIOUS DISPO TO REHAB, SNF, OTHER OR ROUTINE)
1-315 DAYS	5.8 AVG	LENGTH OF HOSPITAL STAY

All statistics are from Shands at UF Level I Trauma Center, Donna York, Trauma PI Nurse/BSCIP Coordinator July 13, 2011.

For additional information, please contact:

Currently, WellFlorida Council staffs the NCFTA meetings and provides part-time technical support to the organization.

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UNIVERSITY OF FLORIDA SHANDS BURN CENTER - Gainesville

Shands HealthCare, affiliated with the University of Florida, is one of the southeast's premier health systems. Shands includes nine hospitals, more than 80 affiliated primary and specialty physician practices, and a medical staff of 1,500 UF faculty and community doctors. Shands is committed to delivering essential medical care, offering advanced diagnostic techniques, and pioneering sophisticated treatments, which draw residents living in the local communities, as well as patients nationally, for highly specialized, complex care.

Established in 1958, Shands is a 630-bed academic medical center located in north central Florida. The U.S. News and World Report magazine consistently ranks the UF College of Medicine physicians practicing at Shands at UF among America's best. Shands at UF is a tertiary care center with 144 intensive care beds with "Centers of Excellence" including cancer, cardiovascular, neurosciences, and transplant services.

In 1973, thru the vision of Dr. Tubbs, Shands at the University of Florida Provisional established the burn center by converting a fourbed ward to a threebed intensive care unit. Included in the unit was an adjoining operating room that allowed all procedures to be performed within the confines of the burn center.

In 1988, Shands built a new eightbed burn intensive care unit. This new unit included an operating suite, hydrotherapy room, as well as an outpatient clinic. Over the past 20 years, with the continued support of Shands Healthcare, the center has continued to grow into its current configuration. The unit was completely renovated in 2007, to enhance staff flow and improve patient outcomes. Shands Burn Center serves all of north central Florida from south of Ocala, east to Jacksonville, west into the Florida panhandle, and north to Georgia and Alabama.

Since its inception, the burn center has grown from 10-20 patients annually to more than 450 in 2008. In 2009, The Shands Burn Center was re-verified by the American Burn Association (ABA) and was recognized by the ABA for excellence in care.

A multidisciplinary team made up of adult and pediatric burn surgeons, critical care physicians, consulting physicians, nurse practitioners, registered nurses, occupational and physical therapists, pharmacists, respiratory therapists, and registered dieticians work together to deliver burn care ranging from initial resuscitation to rehabilitation. The nurses on the unit all meet the level I trauma education requirements and specialize in burn resuscitation and more than 50 percent are certified in Advanced Burn Life Support©, with a core of staff that are ABLIS© instructors and certified in advanced cardiac life support. The department works closely with the Department of Health's "Bombs, Burns, and Blasts" Disaster Preparedness Program. The populations served by the burn center include pediatrics to geriatrics. The burn center treats all flame, scald, chemical, and electrical burns ranging in severity from small minor injuries to severe life threatening total body burns.

Admissions for 2010

• Adult burn admissions	377
• Pediatric burn admissions	119
• Wound admissions	25
• Outpatient clinic visits	1932

The university and Shands Burn Center have participated in a variety of clinical research since 1998. As a wellrespected research institution, we have performed industry sponsored studies and physician/provider-initiated studies evaluating new antibiotics for pneumonia, wound

Prospective Evaluation of the Effects of Topical Therapy with Sulfamylon® for 5% Topical Solution on Autograft Healing in Subjects with Thermal Injuries Requiring Meshed Autografts: A Comparison to a Historical Control	David W. Mazingo, MD	In Progress WIRB # 2006-1347
Burn Injury in the State of Florida	Winston T. Richards, MD	In Progress UF IRB # 59-2009
Epicel (Cultured Epidermal Autografts) Humanitarian Device Project	Winston T. Richards, MD	In Progress UF IRB # 225-2010
A Retrospective Single Center Study Characterizing the Incidence of Herpes Simplex Virus Infection As Well As Outcomes in Patients Post Herpes Simplex Virus Infection After Thermal Injury	David W. Mazingo, MD	In Progress UF IRB # 309-2010
A Comparative Study of the ReCell Device and Autologous Split-Thickness Meshed Skin Graft in the Treatment of Acute Burn Injuries	David W. Mazingo, MD	In Progress UF IRB # 410-2010
A Randomized Clinical Trial of Restrictive vs. Traditional Blood Transfusion Practices in Burn Patients	David W. Mazingo, MD	In Progress UF IRB # 120-2010
Burns on Home Oxygen: What is the Cost developing Tool? What is the Cost State Wide	Winston T. Richards, MD	Submitted UF IRB

UNIVERSITY OF FLORIDA SHANDS BURN CENTER - Gainesville

coverings to improve healing and decrease infection, gastric ulcer prevention, wound healing methods, and scar/contracture management. All of our research has centered on improving patient outcomes and reducing pain. It is our goal as a research center to offer top of the line care including the most up to date therapies while using evidenced-based practice.

Examples of some of our recent projects conducted by David W. Mozingo, M.D., F.A.C.S., and Winston T. Richards, MD include:

The burn center provides outreach to the community by performing presentations related to burn safety, as well as on-site safety presentations to industry. Also, staff members coordinate and participate in an annual burn camp for kids. This program provides a resource for child burn survivors to interact with other children who have had the same experiences.

Burn center staff members develop and present healthcare provider education to the local colleges and universities. This education includes all aspects of burn care including prevention, first responder care, burn patient management, psychosocial management, and outpatient follow-up. Shands Burn Center has also committed to first responders and point-of-service hospitals by establishing a team of instructors trained by the American Burn Association in the techniques of Advanced Burn Life Support®. This team provides ABLS® instruction to the surrounding communities to enhance their ability to treat burn victims. Shands Healthcare has and will continue to support the needs of the burn patients of north central Florida.

For additional information, please contact:

David Mozingo, M.D., F.A.C.S.
Burn Center Medical Director
University of Florida

TAMPA GENERAL HOSPITAL BURN CENTER - Tampa

Tampa General Hospital is home to the regional burn center. It is one of just four burn centers in Florida. The center treats adult and pediatric patients from emergency admission through rehabilitation. The Tampa General Hospital Burn Unit consists of an 18-bed specialty unit with a six bed intensive care capacity; a twelve bed wound care unit and state of the art treatment rooms conveniently located within the unit. The pediatric burn patients are cared for in the pediatric intensive care unit and the pediatric medical-surgical unit. The burn interdisciplinary team provides consistent care to all burn patients throughout the organization regardless of their location.

The Burn Center at Tampa General Hospital has been verified by the American Burn Association of the American College of Surgeons and is certified by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) as a Disease Specific Burn Program. Tampa General Hospital has also earned the prestigious Magnet designation from the American Nurses Credentialing Center.

The Tampa General Hospital Burn Center is affiliated with skilled physicians from the University of South Florida, and serves patients from primarily the West/Central region of Florida, although patients come from all over Florida and the Caribbean Islands.

In 2010, the Burn Program at Tampa General Hospital provided care to 389 adult and pediatric inpatients.

EDUCATION – HEALTHCARE PROFESSIONALS

Burn patients are cared for by USF Plastic Surgery Faculty, Residents, Pediatric Critical Care and Anesthesia Critical Care Physicians as appropriate. The Burn Service at TGH also has an ARNP and Physician Assistant dedicated to Burn Care.

The Nursing staff consists of highly trained adult and pediatric registered nurses. Staff complete certification courses such as the American Association of Critical Care Nurses Essentials of Critical Care, Advanced Burn Life Support (ABLS), Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) as appropriate. Burn team members from medical, nursing, and ancillary therapies participate in Regional and National Burn Conferences annually.

Ancillary Burn team members include specially trained physical and occupational therapists, recreational therapist, as well as dietary, social work, pharmacology, respiratory therapy, psychiatry, psychology and pastoral care.



TAMPA GENERAL HOSPITAL BURN CENTER - Tampa

Realizing that pediatric burn patients have special needs, these patients have the support of Child Life Therapy to help children and their families cope with their hospitalization. TGH is also fortunate to have a certified Hillsborough County school teacher on the premise that enables students to catch up on their schoolwork while in the hospital.

Kimberly Brown, ARNP provided a 3 hour course on Burn care and rehabilitation to the USF School of Physical Therapy and Rehabilitation Sciences.

INJURY PREVENTION & COMMUNITY EDUCATION

Every year Tampa Fire Rescue and the Burn Center co-sponsor Camp Hopetake, a camp for previously burned children. For over 20 years approximately 40 children annually participate in the one-week camping experience. The camp has been held on the University of South Florida campus. The event is staffed with volunteers from Tampa General, Tampa Fire Rescue as well as other community leaders.

Burn Staff also run a Burn support group and participate in SOARS (Survivors offering Assistance in Recovery).

Many of our adult and pediatric staff are ABLIS instructors. We have 2 National Faculty Members on our medical and nursing staff. ABLIS courses are offered several times per year. In 2010, we held 2 courses. Our staff are often requested to provide burn training to outlying hospitals. The Burn Center Staff participates in many educational programs for the community including; The Walker Program, which provides education and deterrents to juvenile fire-starters. They also educate nursing students, EMT's and paramedics and Special Operations military personnel from Fort Bragg. They participate in the Great American Teach-in for school age children.

The staff assists the International Brother Hood of Electrical Workers (IBEW), Tampa Electric Company and the TGH foundation to offer funding for education and patient and family support. The funding provided by these companies has been used to support and assist patients and families with burn injuries during and after hospitalization. The IBEW also provides funds for our survivor support program. The Burn Center participates in the Public Health Emergency Management System's Burn Asset resource tracking Program, which maintains a weekly log of all available Burn Beds in the nation in the event of disaster.

RESEARCH

Medical/Nursing and ancillary staff participate in Burn-related research endeavors and present them at regional and national conferences. Scott Barlow PA-C presented the "Haitian Experience" at the Annual Region 4 Burn Meeting in Memphis, November 2010. In addition, the Burn Center is participating in a smoke inhalation toxic metabolite study. In 2011, the burn center will begin 4 additional studies including: Mepitel One, the ABA Rescue Study, Recell study and Guided imagery vs. virtual reality to treat burn pain.

Submitted by:

David Smith, MD – Burn Center Medical Director
Janet Davis – Vice President of Acute Care, Therapy and Trauma Services
J. Celeste Kallenborn – Director of Medical-Surgical Services
Lori Desmond – Burn Center Nurse Manager

For additional information, contact the Burn Center at 813-844-7617.

Real People. Real Stories.



SUCCESS STORY MIKE ATHERTON

Mike Atherton, an avid water skier and family man, was boating with his family on May 9, 2009 when their boat exploded - marking one of the most devastating boating accidents to occur in Tampa Bay history. Mike remembers that day prior to the explosion perfectly. Family and friends were visiting from Iowa to celebrate his daughter's First Communion the following day. There were 14 family members on board the vessel. Within an instant, the boat blast tossed debris, boat parts, and the Atherton/Meyer family into Tampa Bay. After that, no one remembers much of anything. The family was pulled to shore and transported to Tampa General Hospital Level I Trauma Center.



Real People. Real Stories.



The Tampa General Hospital Trauma Resuscitation Team was called to respond, along with back-up services to care for the six injured family members. Mike, his wife Carrie, their seven year old nephew, and Carries parent's George and Nancy Meyer were critically injured. Within minutes, all were transported to Tampa General Hospital Trauma Center by Helicopter. Mike was conscious, but in shock as his injuries included near amputations of both of his legs. He was treated with IV fluids and blood transfusions; however, he was becoming more unstable. He was then rushed to the operating room where his bleeding was controlled and fractures stabilized. Unfortunately, his right leg was so badly damaged that it required immediate amputation. Several days later he also required amputations of his other leg and left arm. After a several surgeries, a prolonged ICU stay, and recovery on the inpatient Trauma Unit, Mike was transferred to the Tampa General Rehab Hospital 60 days following the explosion.

During all of Mike's care, the Tampa General Hospital Trauma Team was also caring for the five other injured family members. Investigators and officials at the time said it was a miracle that all of the family members survived.

Today, Mike walks with the help of prosthetics without the use of a cane. A prosthetic arm helps him towards an independent life. He has even returned to the water to ski. The entire family has made a successful recovery and returning to life as usual.

The Atherton/Meyer family's strength and determination are an inspiration to all of us.



UNIVERSITY OF MIAMI/JACKSON MEMORIAL BURN CENTER - Miami

UNIVERSITY OF MIAMI JACKSON MEMORIAL BURN CENTER

The University of Miami/Jackson Memorial (UM/JM) Hospital Burn Center is dedicated to the comprehensive care of the burn victim using a multidisciplinary team approach. A burn injury, whether minor or life-threatening, can forever alter the lives of those involved in this type of traumatic event and the lives of their families. Our mission is to provide comprehensive care to our burn patients by utilizing a multidisciplinary approach to not only address the immediate physical and emotional injuries, but also ensure an optimal outcome.

DEMOGRAPHICS AND CLINICAL STATISTICS

The UM/JM Burn Center, verified by the American Burn Association and American College of Surgeons, admitted 226 patients during 2010; 48 of whom were pediatric. In addition to the patients admitted, there were 1219 encounters in the Burn Clinic which operates within the Ryder Level I Trauma Center. As the only Burn Center in South Florida, patients are referred from Miami-Dade, Broward, Palm Beach, Collier, and Monroe counties and throughout the Caribbean.

The clinical team, including burn/trauma surgeons, nurse practitioners, nurses, skilled technicians, occupational

therapists, physical therapists, social workers, registered dietitians, pharmacists and psychologists provide care throughout the duration of stay for each patient. In our Trauma Resuscitation area, surgeons and nurses provide rapid evaluation and treatment. Injuries are assessed for the degree of burn, resuscitation is administered, temporary coverage is applied, and special measures are implemented to reduce the risk of infection.

Patients are dispositioned from Trauma Resuscitation to a dedicated Burn Intensive Care Unit or the Burn Step-Down Unit, depending on the severity of injury and level of monitoring required. Within the Burn Intensive Care Unit, specialized practitioners monitor for the potential complications associated with severe burns such as inhalation injury, muscle loss, altered metabolism, respiratory complications, renal compromise, digestive disorders, and more. To ensure timely identification and treatment of these potential risks, physicians certified by the American Board of Surgery in General Surgery and Surgical Critical Care maintain oversight of all care provided.

Occupational and Physical Therapists provide rehabilitative services both at the bedside and in the Burn Center's gym. Therapists guide exercises in weight training, muscle strengthening, resistance and endurance, range of motion and activities of daily living. During the recovery phase special emphasis is also placed on scar management, which includes application of pressure garments and splinting. This focus on scar management contributes to a patient's successful return to work and home with the highest level of function obtainable.

Psychologists assist with the emotional needs of patients and their families to provide support, encouragement and coping strategies. Recovery from a burn not only involves healing the patient, but addressing the changes and challenges faced by family members. In order to provide support, the burn service clinical psychologist leads bi-monthly burn survivor support groups. Recognizing that



UNIVERSITY OF MIAMI/JACKSON MEMORIAL BURN CENTER - Miami

It is not only the individual impacted by the trauma of a burn injury, our clinical psychologist has also developed a support group for the families of those living with a burn injury.

Social workers serve as patient care coordinators for rehabilitation services, discharge needs, patient and family education, as well as support at home.

The UM/JM Burn Center's outpatient clinic provides follow-up treatment and evaluation after patients are discharged from the facility. Also seen in the clinic are patients referred to the center by community physicians and facilities. During 2010 there were 1219 encounters in the outpatient clinic.

EDUCATION / TRAINING

During the year, an Advanced Burn Life Support (ABLS) course was provided in Chicago to 45 American Burn Association meeting attendees by our Burn Center ARNPs, outreach coordinator, and representatives from other sites. This intense didactic and skills evaluation course was also offered to healthcare professionals in the community in an effort to improve knowledge regarding the resuscitation of burn patients.

Education in Burn Care has not been limited to employees of Jackson Memorial Hospital. The staff of the UM/JM Burn Center have reached out to the community by providing lectures on the care and treatment of victims of burn injury to nursing students from Miami-Dade College, University of Miami, and Florida International. Additionally, a lecture on emergency care of the burn victim was presented for the Dade/Broward Chapter of the Emergency Nurses Association.

As the UM/JM Ryder Level I Trauma Center continues to be the training site for the Army Trauma Forward Surgical Teams, the care of those military personnel suffering burns has been integrated into the training program provided to the teams rotating through the center. Each team receives a lecture by the UM/JM Burn Center staff addressing burn classifications, burn mapping, initial resuscitation, dressings to be applied, and ongoing care and management. Every Forward Surgical Team and most surgeons from combat support hospital teams deployed to Iraq and Afghanistan since 9/11 have passed through this training program. In 2010, 254 active military personnel benefited from this training.

The Return to School Program for children recovering from burn injuries includes school visits by nurses, social workers, and therapists. This skilled team can answer questions for teachers and classmates and help young patients regain acceptance and support from their peers. Additionally, an educational video, *Its Just Me*, teaches other students and teachers about the child's experience.

The UM/JM Burn Center sponsors multidisciplinary burn center staff to attend the annual American Burn Association (ABA) conference. This week long meeting provides

education on all aspects of burn care, such as research, case management, therapy, clinical care, prevention and psychosocial support.

Staff at the UM/JM Burn Center also has the opportunity to attend the annual Southern Region Burn Conference. Representatives from Florida, Georgia, Alabama, North and South Carolina, Kentucky, Mississippi, and Tennessee converge in one location to discuss advances in burn care.

OUTREACH/INJURY PREVENTION

The Children's Fire Safety Festival, held in conjunction with area fire departments biannually, teaches school children life-saving burn prevention lessons. This program is held in February during Burn Awareness Week and again in October during Fire Safety Week. Ranging from first to third grade, the students participate in fun, interactive education about the basics of fire safety including how to escape a fire in their home and what to do if clothes catch on fire. During 2010, 4000 children benefited from this activity.

In an effort to raise awareness regarding burn injury prevention, UM/JM Burn Center staff has also participated in a number of safety fairs and seminars. During the annual Strides for Safety event and Town Park Village Dedication Day-Burn Prevention Safety Fair, an interactive display on burn prevention in the home was presented to all participants and attendees. Additionally, a lecture on Emergency Care of the Burn Victim was presented for the Dade/Broward Chapter of the Emergency Nurses Association.

In 2010, with the help of The Fire Prevention and Safety Grant, the Elderly Burn Prevention Outreach Program was a successful reality. In this two-part education and prevention program targeted towards the elderly and their caregivers in Miami-Dade County, we were able to address the main causes of burn injuries in adults over age 65 and those with physical limitations, and educate



UNIVERSITY OF MIAMI/JACKSON MEMORIAL BURN CENTER - Miami

them on various strategies for prevention. The William Lehman Injury Research Center at the University of Miami Miller School of Medicine partnered with social service and volunteer organizations in the Miami area and provided group education classes as well as home safety visits. The topics that were covered in these educational presentations included risk education, fire and scald prevention techniques, emergency planning, among others. In addition, the outreach program provided safety inspections with special attention paid to smoke detector use and water temperature.

Annually, the UM/JM Burn Center participates in the Children's Burn Foundation of Florida, Camp Tequesta, held in Umatilla, Florida. This camp is designed for children who have experienced a burn injury. Daily activities include swimming, crafts, archery, and many other outdoor activities. Through these activities, an environment is created in which the children can share their feelings about being burned and come to realize that others have had similar experiences. The children then come to recognize that they are not alone. The UM/JM Burn Center sponsors 20 – 25 children and their "buddies" for this four day adventure.

The Juvenile Firesetter Program brings together parents, teachers, county, and state officials concerned about the rehabilitation of juvenile offenders who have been caught starting fires. A special educational program at the JM/UM Burn Center is available to explain the serious consequences of playing with fire.

Each year, the UM/JM Burn Center sponsors burn survivors and staff to attend the Phoenix Society, World Burn Congress. The Phoenix Society's World Burn Congress is an annual international conference that brings together more than 650 burn survivors, their families, care givers, burn care professionals and firefighters. The congress provides a forum in which the sharing of stories is encouraged and facilitated. For many it is the first opportunity to meet and share with others who have experienced a burn trauma.

PUBLICATIONS AND RESEARCH

Research is an integral part of improving the care of burn patients. The staff at the UM/JM Burn Center published the following research study during 2010:

- King DR, Namias N, Andrews DM. Coagulation abnormalities following thermal injury. Blood Coagulation Fibrinolysis, 2010 Oct;21(7):666-9.
- "A Retrospective Review of Medical Records on Burn Care Patients who have received Vitamin C during their hospital stay." Cofnas, P., Namias, N., Schulman, C.I. Manning, R.J. This abstract had a poster accepted to the ABA.

The following studies and reviews are currently being conducted:

- A Prospective Evaluation of the Effects of Topical Therapy with Sulfamylon? for 5% Topical Solution on Autograft Healing in Subjects with Thermal Injuries Requiring Meshed Autografts: A Comparison to a Historical Control Group. Namias, N.
- Rapid, Quantitative, PCR-Based Detection of Staphylococcus aureus in Burn Sepsis Patients. Namias, N.
- Epicel Humanitarian Use. Schulman, C.I.
- Maintenance of Intraoperative Normothermia using an Intravascular Warming Device: A Retrospective Analysis. Schulman, C.I.
- A prospective, randomized controlled study evaluating the influence of central venous catheter change at three days versus clinical indication on catheter-related blood stream infections in burn patients. Varas, R.

NATIONAL RESPONSIBILITY

The UM/ Burn Center at Jackson Memorial Hospital contributes data to the American Burn Association National Burn Repository. Data from the Burn Center was included in the recent 10-year report from the repository.

MASS CASUALTY PREPAREDNESS

The Burn Center remains an integral part of South Florida's mass casualty preparedness. The Burn Center is also a part of the Southern Region Burn Disaster Plan and regularly reports to the Public Health Emergency Management System on the availability of burn beds in the event of a disaster.

Submitted by:

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2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

All trauma centers are required to conduct injury prevention programs within their communities to comply with Standard XVII of *DOH Pamphlet 150-9*, Florida Trauma Center Standards. These projects must demonstrate a Level I or Pediatric trauma center's commitment to the discovery and application of new knowledge to adult and pediatric trauma care. The results of these research projects may be disseminated in one of several forms. These programs consist primarily of educational activities and events designed to raise community awareness of traumatic injuries, and the personal safety measures that one can take to prevent these injuries from occurring. In 2010, Florida's 22 trauma centers reported conducting a total of approximately 378 injury prevention programs.

All Level I and Pediatric trauma centers are also required to conduct research projects to comply with Standard XIX of *DOH Pamphlet 150-9*, Florida Trauma Center Standards, including but not limited to articles published in peer-reviewed journals, book chapters, presentations, or trauma-related course material. Florida's seven Level I trauma centers, two Pediatric trauma centers, and four Level II trauma centers with pediatric designation reported approximately 268 completed or ongoing research projects in 2010-2011.

Highlights

Based on an August 2009 and July 2010 Internet search using the Google Scholar 1 search engine of each trauma center's scholarly output in 2009-2010, Florida's Level I trauma centers have emerged as leaders in specific areas of trauma care.

A list of the injury prevention programs and research projects reported by each trauma center in 2010-2011 is provided below. More information about research projects conducted by Florida's trauma centers may be found in the *Florida Trauma System Research and Data Report* available at <http://www.doh.state.fl.us/demo/trauma/index.html>.

ALL CHILDREN'S HOSPITAL

Injury Prevention Programs

- School-Based MORE HEALTH Programs
- SafeKids Suncoast (lead sponsor)
- Bicycle Safety Education Programs/Helmet Distribution
- Drowning Prevention Program
- Child Passenger Safety Seat Education, Awareness and Training Programs
- Pedestrian Safety
- SKIP (Safety Kids Injury Prevention)
- TIKES (Trauma in Kids Education Source)
- "Walk This Way" Walk to School Day
- Summer Safety Camp
- National Child Passenger Safety Technician Training
- Special Needs Occupant Protection Loaner Program
- "Trouble in Toyland" News Conference

Research

- "Characteristics of Pediatric Inpatient Trauma Cases Admitted Through a Joint Pediatric Trauma Program Administered by a Pediatric Hospital and an Adult Community Hospital" (ongoing research protocol using trauma registry data)

Publications

- Jiménez RR. "Radiographic evaluation of the pediatric trauma patient and ionizing radiation exposure," *Clinical and Pediatric Emergency Medicine*, March 2010, 11:22-27.

BAPTIST HOSPITAL

Injury Prevention Programs

- "Five Flags for Life" Beach Safety Literature Distribution Program
- Pool Safety Education through SafeKids
- Think First of Northwest Florida
- Co-Sponsorship of the Annual Surviving Trauma Conference
- Baptist Healthcare Andrews Institute Sports Injury Prevention
- Shaken Baby Syndrome Education
- Senior Citizen Injury Prevention
- Teen Prom "Safe Ride Home" Taxi Vouchers
- "TraumaRoo" Safety Kangaroo Mascot
- 55 Alive Mature Driving Course
- WalkSafe

BAYFRONT MEDICAL CENTER

Injury Prevention Programs

- Traumatic Brain Injury Prevention/Traumatic Brain Injury Survivors Reunion
- Stroke Prevention Seminars
- "Prom Promise" Drunk Driving Prevention Program
- "Touch a Truck" Program (allows schoolchildren to explore fire trucks and helicopters)
- "No texting while driving campaign Pledge"
- Community Education

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

BROWARD GENERAL MEDICAL CENTER

Injury Prevention Programs

- Broward County Schools Injury Prevention Webcasts
- Career/Safety/Health Fairs
- Bicycle Safety Classes and Brochures Distribution
- General Injury Prevention Presentations
- Injury Prevention Information/Tools/General Literature/Promotions
- Substance Abuse Prevention
- Annual EMS/Trauma Survivors Breakfast
- Light the Night Walk/Night Out on Crime
- Community Health Fairs/Celebrations
- Halloween Safety Walk
- Safe Driving Program
- "Florida's Trauma System: Together We Save Lives" Campaign

Research

- "Prevention of Elderly Pedestrian Injuries: A Multi-Trauma Center Project"
- "Emergency Percutaneous Dilatational Tracheostomy: Changing the Algorithm at a Regional Trauma Center"
- Institutional Review of the Creation of a New Management Algorithm Using a Pelvic Stabilizer and Preperitoneal Pelvic Packing for Hemodynamically Unstable Pelvic Fractures"
- "When Hyper-Resuscitation Leads to Hyper-Acute Secondary Abdominal Compartment Syndrome"
- Ratification of IATSI/WHO's Guidelines for Essential Trauma Care Assessment in the South America Region. (2010). World Journal of Surgery, 34(11), 2735-44.
- Endoscopically Assisted Repair of Mandibular Angle Fractures. (2010). Journal of Oral and Maxillofacial Surgery, 68(4), 912-14.
- Implementacion y Desarrollo de Sistemas de Atencion en Trauma en America Latina. (Book Chapter). Trauma. Colombian Surgery, Rev Colomb Cir.

Publications

- Parra MW, Rodas EB, Niravel AA. "Laparoscopic repair of potentially contaminated abdominal ventral hernias using a xenograft: a case series," Hernia, June 2010 [E-publication ahead of print].

Presentations

- PrePeritoneal Pelvic Packing. (2010) Pan American Trauma Society Congress, Montevideo, Uruguay

- Emergency Percutaneous Dilatational Tracheostomy: Changing the Algorithm at a Regional trauma center. (2009). Germany.
 - Como Evitar Errores en el Diagnostico de Trauma Abdominal. (2010). XXXIV Congreso Nacional de Cirugia Trauma. Ecuador.
 - Advances in the Treatment of Hemodynamically Unstable Pelvic Fractures. (2010). Florida Committee on Trauma Resident Paper Competition.
 - Unstable Pelvic Fractures. (2010). XXIII Pan American Trauma Society Congress, Montevideo, Uruguay.
 - Emergency Percutaneous Dilatational Tracheostomy. (2010). XXIII Pan American Trauma Society Congress, Montevideo, Uruguay.
 - Use of Teleconference for the Advancement of Trauma Care in the Americas. XXIII Pan American Trauma Society Congress, Montevideo, Uruguay.
 - Open Reduction Internal Fixation of Mandibular Angle Fractures: An Endoscopically Assisted Minimally Invasive Approach. (2010). ACOMS.
 - Prevention of Elderly Pedestrian Injuries: A Multi Trauma Center Project
 - International Videoconference: Lessons Learned
 - When "Hyper-Resuscitation" Leads to "Hyper-Acute" Secondary Abdominal Compartment Syndrome
- ### Ongoing Research
- Prevalence of Additional Injuries in Pediatric Blunt Liver and Splenic Trauma: Impact on the Ability to Implement Evidence Based ICU and Hospital Length of Stay Guidelines
 - Guidelines for Essential Trauma Assessment in the South American Region
 - Pre-Hospital Communication Tool
 - Osteocell/Management of Non unions with Cellular Matrix Containing Viable Mesenchymal Stem Cells
 - Delayed Transdiaphragmatic Hepatic Rupture
 - Antibiotic Intramedullary Nails: Minimizing Potential Complications

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

DELRAY MEDICAL CENTER

Injury Prevention Programs

- Pediatric Falls Prevention
- Helmet and Bike Safety
- Home Safety and Fall Prevention Lectures for the Elderly
- Participation in Community Safety and Education Events
- Weekly Trauma Support Group Meetings
- Trauma Awareness Day
- Drinking and Driving Prevention/Pre-Prom Event
- SafeKids Palm Beach (partner)
- Booster Seat Awareness

Research

- "A Retrospective Study: Pediatric Trauma and Mechanism of Injury"
- International Videoconference Lecture Series

HALIFAX MEDICAL CENTER

Injury Prevention Programs

- Safety Booths During Bike Week and "Biketoberfest"
- SafeKids Volusia/Flagler (lead sponsor through Halifax Healthy Communities)
- Participation in Firearm Safety Programs
- Beach Camp
- Bike and Helmet Safety Programs
- Water Safety Programs/Scholarships for Children to Receive Swim Lessons
- Seat Belt Safety Programs
- Mothers Against Brain Injury

- Wheeled and Pedestrian Safety Programs
- Child Passenger Safety
- Back to School Booster Program
- Gear Up for Safety Health and Safety Fair
- Walk to School Day
- "Never Leave Your Child Alone" Campaign (to prevent children being left in hot cars)
- National Child Passenger Safety Certification Training Program
- Spinal Cord Injury and Brain Injury Support Groups

HOLMES REGIONAL MEDICAL CENTER

Injury Prevention Programs

- Love Enough Campaign
- Operation Now
- Harley-Davidson Pineda
- Prom Night Program
- WalkSafe™ Coalition
- Senior Driving Awareness Seminars/SLIP Education Program for Seniors

- "Don't Text and Drive" Pledge Campaign
- Drive with Care
- Fall Prevention for Seniors
- Medication Safety for Seniors
- Trauma Awareness

UNIVERSITY OF MIAMI, JACKSON MEMORIAL HOSPITAL /RYDER TRAUMA CENTER

Injury Prevention Programs

- Pediatric Neurotrauma Research
- Motor Vehicle Crash Research
- Poison Prevention
- Motor Vehicle Safety
- Alcohol/Drug Awareness and Motor Vehicle Safety
- Bicycle Helmets
- Distracted Driving
- Distracted/Impaired Driving and Seatbelt Use
- Violence Prevention Education
- Bullying
- Gun Safety
- Senior Citizens Provided with Home Safety
- Medication Safety
- Fall Prevention Education
- Aquatic Safety Awareness Program (ASAP)

- Students Against Destructive Decisions (SADD)
- WalkSafe™
- BikeSafe™
- The Family Gun Safety Education
- The Gate Program for Juvenile Weapons Offenders

Research

- "Pediatric tumors and head Trauma"
- "New Surgical approaches for the treatment of epilepsy"
- "The Cool Kids Hypothermia study for children with severe traumatic brain injury"
- "Department of Defense (DOD) study for Milk to Moderate Traumatic Brain Injury"
- Severe injury can activate complex neuro-humoral

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

feedback systems and cascades within the body that can lead to secondary damage of otherwise normal tissue. Many recent innovations have been translated from laboratory benchtops into practical bedside care for victims of life-threatening major torso trauma and traumatic brain injury. In a collaborative study with the Dept of Neurosurgery, patients with life threatening brain injury where most other therapeutic options are exhausted, we are evaluating new applications for FDA-approved generic drugs. In collaborative studies with the Dept of Anesthesiology, we are evaluating novel, non-invasive or minimally invasive, monitors for triage in the pre-hospital setting, for reducing sedation use in the intensive care unit, and for diagnosing and treating deep venous thrombosis and coagulation disorders

- WLIRC, in partnership with the US Army, has demonstrated the versatility of telemedicine in the trauma environment. Specifically, attending specialty physicians will remotely support on-site team and care of patients with the InTouch Health RP-7 robot. This research has demonstrated telemedicine technology could virtually bring world class trauma experts to the battlefield (or any site on the globe) to support and mentor deployed military physicians who are treating injured soldiers and physicians in rural areas. This could mitigate current and future concerns about gaps in rural and urban trauma care and critical care staffing shortages. The WLIRC and JMH have also been testing mobile telemedicine system for use in the operating room (OR). Studies have grown to include collaborations with other state agencies and trauma centers across the State to better understand how telemedicine can assist during disaster response phases. The Teletrauma Program of the WLIRC evaluates telemedicine solutions for the optimal delivery of trauma care, education and information exchange. The use of telemedicine for daily morning rounds is currently standard operating procedure in the TICU. The International Tele-Trauma Grand Rounds is a weekly series of complex trauma case presentations and advanced trauma and critical care topics. To date, we have collaborated with institutions across Brazil, Colombia, Canada, Florida, Washington D.C., and California.
- Dr. Carl Schulman has completed a study funded by the Robert Wood Johnson Foundation to study the problem of elderly pedestrian injury. The primary purpose of this project was to identify risk factors that will lead to the development and implementation of effective prevention strategies to reduce the risk of pedestrian injury in this vulnerable population.
- We are also actively engaged in initiatives to understand how errors and adverse outcomes can occur during the management of trauma victims. It is our aim to understand these strategies and apply them in our care of trauma patients. Patient safety efforts also include collecting and analyzing incident and adverse outcome data and we have earned federal government designation as "The Ryder Trauma Patient Safety Organization" which is the first specialty designated

trauma PSO approved by the department of health and Human Services.

- The Neurosurgical service also continues with their research into the long term outcomes of those patients who receive hypothermia treatment after suffering a traumatic brain injury (TBI) and/or spinal cord injury (SCI). Some other research projects that took place for 2010 are Biomarkers of Brain Injury, Spreading Depressions as Secondary Insults after Traumatic Injury, Culture of Neural Progenitor Cells from Patients with Acute Brain Damage, Evaluation of Traumatic Brain Injury Severity and Outcome, and Retrospective study of cranioplasty following decompressive craniectomy for head trauma.
- Grant from U.S. Army Medical Research & Materiel Command (USAMRMC) 09078015 "Evaluation of SOCOM Wireless Monitor in Trauma Patients," (\$1,256,720 direct costs 2011 – 2014)
- Grant from Office of Naval research N0001406160670 "Novel Resuscitation Strategies" (\$2,218,140 direct costs 2009 – 2013)
- Bullock,MR (PI)
A Randomized, Double-Blind, Placebo-controlled, Dose-Escalation Study of NNZ-2566 in Patients with Traumatic Brain Injury (TBI): Investigating Treatments for the Prevention of secondary Injury and Disability following TBI (INTREPID -2566 Study). Role: Co-investigation \$215,000
- Bullock,MR (PI)
A Randomized, Double blind, Placebo-Controlled Dose Escalation Study in Investigate the Safety and Pharmacokinetics after Single and Multiple Doses of SLV334 in Sequential Cohorts of Patients with Moderate and Severe Traumatic Brain Injury. Role: Co-investigator; Non- funded
- Bullock,MR (PI)
Spreading Depressions as Secondary Insults after Traumatic Injury to the Human Brain (IRB approved). Role: Co-Investigator; \$50,000 over 4 years
- Bullock,MR (PI)
Culture of Neural Progenitor Cells from Patients with Acute Brain Damage (IRB approved). Role: Co-investigator; Non-funded
- Gallo, BV (PI)
Protocol # C-04-01 – A clinical evaluation of bilateral stimulation of the Subthalamic Nucleus (STN) using the Libra® Deep Brain Stimulation System as an adjunctive treatment for reducing some of the symptoms of advanced levodopa-responsive Parkinson's Disease that are not adequately controlled with medication, st Jude Medical, 2008 – 2011. Role: Co-Investigator \$13,450/ Subject.
- Bullock,MR (PI)
Biomarkers of Brain Injury: Magnitude, Secondary Insults, and Overcome (IRB Approved). Role: Co investigator; \$60,000

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

- Levin, B (PI)
Deep Brain Stimulation in Parkinson's Disease: follow-up Study. Role: Consultant; Non-Funded
- Jagid, J (PI)
Efficacy of intravenously instituted Hypothermia treatment in improving functional outcomes in patients following Traumatic Brain Injury; Non-funded
- Wyeth Pharmaceuticals(Account #66296): A multicenter, open labeled randomized comparative of Tigecycline versus ceftriaxone plus metronidazole for the treatment of hospitalized patients with complicated intra-abdominal infections. Completed. Sub I-\$28,281.25 – 11/1/2006 – 10/30/2009
- Artisan Pharma(Account #66409C): A randomized double-blind placebo controlled phase 2-B study assess the safety and efficacy of ART -123 on subjects with sepsis and disseminated intravascular coagulation. Ongoing. PI - \$48,378.00 – 11/1/2007 – 12/31/2010
- Johnson & Johnson (Account #66621T): A randomized open-label multicenter study assess the safety and tolerability of doripenem compared with imipenem in the treatment of subjects with complicated intra-abdominal infections or ventilator associated pneumonia. PI-\$3,155.00 – 8/5/09 – 12/4/2011 (Expected to run through 2013)
- Eli Lilly & Company (Account # 666f6G) Efficacy and Safety of drotrecogin alfa (activated) in adults with septic shock. PI- \$5,000.00 11/24/2009 – 2/28/2011
- NIH NINDS – RO1 NS061860-01
Dr. Ramon Diaz-Arastia, PI
Phase II, randomized controlled trail of brain tissue oxygen monitoring. (BOOST trail)
(U of M sub award, total \$235,000)
- CDMRO award PT 074614
Dr. Fran Tortella, PI
Treatment of Traumatic Brain Injury using the neuroprotectant NNZ2566.
Funded 2010 – 2014
(Miami subcontract for approx \$880,000 over 4 years)
- "Rehabilitation of IPF patients: Effects of exercise and oxidant stress," VA-ORD, 1 I01 RX000265-01; P.I. Robert M. Jackson, MD; Role: Co-investigator; 10/1/10 – 9/30/13; \$807,443.
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2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

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Presentations

- Cardiac Trauma Management II International Seminar On New Perspectives of Trauma Care in Major Disasters
Brazilian National Academy of Medicine
Rio de Janeiro, Brazil - March 2011
- Baeza Dager JM, Hurtado L, Dalal K, Johnson-Greene D, Cardenas DD. Impact of Etiology on Functional Outcome Following Spinal Cord Injury. Poster presentation at the Annual Meeting of the Association of Academic Physiatrists, Bonita Springs, FL, April 6-10, 2010. *Am J Phys med Rehabil* April;89(4):S22,2010.
- Weiner M, Cardenas DD, Dala KL, Dechellis DM. Incomplete Paraplegia Secondary to Thoracic Intradural Plasma Cell Granuloma: A Case Report. Poster presentation at the American Academy of Physical Medicine and Rehabilitation 71st Annual Assembly, Seattle, WA, November 4-7, 2010. *PM&R* September;2(9)S179,2010.

LAKELAND REGIONAL MEDICAL CENTER

Injury Prevention Programs

- Project C.A.R.G.O. (Communities Addressing Responsible Gun Ownership)
- CAUTION (safety awareness board game)
- Coalition on Injury Prevention (CIP) for Polk County
- Florida Injury Prevention Advisory Council
- Polk County Council of SafeKids Suncoast
- Trauma Awareness Day
- Trauma Awareness Event at the Capitol, April 6, 2009
- WalkSafe™ Program
- Polk County Drowning Prevention Task Force
- Heat Stress Presentation

- Basic Aid Training (BAT) and First Aid for Children Today (FACT)
- Mothers Against Brain Injury
- Community Health Fairs
- Adult Health, Wellness, and Injury Prevention
- Violence Prevention
- Motorcycle Safety
- Fall Festival
- Gun Safety
- Stadium Security
- SafeKids Child Passenger Seats
- Career Academy

LAWNWOOD REGIONAL MEDICAL CENTER & HEART INSTITUTE

Injury Prevention Programs

- Shattered Dreams
- Mothers Against Brain Injury
- Single Brief Intervention and Referral

- Understanding Spinal Cord Injury and Understanding Brain Injury
- Be Seen Safety Campaign
- Bike Rodeo
- High Risk Drivers Course

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

LEE MEMORIAL HOSPITAL

Injury Prevention Programs

- H.E.L.M.E.T. (educational tours of trauma center)
- "Gun Safety: It's No Accident" Program
- "Dare to Care" (drunk driving and binge drinking prevention and seat belt use)
- Safe Lee Program
- Pedestrian Safety Program
- "Trauma Nurses Talk Tough" Program
- Day Care Safety Program
- "Take Care 1" Program (safe medication use and falls prevention for mature adults)
- "Take Care 2" Program (highway safety and physical fitness for mature adults)
- "Friday Night Video" (15-minute video showing a mock trauma code)
- High-Risk Driving Course
- "Bike With Care" Helmet Promotion Program

- Car Seat Fitting Sessions
- Distribution of Bike Helmets/Bike Rodeos
- Seat Belt Safety Program
- Trauma Awareness Day Activities
- Students Against Drunk Driving (SADD)
- Drag Racing Prevention Programs
- Day Care Safety Program
- "Drug House Odyssey"
- Young Driver Program (three-hour course)
- "Falls Prevention: Stepwise Lee" (community-wide falls prevention program)
- SafeKids Lee/Collier (lead sponsor through LMH's Children's Hospital of SW Florida)
- G.A.T.E. Program

MEMORIAL REGIONAL HOSPITAL

Injury Prevention Programs

- Alcohol Misuse Brief Intervention
- Project Sentry (formerly C.A.R.G.O)
- Risky Behaviors" (drinking and drug use prevention)
- SafeKids Broward (lead sponsor through Joe DiMaggio Children's Hospital)
- Seniors Learning Injury Prevention Strategies (S.L.I.P.S.)
- Street Racers (drag racing and speeding prevention program)
- Tough Trauma Talk Program
- WalkSafe™ Program
- Community Health Fairs
- Trauma Awareness Day
- "Playing It Safe with Troo"
- "Prom Promise"
- Tough Trauma Talk
- SafeKids Worldwide
- Bicycle Helmet Usage
- Seat Belt Usage
- Air Bag Usage
- Bike Safety
- Helmet Use
- Pedestrian Safety
- Water Safety
- Drinking and Driving
- Destructive Decisions

Research

- Septic Shock Syndrome Resulting From Snake Bite— Dr. Carrillo, Magdalena Gonzalez PA-C, Dr. Sanchez. Journal of Trauma April 2010;68:1015
- Thyroid Carcinoma Secondary To Radiation Cloud Exposure From The Chernobyl Incident, Andrew Atkinson, MSIII, Dr. Andrew Rosenthal, Accepted for publication by Journal of Oncology Case Reports, March 2010.

- Delayed and Sudden-Onset of Diffuse Axonal Injury: A Case Report- Dr. Rosenthal, Accepted for publication by Journal of Neurological Sciences (Turkish), March 2010.
- Editorial Review of Articles: - Gerota's Fascia Flap: A Technique for Autogenous Packing in Major Liver Injuries- Dr. Carrillo, Journal of Trauma, April 2010. -Blunt Cerebrovascular Injury is Poorly Predicted by modeling with Other injuries: Analysis of NTDB Data- Dr. Carrillo, Journal of Trauma, April 2010
- Medical Student Evaluation of The Trauma Patient is Integral: A Case Study- Poster presented at the American College of Physicians Conference, April 11, 2010 in Baltimore, MD.
- Internal Hernia of the Falciform Ligament with Incarcerated Small Bowel- Poster presented at the American College of Physicians Conference, April 11, 2010 in Baltimore, MD.
- Anatomical Reconstruction of Complex Pelvic and Acetabular Fractures- Presented at the 21st Annual Fellow, Resident and Medical Student Surgical Research Paper Competition, Mt. Sinai Medical Ctr, April 29, 2010. 2nd place winner.
- Refractory chylothorax following a transhepatic gunshot wound to the abdomen requiring unorthodox surgical treatment - Dr. Carrillo, Rosenthal, Pepe, Sanchez, and Lee- Journal of Surgical Case Reports. 2010 6:3, August 2010.
- Pharmaceutical/Device Trial: A Phase III, Randomized, Open-Label, Efficacy and Safety Study of Octaplex and Fresh Frozen Plasma (FFP) In Patients Under Vitamin K Antagonist Therapy With The Need For Urgent Surgery Or Invasive Procedures- Dr. Carrillo- study closed April 2010.

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

- Pharmaceutical/Device Trial: SAMMPRIS – Dr. H. Duong – study closed April 2010.
- American College of Surgeons Committee on Video-based Education Video Session: Bedside Abdominal Wound Care with Negative Pressure- Video accepted for presentation at American College of Surgeons 96th Annual Clinical Congress, October 5, 2010. Video will be put into ACS Video Library available online.
- The Effects of Mild Hypothermia and Concurrent and Supplemental Infusion of Magnesium Sulfate in Severe Traumatic Brain Injury- Dr. Carrillo, Dr. Zorman, Department of Defense Research Study, in progress August 2010.
- Annual Trauma Visiting Professorship - PAMPs, DAMPs and our evolving understanding of Sepsis and SIRS by Dr. Carl Hauser, Harvard Medical School, July 2010

Publications

- Arhinful E, Rosenthal A. "Comminuted lumbar fracture with spinal cord compromise in an adolescent female following a minor fall," Pediatric Emergency Care, November 2009, 25:764-768.
- Atkinson A, Rosenthal A. "Thyroid carcinoma secondary to radiation cloud exposure from the Chernobyl incident," Journal of Oncology (accepted).
- Carrillo EH, Barkoe DJ, Sanchez Rafael, Lee SK, Rosenthal A, Pepe A, Nardiello D. "Open thoracic window: A useful alternative for retained infected pleural collections in critically ill trauma patients, Journal of Trauma Surgery, 75:152-156.

MIAMI CHILDREN'S HOSPITAL

Injury Prevention Programs

- SafeKids Dade (lead sponsor)
- Florida Special Needs Occupant Protection Program
- Car Seat Fitting Station
- Child Restraint Offender Program (CROP)
- Third Trauma Patient Reunion, May 2009
- Novel treatment approaches for pediatric brain tumors and head trauma
- New surgical approaches for the treatment of epilepsy
- "Cool Kids" hypothermia study
- Department of Defense study on mild traumatic brain injury
- Bicycle Safety
- Gun Safety
- Sports Injury Prevention,

- Fire Safety
- Water-Sports Safety
- Drowning Prevention
- Kohl's Cares for Kids®
- Teen Drive with CARE Program

Research

- "Pediatric tumors and head Trauma"
- "New Surgical approaches for the treatment of epilepsy"
- "The Cool Kids Hypothermia study for children with severe traumatic brain injury"
- "Department of Defense (DOD) study for Milk to Moderate Traumatic Brain Injury"

NORTH BROWARD MEDICAL CENTER

Injury Prevention Programs

- Prom Night Video/Pre-Prom "Ghost Out" Event
- Falls Prevention Screening/Lecture
- Trauma Awareness/Prevention Safety Lectures and Bicycle Helmet Distribution
- "A Night Out Against Crime" Annual Event
- Halloween Safety Walk
- Monthly Support Groups for Brain Injury Survivors
- EMS Appreciation Breakfast
- Fire Chiefs Conference

- Teens and Trauma Presentation
- Water Safety Program
- Pedestrian Safety Program
- Driving Safety Program
- NBMC Community Health Fair
- Students Against Destructive Decisions (SADD) video production
- Safety Awareness Day
- SafeKids Broward (partner)
- "Preventing Electrical Injuries" Lecture

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

ORLANDO REGIONAL MEDICAL CENTER

Injury Prevention Programs

- EMS Night Out
- Injury Prevention Through Exercise (with ORMC Wellness Center)
- Career and Safety Day for Local Schools
- SafeKids of Orange County, FL (partner)
- Car Seat Safety Program
- WalkSafe™ Program
- Air Care Team Activities: Mock DUI's, Visit to Children's Burn Camp
- Prom-Promise (DUI prevention education)
- Crash Dummies Safety Education
- Bicycle Helmet Fitting Clinics
- Car Fit Program for Seniors
- Fifth Annual "ONE NIGHT"
- Air Care Team
- Mock DUI's
- Children's Burn Camp
- Bicycle Helmut
- Car Fit Program
- Injury Prevention Through Exercise

Research

- A multi-center, randomized, double-blind, trial of Ibuprofen for the treatment of fever and pain in the burn patient. Promes J, Safcsak K, Smith H, Pavliv L, Rock, A. *J Burn Care and Research* 31:S120, 2010
- Alban RF, Nishi GK, Shabot MM. "When is ICU Admisiion Required for Post-operative Neurosurgical Patients? Identification of Candidates for Intermediate Care. *ICU Director*. 2010 Jan 1(1): 28-34.
- Williams M, Alban RF, Hardy J, Garcia E, Rogers SO. "Measuring Communication in the Surgical Intensive Care Unit: Better Communication Equals Better Care". *J Amer Coll Surg*. 2010 Jan 210 (1): 17-22.
- Is the evolving management of intra-abdominal hypertension and abdominal compartment syndrome improving survival? Cheatham ML, Safcsak K. *Crit Care Med* 2010; 38:402-407.
- A Prospective, Observational Study of Xigris Use in the United States (XEUS). Steingrub J, Cheatham ML, Effron M, Wang T, and Woodward B for the XEUS Investigators. *J Crit Care*. 2010 Apr 30.

- Intra-abdominal pressure measurement using a U-Tube Technique: Caveat Emptor! De Waele JJ, Cheatham ML, Balogh Z, Bjorck M, D'Amours S, Keulenaer B, Ivatury R, Kirkpatrick AW, Leppaniemi A, Mlabrain M, Sugrue M. *Annals of Surgery* 2010 252: 889-890.
- A Novel Device for Measuring Intermittent and Continuous Intragastric Pressure in Patients with Intra-abdominal Hypertension. Cheatham ML, Safcsak K. Poster presentation at the 39th Educational and Scientific Symposium of the Society of Critical Care Medicine, January 9-13, 2010, Miami, Florida.
- Transpulmonary pressure (PTP) is necessary to measure pulmonary distending pressure in the presence of Intra-abdominal Hypertension (IAH). Silva H, Hunley C, Jimenez E, Falk J, Cheatham ML, Jones P, Barba J, Nieman G, Johannesen Z. Poster presentation at the 39th Educational and Scientific Symposium of the Society of Critical Care Medicine, January 9-13, 2010, Miami, Florida.
- Animal Age, Weight, and Anesthesia Affect Outcome in a Clinically Applicable Porcine Sepsis / Ischemia Reperfusion Model. Silva H, Jimenez E, Falk J, Barba J, Cheatham ML, Bailey J, Hunley C, Johannesen Z, Nieman G. Poster presentation at the 39th Educational and Scientific Symposium of the Society of Critical Care Medicine, January 9-13, 2010, Miami, Florida.
- Promes J, Safcsak K, Smith HG, Rock A, Pavliv L: A Multi-center, Randomized, Double-blind Trial of Ibuprofen Injection for the Treatment of Fever and Pain in the Burn Patient. Poster Presentation at the American Burn Association meeting – Boston, MA, March 9-12, 2010.

Presentations

- NeuroScience Educational Seminar: Concussion Management: Dr. Greg Olavarria, March 2010
- Diffuse low grade glio-neuronal tumor: not oligodendrogliosis, American Assoc of Neuorpathology: Dr. Greg Olavarria, 2010
- Dandy Walker Malformation: Handbook for Pediatric Neurosurgery: Dr. Greg Olavarria, 2010
- NeuroScience Educational Seminar: Facial Injury in Children: Dr. Ramon Ruiz, May, 2010

SACRED HEART HOSPITAL

Injury Prevention Programs

- ThinkFirst
- National Trauma Awareness Week/Trauma Awareness Day Celebration
- Public Speaking at Local Colleges and Schools
- Local Television Public Education Broadcasts
- Conferences and Symposia
- Participation in Injury Prevention Coalitions on the Local

and State Level

- Local Injury Prevention Events
- Gang Violence Prevention
- Senior Falls Prevention
- Rural Trauma

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

SAINT JOSEPH'S HOSPITAL

Injury Prevention Programs

- Child Advocate in the Emergency Department
- Health Fairs
- Safety Bulletins
- "AARP 55 – Drive Alive" (driving safety course for seniors)
- CPR, Adult and Pediatric First Aid Classes
- Safe Sitter
- "Teen Talk" Program
- Car Seat Safety Checks
- Safe Sitters
- SafeKids Greater Tampa (lead sponsor through SJH's Children's Advocacy Center)
- Bicycle Safety
- Pedestrian Safety

- Water Safety
- Child Passenger Safety
- "Over the River and Through the Woods" (refresher course for grandparents)
- Boot Camp for New Dads
- Sibling Class
- Healthy Families Hillsborough

Research

- Nursing research projects at the bedside level
- Orthopaedic trauma research Study to identify early biomarkers of severe trauma

SAINT MARY'S MEDICAL CENTER

Injury Prevention Programs

- DUI Awareness Programs:
- "Shattered Dreams" (Pre-Prom Night drunk driving prevention program)
- "On The Beaten Path" DVD Distribution (high school DUI education)
- Teen Driver Awareness Webcasts through Slosberg Foundation
- Under-age Drinking Task Force
- SafeKids Palm Beach (Steering Committee member)
- Risk Watch® Program
- "What is Trauma?" (Overview of Trauma Services presented to high school students)
- Boating Safety Fair
- Elder Health and Fall Prevention Fair
- WalkSafe™ Program (pediatric pedestrian safety education)
- International Walk Your Child to School Day
- Pediatric Pedestrian and Buckle-up Initiatives
- Bicycle and Helmet Safety Programs
- "Use Your Head to Protect Your Body" Program
- Drowning Prevention Coalition of Palm Beach County
- Seatbelt Presentations
- High School Medical Academics
- Drive with Care – distracted driving focus
- Fall prevention- and the elderly

- South Florida H.E.A.T. Conference – trauma lectures presented
- Disaster drill- Airplane crash tabletop
- Injury prevention – SafeKids Coalition Palm Beach County
- Shattered Dreams – pre prom presentations
- Injury prevention – Drivers education conferences, seatbelt presentations
- Kids Left in Cars – pediatric hyperthermia awareness
- Thoracic Trauma – Community hospital outreach
- Concussions in youth athletes
- Gang violence prevention
- Pedestrian safety and risk factors
- Health and Safety Fairs – injury prevention and give-aways for all ages
- Dori Slosberg Foundation – active partners in safety events
- High School Medical Academics – presentations, tours and committee members

Research

- Implementation of the Bladder Scanner to reduce Urinary Tract Infections
- Safe Glycemic control in the ICU setting.

SHANDS AT THE UNIVERSITY OF FLORIDA

Injury Prevention Programs

- Scooter-Helmet Awareness Campaign, October 1-8, 2009
- SafeKids of North Central Florida (lead sponsor through Shands Children's Hospital)
- ATV Safety Program
- Car Seat Safety Programs
- Child Passenger Safety Week Campaign

- Water Safety Programs
- Bike Safety Program
- Fire Safety Program
- Save-a-Life Campaign – to promote better choices, not to drink and drive
- Media Events to Promote Safety Awareness
- Distribution of Safety Materials to the Public
- ShandsCair

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

- Trauma Awareness Day
- Distracted Driving

Research

- "A Comparative Study of the ReCell Device and Autologous Split Thickness Meshed Skin Graft in the Treatment of Acute Burn Injuries." DW Mozingo, primary investigator. Submitted to Department of Defense Institutional Review Board.
- "A Phase 2B, Multi Center, Randomized, Dose Blinded, Parallel Arm, Intra Patient Controlled Dose Finding Study of I020502 in Patients Undergoing Autologous Meshed Skin Grafting." WT Richards, primary investigator. Study completed in 2010.
- "A Prospective Study Examining Clinical Outcomes Associated with the Management of Open Abdomen and the Barker's Vacuum Packing Technique." L Lottenberg, primary investigator. Submitted to Institutional Review Board.
- "A Randomized Clinical Trial of Restrictive vs. Traditional Blood Transfusion Practices in Burn Patients." DW Mozingo, primary investigator. Submitted to University of Florida Institutional Review Board.
- "A Randomized, Double Blind, Placebo Controlled, Parallel Group Study of the Safety and Efficacy of REGN475 in Patients with Pain Resulting from Thermal Injury." WT Richards, primary investigator. In progress.
- "An Open, Parallel, Randomized, Comparative, Multi Center Investigation in US Evaluating the Cost Effectiveness, Efficacy, Safety and Tolerance of Mepilex Ag® vs. Silvadene® in the Treatment of Partial Thickness Burns." DW Mozingo, primary investigator.
- Completed in 2009. "Incidence of Venous Thromboembolism in High Risk Trauma Patients with Retrievable Inferior Vena Cava Filter Prophylaxis: A Pilot Feasibility Study." A Rajasekhar, primary investigator. In progress. In Progress
- "NeuRx Diaphragm Pacing System (DPS, RA/4 Respiratory Stimulation System)." L Lottenberg, primary investigator.
- "Prospective Evaluation of the Effects of Topical Therapy with Sulfamylon® for 5% Topical Solution on Autograft Healing in Subjects with Thermal Injuries Requiring Meshed Autografts: A Comparison to a Historical Control." DW Mozingo, primary investigator. In progress.

SHANDS JACKSONVILLE TRAUMAONE

Injury Prevention Programs

- Duval Community Traffic Safety Team (member)
- Jacksonville Pediatric Injury Control System (central coordinating agency)
- Healthy Jacksonville Injury Prevention Coalition
- Trauma Prevention/General Safety Presentations
- "Turning Point: Rethinking Violence" (court-mandated violence prevention program)
- Child Passenger Safety/Seat Belt Safety/Car and Booster Seat Give-a-way Programs
- W.H.A.L.E. – "We Have A Little Emergency" (booster and car seat education)
- Think First for Teens
- Walk Your Child to School Day
- Home Safety
- Injury Free Coalition for Kids
- Bike/Pedestrian Safety
- DUI/Texting Mock Crashes
- Health and Safety Fair/Distribution of Activity Books, Bookmarks and Posters
- Helmet Fittings
- Media Events
- Swimming Safety Program
- Gun Safety Program
- Alcohol Screening
- Trauma Prevention Presentations/General Safety
- Child Passenger Safety (CPS)
- The Great First Coast Hang-up

Research

- "Hypertonic Saline Versus Mannitol in TBI Patients"

- "The Predictive Role of Clinical Pulmonary Infection Score (CPIS) in the Diagnosis of Ventilator-Associated Pneumonia (VAP)"
- "A Retrospective Review of the Use of Epoprostenol (Flolan™) at UF/Shands Jacksonville in Intensive Care Unit (ICU) Patients with Acute Respiratory Distress Syndrome (ARDS)"
- "Evaluating the Role of Splenic Embolization in the Nonoperative Management of Blunt Splenic Trauma"
- "An Evaluation of the Disposition of Trauma Patients Arriving by Helicopter Emergency Medical Services"
- urinary and prostate cancer
- ventilator associated pneumonia
- "The Effect of Age on Blunt Traumatic Brain Injured Patients"
- "Mixed Flora: Indication for Therapy or Early Warning Sign?"
- "A Retrospective Review of the Use of Epoprostenol (Flolan™) at UF/Shands Jacksonville in Intensive Care Unit (ICU) Patients with Acute Respiratory Distress Syndrome (ARDS)"
- "Characterization of Pulmonary Embolism in high risk trauma patients despite aggressive prophylaxis"
- "An Evaluation of the disposition of Trauma Patients Arriving by Helicopter Emergency Medical Services"

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

PUBLICATIONS

- Kerwin AJ, Tepas JJ, Schinco MA, Graham D. "Florida's trauma surgeons: a vanishing breed", *The American Surgeon*, February 2010, 76:193-196
- Qureshi I, Kerwin A, McCarter Y, Tepas J. *Mixed Flora: Indication for Therapy or Early Warning Sign?* *The American Surgeon* 2010. Accepted for Publication
- Roberts E, Bhullar IS. *The Effect of Age on Blunt Traumatic Brain Injured Patients.* *The American Surgeon* 2010. Accepted for Publication

Presentations

- Update of Practice Management Guideline: Evaluation of Blunt Abdominal Trauma. Burns JB, Bhullar I, Kerwin AJ, et. al. Presented at Twenty-Third Annual Scientific Assembly of the Eastern Association for the Surgery of Trauma. Phoenix, Arizona, January 23, 2010.
- Qureshi I. *Mixed Flora: Indications for Therapy or Early Warning Sign.* 20th Annual Scientific Meeting of the Southeastern Surgical Congress. February 23, 2010. Savannah, GA.
- Qureshi I. *Mixed Flora: Indications for Therapy or Early Warning Sign.* Annual of Meeting of Florida College

of Trauma. Tampa, FL Garcia AJ. Characterization of Pulmonary Embolism in high risk trauma patients despite aggressive prophylaxis. 23rd Annual Meeting of the Florida Vascular Society. April 2010. Naples, FL.

- Garcia AJ. Characterization of Pulmonary Embolism in high risk trauma patients despite aggressive prophylaxis. Annual Meeting of the Florida Chapter, American College of Surgeons. Jacksonville, Florida.
- Griffin R. Early protocol base IVC filter placement in high risk trauma patients may result in decrease incidence of P.E. Annual Meeting of the Florida Chapter, American College of Surgeons. Jacksonville, Florida.
- Knofsky M. Pediatric Trauma Patients are More Likely to be Discharged from the Emergency Department After Arrival by Helicopter Emergency Medical Services. Annual of Meeting of Florida College of Trauma. Tampa, FL
- Tabrizi M. Inhaled prostacyclin improves oxygenation in severe hypoxemia. Annual Meeting of the Florida Chapter, American College of Surgeons. Jacksonville, Florida.

TALLAHASSEE MEMORIAL HEALTHCARE

Injury Prevention Programs

- Think First (age-appropriate injury prevention program for school-age children)
- "Head Smartz Seniors" (injury prevention program focused on senior safety)
- "Car Fit" (community education program focused on car seat safety)
- TBI Advocacy TV Interviews
- Trauma Awareness Day Press Conference
- Trauma Survivors Celebration
- Annual Trauma Symposium

- Falls Prevention
- Street Smart Program
- Leon County Community Traffic Safety Team
- Stop DUI in 24 Hours
- Mother and Baby Fair
- Preventing Falls in the Over 65 Population
- Brain Injury Association of Florida press conf.
- Trauma Outreach - "Stomp out Diabetes"
- Operation Prom Night
- Trauma Symposium

TAMPA GENERAL HOSPITAL

Injury Prevention Programs

- MORE HEALTH (injury prevention education presentations in schools)
- Juvenile Justice Shock Tour Program
- Florida's Trauma System Public Awareness Event and Press Conference
- Community Awareness of Trauma Discussion on "AM Tampa Bay" Talk Radio
- Seat Belt Safety
- WalkSafe™ Program
- Safety and First Aid Classes
- Firearm Safety Classes
- Bike Safety Classes
- Walker Program
- Poison Prevention Program
- Firearm Safety Program

- Distracted Driving
- Pedestrian and Bicycle Safety
- Safety and First-Aid
- Supersitters
- Firearm Safety
- Brain Health F. F.

Research

- Dr. Shapiro – "The Impact of Surgery for Morbid Obesity on the VA Health Care System – A Cost Benefit Analysis"
- Dr. Shapiro, co-principal investigator – "A Prospective, Randomized, Double-Blind Multicenter Trial Assessing the Safety and Efficacy of Sequential (Intravenous/Oral) BAY 12-8039 (Moxifloxacin) 400mg Every 24 Hours Compared to Intravenous Piperacillin/Tazobactam 3.375

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

Grams every 6 Hours Followed by Oral Amoxicillin/Clavulanic Acid Suspension 800 mg Every 12 Hours for the Treatment of Patients with Complicated Intra-Abdominal Infections."

- Dr. Khetarpal and Dr. Llerena, co-principal investigators – "Phase IV Open-Label, Non-Comparative Trial of IV Anidulafungin Followed by Oral Azole Therapy for the Treatment of Candidemia, An Invasive Candidiasis." Funded by Pfizer Inc. Amount:\$60,000.
- Dr. Khetarpal and Dr. Llerena, co-principal investigators – "Efficacy and Safety of Doctrecogin Alfa (Activated) in Adult Patients with Septic Shock." Funded by Eli Lilly and Company. Amount: \$120,000.

Publications

- Afsari A, Liporace F, Lindvall E, Infante A Jr, Sagi HC, Haidukewych GJ. Clamp-assisted reduction of high subtrochanteric fractures of the femur: surgical technique. *J Bone Joint Surg Am.* 2010 Sep;92 Suppl 1 Pt 2:217-25. PubMed PMID:20844177.
- Baaj AA, Uribe JS, Nichols TA, Theodore N, Crawford NR, Sonntag VK, Vale FL. Healthcare burden of cervical spine fractures in the United States: analysis of a nationwide database over a 10 year period. *J Neurosurg Spine* 2010; 13:61-6.
- Min W, Gaines RJ, Sagi HC. Delayed presentation of bladder entrapment secondary to nonoperative treatment of a lateral compression pelvic fracture. *J Ortho Trauma.* 2010 May;24(5):e44-8. PubMed PMID: 20418728.
- Min W, Munro M, Sanders R. Stabilization of displaced articular fragments in calcaneal fractures using bioabsorbable pin fixation: a technique guide. *J Orthop Trauma.* 2010 Dec;24(12):770-4. PubMed PMID: 21076250.
- Min W, Sanders R. The use of the mortise view of the ankle to determine hindfoot alignment: technique tip. *Foot Ankle Int.* 2010 Sep;31(9):823-7. PubMed PMID: 20880487.
- Phommachanh V., Patil Y.J., McCaffrey, T.V., Vale, F. Freeman, T.B., Padhya T.A. Otolaryngologic management of delayed pharyngoesophageal perforation following anterior cervical spine surgery. *Laryngoscope* 2010;120:930-936.
- Radnay CS, Clare MP, Sanders RW. Subtalar fusion after displaced intra-articular calcaneal fractures: does initial operative treatment matter? Surgical technique. *J Bone Joint Surg Am.* 2010 Mar;92 Suppl 1 Pt 1:32-43. PubMed PMID: 20194342.
- Reddy J, Nichols T, Uribe JS, Melton M, Vale FL. Sternal cancellous bone graft harvest for anterior cervical discectomy and fusion with interbody cage devices. *Clin Neurol & Neurosurg* 2010;12(6):470-473.
- Sagi HC, Afsari A, Dziadosz D. The anterior intra-pelvic (modified rives-stoppa) approach for fixation of acetabular fractures. *J Orthop Trauma.* 2010 May;24(5):263-70. PubMed PMID:20418730.
- Sanders R. The problem with EMTALA. *J Orthop Trauma.* 2010 Jun;24(6):346. PubMed PMID:20502214.
- Uribe JS, Ramos E, Youssef A, Levine N, Johnson W, Turner AW, Vale FL. Craniocervical fixation with occipital condyle screws: biomechanical analysis of a novel technique. *Spine J.* 2010;35(9): 931-938.
- Youssef AS, Uribe JS, Ramos EZ, Janjua R, Thomas LB, van Loveren H: Interfascial Technique for Vertebral artery Exposure in the Suboccipital Triangle: The Road Map. *Neurosurgery.* 2010 Dec;67(2 Suppl Operative):355-61.

Presentations

- Ciesla, D. J. (Nov 7, 2010) American Society of Abdominal Surgeons Annual Meeting. Trauma of the liver, biliary tree, pancreas and spleen. Tampa Florida.
- Ciesla, D.J. (Nov 7, 2010) American Society of Abdominal Surgeons Annual Meeting. Mass casualty care. Tampa, Florida.
- Ciesla, D.J. (Oct 19, 2010) Distance Learning CBBW. Introduction to trauma: Global burden of disease, hemorrhage and early traumatic deaths, and hemorrhage control. Sao Paulo Brazil.
- Ciesla, D.J. (June 1, 2010) Tampa Police Department. Trauma Systems and effects of penetrating trauma on human tissue. Tampa, Florida.
- Llerena, L. (January 2010) Eastern Association for the Surgery of Trauma – Annual Scientific Assembly: Plenary Session - Practice Management Guidelines, Teen Driving: Evidence Based Review. Phoenix, Arizona

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

MULTICENTER RESEARCH STUDIES

In addition to the research projects and publications listed under each trauma center above, several Level I trauma centers in Florida participated in multicenter research studies that involved more than one institution in the state, nation, or world. These types of studies are particularly encouraged, not only because they increase statistical power to detect differences between treatment and control groups, but because they help to achieve consensus in building an evidence base for clinical medical practice. They also enhance the reputations of the investigators and institutions that participate in them. Seven of these studies are listed below and the Level I trauma centers in Florida that participated in them.

Jackson Memorial Hospital/Ryder Trauma Center:

- Demetriades D, Velmahos GC, Scalea T, Jurkovich G, Karmy-Jones R, Teixeira PG, Hemmila M, O'Connor JV, McKenney MO, Moore FO, London J, Singh M, Spaniolas K, Keel M, Sugrue M, Wahl W, Hill J, Wall MJ, Moore EE, Lineen E, Margulies D, Malka V, Chan LS. "Blunt traumatic thoracic aortic injuries: early or delayed repair—results of an American Association for the Surgery of Trauma Prospective Study," *The Journal of Trauma: Injury, Infection and Critical Care*, April 2009, 66:967-973.

Memorial Regional Hospital and Jackson Memorial Hospital/Ryder Trauma Center:

- Rosenthal A, McKenney M, Sanchez R, Lee S, Carrillo EH. "Extracorporeal membrane oxygenation for severe hypoxemia after trauma pneumonectomy," *The American Surgeon*, December 2009, 75:1258-1260.

Miami Children's Hospital

- Pieretti-Vanmarcke R, Velmahos GC, Nance ML, Islam S, Falcone R, Wales PW, Brown RL, Gaines BA, McKenna C, Moore FO, Goslar PW, Inaba K, Barmparas G, Scaife ER, Metzger RR, Brockmeyer DL, Upperman JS, Estrada J, Lanning DA, Rasmussen SK, Danielson PD, Hirsh MP, Consani HFX, Stylianos S, Pineda C, Norwood S, Bruch SW, Drongowski R, Barraco RD, Pasquale MD, Hussain F, Hirsch EF, McNeely PD, Fallat ME, Foley DS, Iocono JA, Bennett HM, Waxman K, Kam K, Bakhos L, Petrovick L, Chang Y, Masiakos PT. "Clinical clearance of the cervical spine in blunt trauma patients younger than 3 years: a multi-center study of the American Association for the Surgery of Trauma," *The Journal of Trauma: Injury, Infection and Critical Care*, September 2009, 67:543-550.

Orlando Regional Medical Center and Tampa General Hospital:

- Phelan HA, Velmahos GC, Jurkovich GJ, Friese RS, Minei JP, Menaker JA, Philp A, Evans HL, Gunn ML, Eastman AL, Rowell SE, Allison CE, Barbosa RL, Norwood SH, Tabbara M, Dente CJ, Carrick MM, Wall MJ, Feeney J, O'Neill P, Srinivas G, Brown CV, Reifsnyder AC, Hassan MO, Albert S, Pascual JL, Strong M, Moore FO, Spain DA, Purtill MA, Edwards B, Strauss J, Durham RM, Duchesne JC, Greiffenstein P,

Cothren CC. "An evaluation of multidetector computed tomography in detecting pancreatic injury: Results of a multicenter AAST study," *The Journal of Trauma: Injury, Infection and Critical Care*, March 2009, 66:641-647.

Orlando Regional Medical Center and Shands Jacksonville TraumaOne:

- Brophy GM, Pineda JA, Papa L, Lewis SB, Valadka AB, Hannay HJ, Heaton SC, Demery JA, Liu MC, Tepas JJ, Gabrielli A, Robicsek S, Wang KK, Robertson CS, Hayes RL. "all-Spectrin breakdown product cerebrospinal fluid exposure metrics suggest differences in cellular injury mechanisms after severe traumatic brain injury," *Journal of Neurotrauma*, April 2009, 26:471-479.
- Papa L, Akinyi L, Liu MC, Pineda JA, Tepas JJ, Oli MW, Zheng W, Robinson G, Robicsek SA, Gabrielli A, Heaton SC, Hannay HJ, Demery JA, Brophy GM, Layon J, Robertson CS, Hayes RL, Wang KK. "Ubiquitin C-terminal hydrolase is a novel biomarker in humans for severe traumatic brain injury," *Critical Care Medicine*, January 2010, 38:138-144.

Shands at the University of Florida and Tampa General Hospital:

- Miller AC, Rivero A, Ziad S, Smith DJ, Elamin EM. "Influence of nebulized unfractionated heparin and N-acetylcysteine in acute lung injury after smoke inhalation injury," *Journal of Burn Care and Research*, March-April 2009, 30:249-256.

2010 HOSPITAL INJURY PREVENTION PROGRAMS AND RESEARCH PROJECTS

BURN CENTERS

UNIVERSITY OF MIAMI/JACKSON MEMORIAL BURN CENTER INJURY PREVENTION PROGRAMS

Injury Prevention Programs

- Children's Fire Safety Festival
- Burn Awareness Week
- Fire Safety Week
- Strides for Safety Event
- Town Park Village Dedication Day-Burn Prevention Safety Fair
- Emergency Care of the Burn Victim
- The Fire Prevention and Safety Grant
- Elderly Burn Prevention Outreach Program
- Children's Burn Foundation of Florida
- The Juvenile Firesetter Program
- Phoenix Society's World Burn Congress

Research

- A Prospective Evaluation of the Effects of Topical Therapy with Sulfamylon® for 5% Topical Solution on Autograft Healing in Subjects with Thermal Injuries Requiring Meshed Autografts: A Comparison to a Historical Control Group. Namias, N.

- Rapid, Quantitative, PCR-Based Detection of Staphylococcus aureus in Burn Sepsis Patients. Namias, N. Epicel Humanitarian Use. Schulman, C.I.
- Maintenance of Intraoperative Normothermia using an Intravascular Warming Device: A Retrospective Analysis. Schulman, C.I.
- A prospective, randomized controlled study evaluating the influence of central venous catheter change at three days versus clinical indication on catheter-related blood stream infections in burn patients. Varas, R.

Publications

- King DR, Namias N, Andrews DM. Coagulation abnormalities following thermal injury. Blood Coagulation Fibrinolysis, 2010 Oct;21(7):666-9.
- "A Retrospective Review of Medical Records on Burn Care Patients who have received Vitamin C during their hospital stay." Cofnas, P., Namias, N., Schulman, C.I. Manning, R.J. This abstract had a poster accepted to the ABA

UNIVERSITY OF FLORIDA SHANDS BURN CENTER

Injury Prevention Programs

- Burn Safety
- Annual Burn Camp for Kids
- First Responder Care
- Burn Patient Management
- Psychosocial Management
- Outpatient Follow-up

Research

- Prospective Evaluation of the Effects of Topical Therapy with Sulfamylon® for 5% Topical Solution on Autograft Healing in Subjects with Thermal Injuries Requiring Meshed Autografts: A Comparison to a Historical Control

- Burn Injury in the State of Florida
- Epicel (Cultured Epidermal Autografts) Humanitarian Device Project
- A Retrospective Single Center Study Characterizing the Incidence of Herpes Simplex Virus Infection As Well As Outcomes in Patients Post Herpes Simplex Virus Infection After Thermal Injury
- A Comparative Study of the ReCell Device and Autologous Split-Thickness Meshed Skin Graft in the Treatment of Acute Burn Injuries
- A Randomized Clinical Trial of Restrictive vs. Traditional Blood Transfusion Practices in Burn Patients

TAMPA GENERAL HOSPITAL- REGIONAL BURN CENTER

Injury Prevention Programs

- Camp Hopetake
- Burn Training
- The Walker Program

Research

- Burn-related research endeavors

- "Haitian Experience"
- Smoke inhalation toxic metabolite study
- Mepitel One
- The ABA Rescue Study
- Recell Study and Guided Imagery vs. Virtual Reality to Treat Burn Pain

FLORIDA TRAUMA REGISTRY 2010

The Florida Trauma Registry is a database of trauma patients treated in Florida's trauma centers. Florida's trauma system relies on this data to analyze trends in injury frequency, type, and location. The Florida Trauma Registry also provides information regarding patient treatment and outcomes. By analyzing this data, we can draw scientifically valid conclusions, which then drive performance improvement efforts for trauma centers individually and for the trauma system as a whole.

REPORTING REQUIREMENTS

Section 395.401(3), *Florida Statutes*, directs the Department of Health to adopt by rule, standards for approval of trauma centers. These standards are referenced in Rule 64J-2.011, *Florida Administrative Code (F.A.C.)*, and implemented in *Florida Trauma Center Standards, DOH Pamphlet 150-9*. These standards require verified trauma centers to maintain a trauma registry. Each trauma center must also report its trauma registry data to the Office of Trauma on a quarterly basis for inclusion in the Florida Trauma Registry, as required by Rule 64J-2.006, *F.A.C.*, and detailed in *DOH Pamphlet 150-13, Florida Trauma Registry Manual*.

Data for patients who meet the following criteria are entered into the trauma center's registry and reported each quarter to the Florida Trauma Registry, including:

- All trauma alert cases admitted to the trauma center. These patients are identified by state trauma scorecard criteria detailed in Rules 64J-2.004 and 64J-2.005, *F.A.C.*;
- Critical or intensive-care unit admissions for traumatic injury;
- All operating-room admissions for traumatic injury, excluding same-day discharges or isolated, non-life threatening orthopedic injuries;
- Any critical trauma transfer into or out of the trauma center; and
- All in-hospital trauma deaths, including deaths in the trauma resuscitation area.

Based on the patient's date of hospital discharge, trauma centers submit data quarterly according to the schedule below:

Quarter	Reporting Dates	Due Date
Quarter One	January 1-March 31	Submit by July 1
Quarter Two	April 1-June 30	Submit by October 1
Quarter Three	July 1-September 30	Submit by January 1
Quarter Four	October 1-December 31	Submit by April 1

ANALYSIS OF 2010 FLORIDA TRAUMA REGISTRY DATA

This report summarizes data submitted to the Florida Trauma Registry for the 2010 reporting year. NOTE: Due to the time constraints imposed on producing this Annual Report, all data shown are based on gross discharge volumes that have not been adjusted using the International Classification Injury Severity Score (ICISS), as required by Rule 64J-2.019, *F.A.C.*, in determining the volume of eligible trauma cases for the purpose of calculating funding for verified trauma centers.

2006 TO 2010 COMPARISON OF FLORIDA TRAUMA CENTER GROSS DISCHARGES

Table 1 shows the total gross number of trauma patients treated and discharged from Florida's trauma centers for 2006 through 2010. In 2010, 44,388 trauma patients were treated and discharged from Florida's trauma centers, compared to 43,709 in 2009, for an increase of 1.6 percent. In 2010, all trauma center levels saw an increase in the number of trauma patients treated and discharged from their facilities compared to 2009, but the two pediatric standalone trauma centers saw the biggest increase (12.3 percent). The 13 Level II trauma centers shown in Table 1 include four hospitals that are also verified as pediatric trauma centers, and all seven Level I trauma centers shown treat both pediatric and adult trauma patients.

FLORIDA TRAUMA REGISTRY 2010

TABLE 1:
TOTAL FLORIDA TRAUMA CENTER GROSS DISCHARGES PER YEAR, 2005-2009

Trauma Center Level (2010)	2006	2007	2008	2009	2010	Difference (2009-2010)	Percent Difference
Level I (7 Hospitals)	22,023	23,447	22,941	22,414	22,904	+490	+2.2%
Level II (13 Hospitals)	17,903	17,871	19,725	20,055	20,092	+37	+0.2%
Pediatric (2 Hospitals)	1,218	1,312	1,330	1,240	1,392	+152	+12.3%
All Trauma Centers (22 Hospitals)	41,144	42,630	43,996	43,709	44,388	+679	+1.6%

Figure 1 shows the gross number of trauma patients treated and discharged from Florida's trauma centers by month during 2010. Florida's trauma centers treated and discharged an average of 3,699 trauma patients per month in 2010. With 3,946 trauma patients treated and discharged, March was the busiest month, which is when many visitors travel to Florida for spring break, followed closely by April, with 3,939 trauma patients treated and discharged during that month.

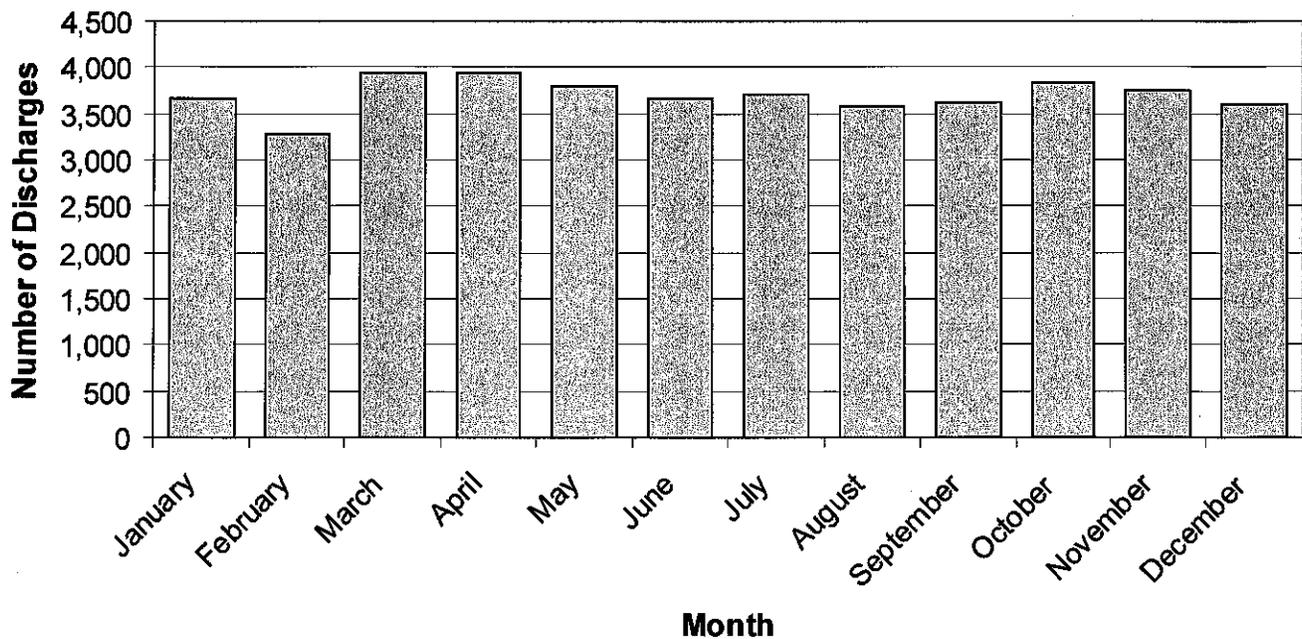
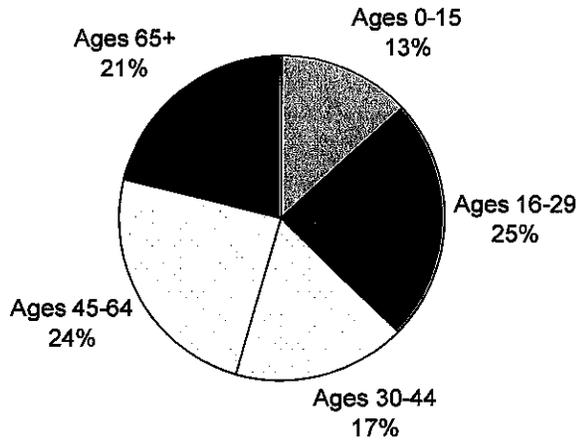


FIGURE 1:
FLORIDA TRAUMA CENTER DISCHARGES PER MONTH, 2010

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 2:
AGE DISTRIBUTION OF
FLORIDA TRAUMA CENTER PATIENTS, 2010**



**TABLE 2: AGE DISTRIBUTION OF
FLORIDA TRAUMA CENTER PATIENTS, 2010**

Ages 0-15	Ages 16-29	Ages 30-44	Ages 45-64	Ages 65+	Average Age
5,817	10,642	7,751	10,831	9,340	42

Figure 2 and Table 2 show the number of trauma patients treated in Florida's trauma centers in 2010 by age group. Over half of all trauma patients treated in 2010 were in the 0-44 year-old age groups (55%), and the average age was 42.

**FIGURE 3:
PEDIATRIC INJURIES TREATED IN FLORIDA TRAUMA CENTERS, BY AGE AND GENDER, 2010**

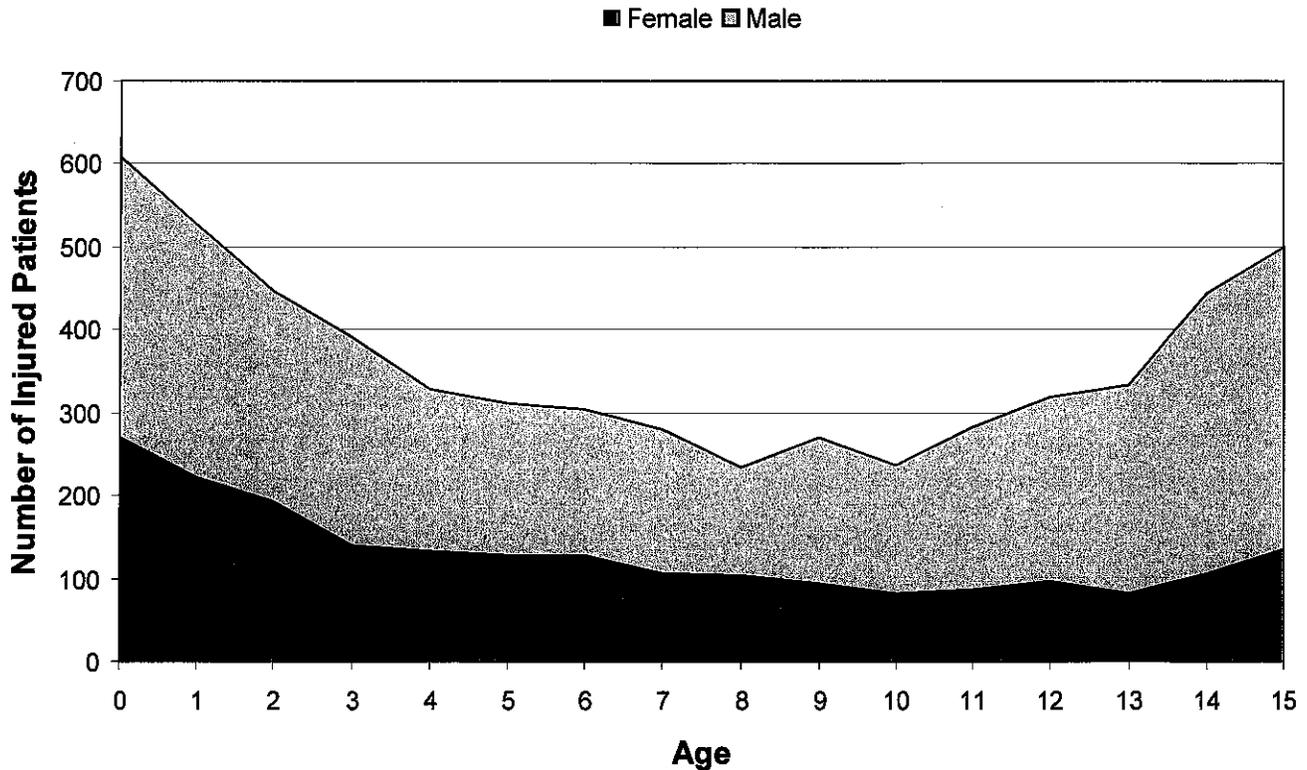


Figure 3 shows the number of injured children, ages birth through 15, treated in Florida's Level I and pediatric trauma centers in 2010, by age and gender. Boys were injured more often than girls were injured at a ratio of 1.8 to one.

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 4:
DISTRIBUTION OF FLORIDA TRAUMA CENTER PATIENTS BY GENDER, 2010**

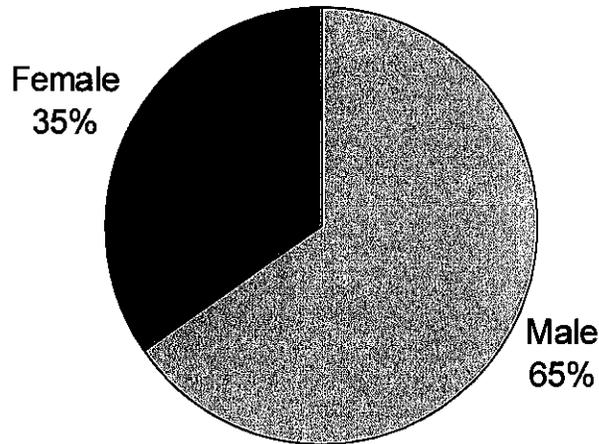
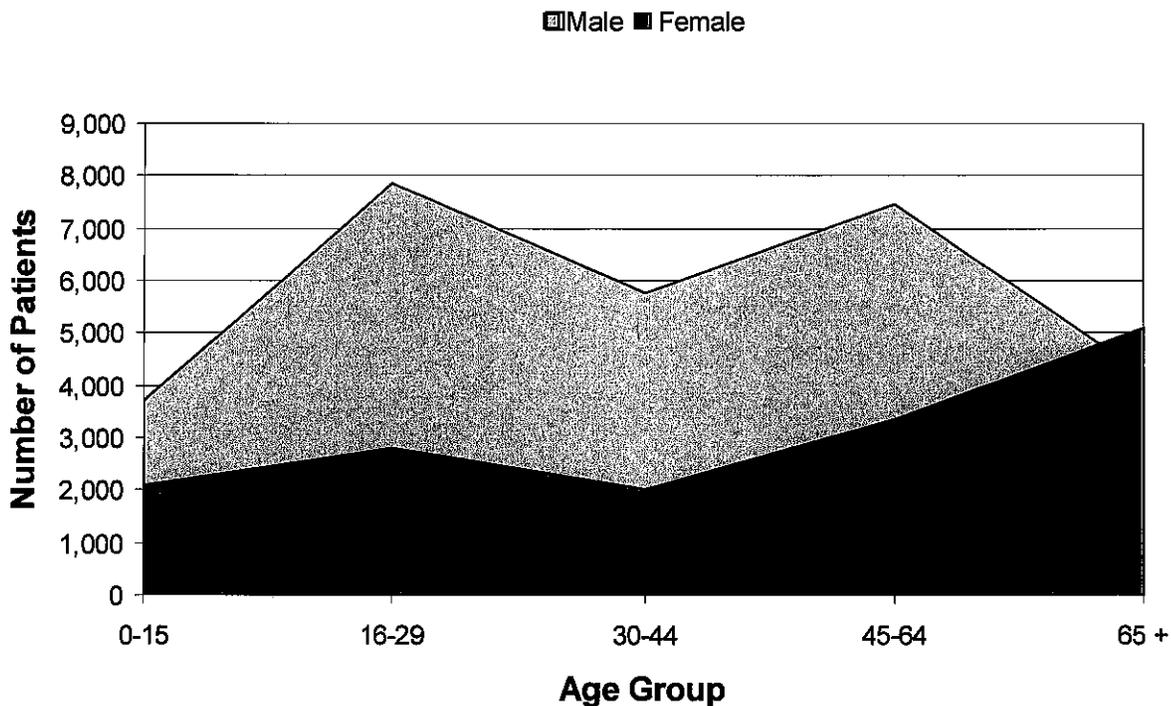


Figure 4 shows a breakout of trauma patients treated in Florida’s trauma centers in 2010, by gender. About two-thirds of all trauma patients treated were male. Figure 5 shows a breakout by both age group and gender. More males are injured and treated in Florida’s trauma centers than females in all age groups except the 65-year-old and older age group. This is because there are more women than men older than age 65 in the population.



**FIGURE 5:
AGE DISTRIBUTION OF FLORIDA TRAUMA CENTER PATIENTS BY GENDER, 2010**

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 6:
DISTRIBUTION OF FLORIDA TRAUMA CENTER PATIENTS BY RACE/ETHNICITY, 2010**

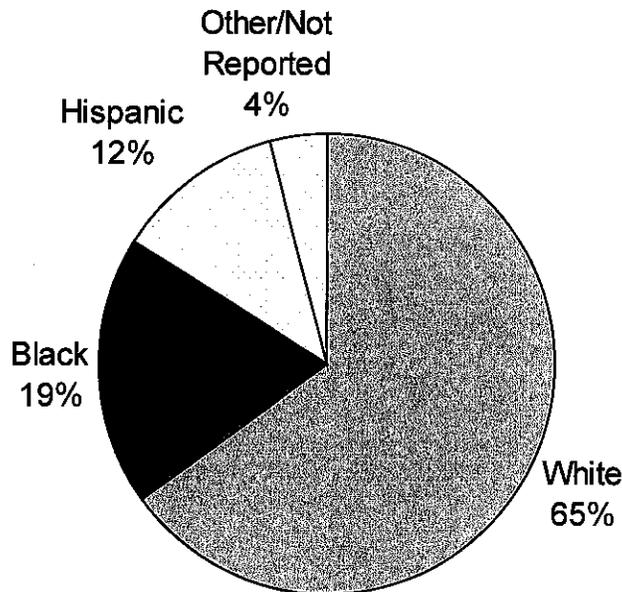


Figure 6 and Table 3 show the number of trauma patients treated in Florida's trauma centers in 2010, by race/ethnicity and gender (Table 3). The race/ethnicity percentages are consistent with Florida's population.

**TABLE 3:
DISTRIBUTION OF FLORIDA TRAUMA CENTER PATIENTS BY GENDER AND RACE/ETHNICITY, 2010**

Gender	White	Black	Hispanic	Other/Not Reported	Total
Male	18,079	5,858	3,872	1,211	29,020
Female	10,819	2,512	1,430	600	15,361
Not Reported	3	0	2	2	7
Total	28,901	8,370	5,304	1,813	44,388

MECHANISMS OF INJURY

Mechanisms of injury are classified into the following groups:

- **Blunt:** An external force injury, usually resulting from a motor vehicle crash, fall, or workplace mishap;
- **Penetrating:** An injury from a projectile force or piercing injury entering deeply into the body, causing tissue and/or organ damage; and
- **Burn:** Tissue damage from excessive exposure to chemical, thermal, electrical, or radioactive agents.

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 7:
MECHANISMS OF INJURY TREATED IN FLORIDA TRAUMA CENTERS, 2010**

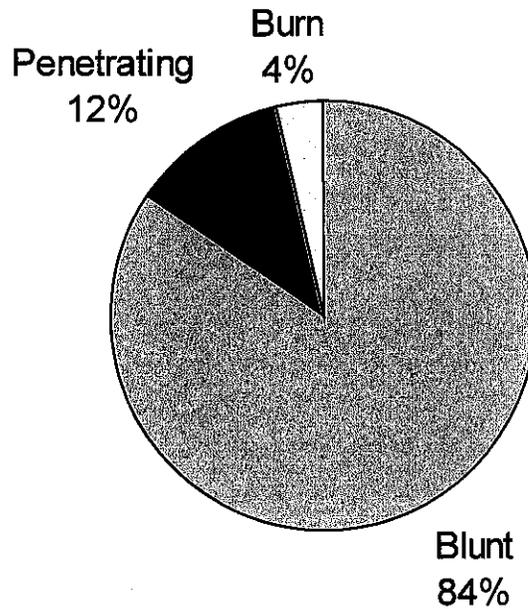


Figure 7 and Table 4 show a breakout of injury mechanisms treated in Florida's trauma centers in 2010. The vast majority of trauma patients treated in Florida's trauma centers had a blunt mechanism of injury. Penetrating injuries result mainly from stabbings and gunshot wounds due to intentional violence, and is the second most common mechanism of injury. While less common, burns are nevertheless serious injuries that are treated by Florida's trauma and burn-care centers.

**TABLE 4:
MECHANISMS OF INJURY TREATED IN FLORIDA TRAUMA CENTERS, 2010**

Blunt	37,248	84%
Penetrating	5,211	12%
Burn	1,583	4%
Other/Not Reported	346	<1%
Total	44,388	100%
Total	43,709	100%

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 8:
MECHANISMS OF INJURY TREATED IN FLORIDA TRAUMA CENTERS BY AGE GROUP, 2010**

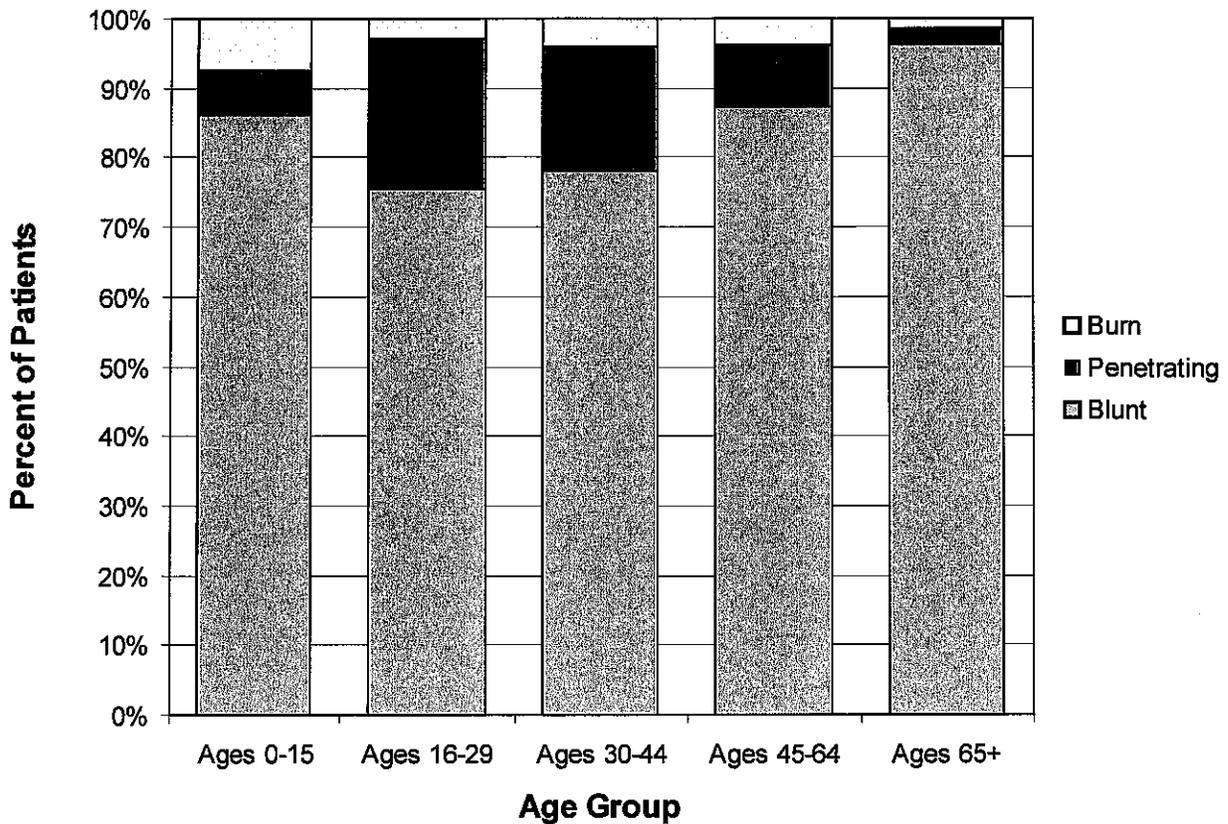


Figure 8 shows the mechanisms of injury treated in Florida’s trauma centers in 2010 by age group. While blunt trauma is the predominant mechanism of injury in all age groups, the proportion of penetrating injuries varies considerably, from two percent of all injuries treated in the 65-year-old and older age group, to 22 percent in the 16-29 year-old age group. Similarly, burn injuries vary from one percent of all injuries treated in the 65-year-old and older age group, to eight percent in the 0-15 year-old age group.

EXTERNAL CAUSES OF INJURY

In addition to the mechanism of injury, Florida’s trauma centers document the external cause of injury in the patient’s medical record by assigning an external cause code (E-code) from the code dictionary of the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), originally developed by the World Health Organization. E-codes provide additional information about how an injury occurred, for example, from a motor vehicle crash, fall, or firearm. These codes provide valuable information for public health injury surveillance, which is necessary for guiding trauma system performance improvement and injury prevention efforts. The National Center for Health Statistics and the Centers for Medicare and Medicaid Services are responsible for revising and updating the ICD-9-CM in the United States.

FLORIDA TRAUMA REGISTRY 2010

**TABLE 5:
EXTERNAL CAUSES OF INJURY TREATED IN FLORIDA TRAUMA CENTERS BY AGE GROUP, 2010**

External Cause of Injury	0-15	16-29	30-44	45-64	65+	Not Re-reported	Total
Fall	1,956	901	1,102	3,084	5,817	3	12,863
Motor Vehicle	728	3,411	1,949	2,110	1,314	1	9,513
Motorcycle	82	818	780	1,040	192	0	2,912
Struck By, Against	546	834	548	641	110	0	2,679
Cut, Pierce	95	886	673	502	75	1	2,232
Pedestrian	311	458	405	635	285	0	2,094
Firearm	109	930	418	264	91	0	1,812
Pedal Cycle	292	205	230	497	125	0	1,349
Other Transport	246	407	264	319	102	0	1,338
Fire, Flame	111	142	140	229	96	0	718
Hot Object, Substance	316	114	114	115	34	0	693
Bite, Sting	118	51	40	65	24	0	298
Machinery	5	43	76	102	24	0	250
Natural, Environmental	47	44	25	36	20	0	172
Maltreatment, Neglect	110	5	0	5	3	0	123
Drowning	37	19	6	17	6	0	85
Hanging, Strangulation	5	27	21	19	1	0	73
Air Transport	0	10	10	21	6	0	47
Adverse Medical Events	1	6	4	5	5	0	21
Poisoning	6	2	4	7	1	0	20
Other/Unspecified	215	647	465	464	128	2	1,921
Not Reported	481	682	477	654	881	0	3,175
Total	5,817	10,642	7,751	10,831	9,340	7	44,388

FLORIDA TRAUMA REGISTRY 2010

**TABLE 6:
EXTERNAL CAUSES OF INJURY TREATED IN FLORIDA TRAUMA CENTERS BY GENDER, 2010**

External Cause of Injury	Male	Female	Not Reported	Total
Fall	6,761	6,101	1	12,863
Motor Vehicle	5,306	4,204	3	9,513
Motorcycle	2,482	430	0	2,912
Struck By, Against	2,262	416	1	2,679
Cut, Pierce	1,908	323	1	2,232
Pedestrian	1,404	690	0	2,094
Firearm	1,575	237	0	1,812
Pedal Cycle	1,115	234	0	1,349
Other Transport	856	482	0	1,338
Fire, Flame	537	181	0	718
Hot Object, Substance	408	285	0	693
Bite, Sting	181	117	0	298
Machinery	237	13	0	250
Natural, Environmental	78	94	0	172
Maltreatment, Neglect	68	55	0	123
Drowning	57	28	0	85
Hanging, Strangulation	58	15	0	73
Air Transport	41	6	0	47
Adverse Medical Events	14	7	0	21
Poisoning	15	5	0	20
Other/Unspecified	1,596	325	0	1,921
Not Reported	2,061	1,113	1	3,175
Total	29,020	15,361	7	44,388

Tables 5 and 6 show that for all age groups combined and for both males and females, falls were the leading cause of injury treated in Florida's trauma centers in 2010. However, motor vehicle crashes were the leading cause of injury treated in age groups 0-44, and falls were the leading cause of injury treated in age groups 45 and up, with motor vehicle crashes second. In the 16-29 year-old age group, firearms were the second leading cause of injury treated after motor vehicle crashes.

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 9:
MODES OF TRANSPORT TO FLORIDA TRAUMA CENTERS, 2010**

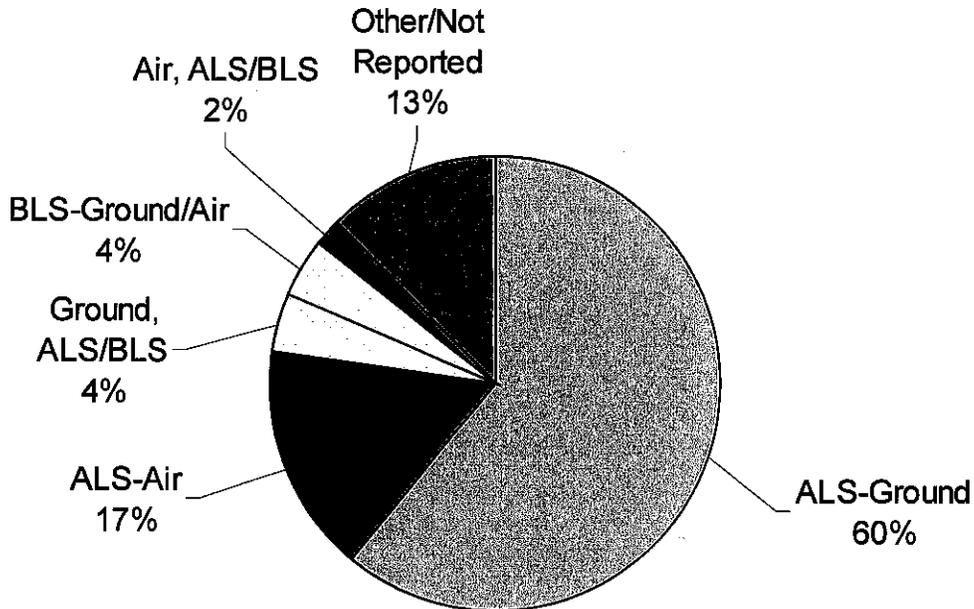


Figure 9 and Table 7 show the modes of transport used to deliver trauma patients to Florida's trauma centers in 2010. Three-fifths of all trauma patients were transported to a Florida trauma center by an Advanced Life Support ground service provider in 2010. This data is useful for allocating and deploying emergency medical transport resources.

**TABLE 7:
MODES OF TRANSPORT TO FLORIDA TRAUMA CENTERS, 2010**

Mode of Transport	Total	Percent
Advanced Life Support (ALS), Ground	26,957	60%
Advanced Life Support (ALS), Air	7,353	17%
Ground, ALS/BLS Not Specified	1,858	4%
Basic Life Support (BLS), Ground and Air	1,842	4%
Air, ALS/BLS Not Specified	785	2%
Other/Not Reported	5,158	13%
Total	44,388	100%

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 10:
SOURCES OF PATIENTS TRANSPORTED TO FLORIDA TRAUMA CENTERS, 2010**

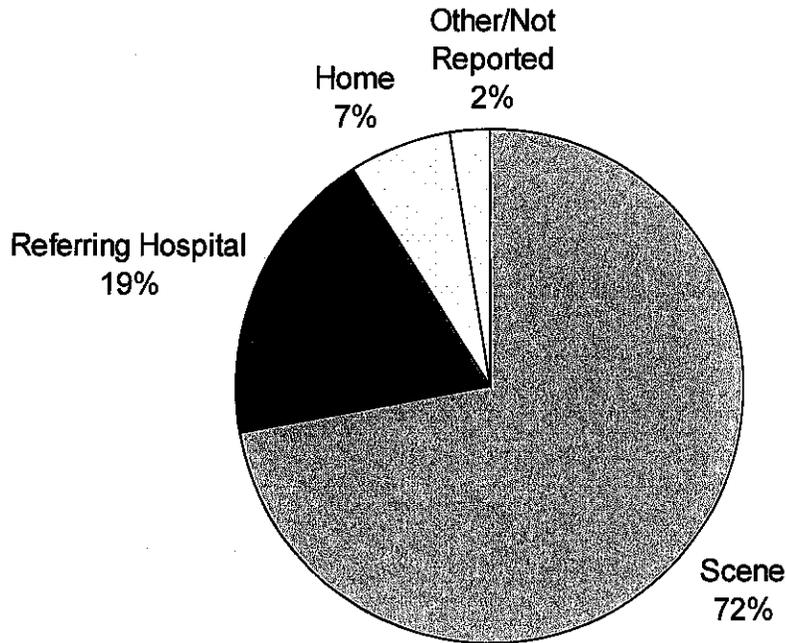


Figure 10 and Table 8 show the sources from which patients were transported to Florida’s trauma centers in 2010. Over three-fourths of all trauma patients were transported directly from the scene of injury or home to a Florida trauma center in 2010, and 19 percent were transferred from a referring hospital, requiring a higher level of care than the referring hospital could provide.

**TABLE 8:
SOURCES OF PATIENTS TRANSPORTED TO FLORIDA TRAUMA CENTERS, 2010**

Source	Total	Percent
Scene	31,875	72%
Referring Hospital	8,485	19%
Home	2,974	7%
Other/Not Reported	1,054	2%
Total	44,388	100%

FLORIDA TRAUMA REGISTRY 2010

HOURS OF ADMISSION

FIGURE 11:
FLORIDA TRAUMA CENTER ADMISSIONS BY HOUR, 2010

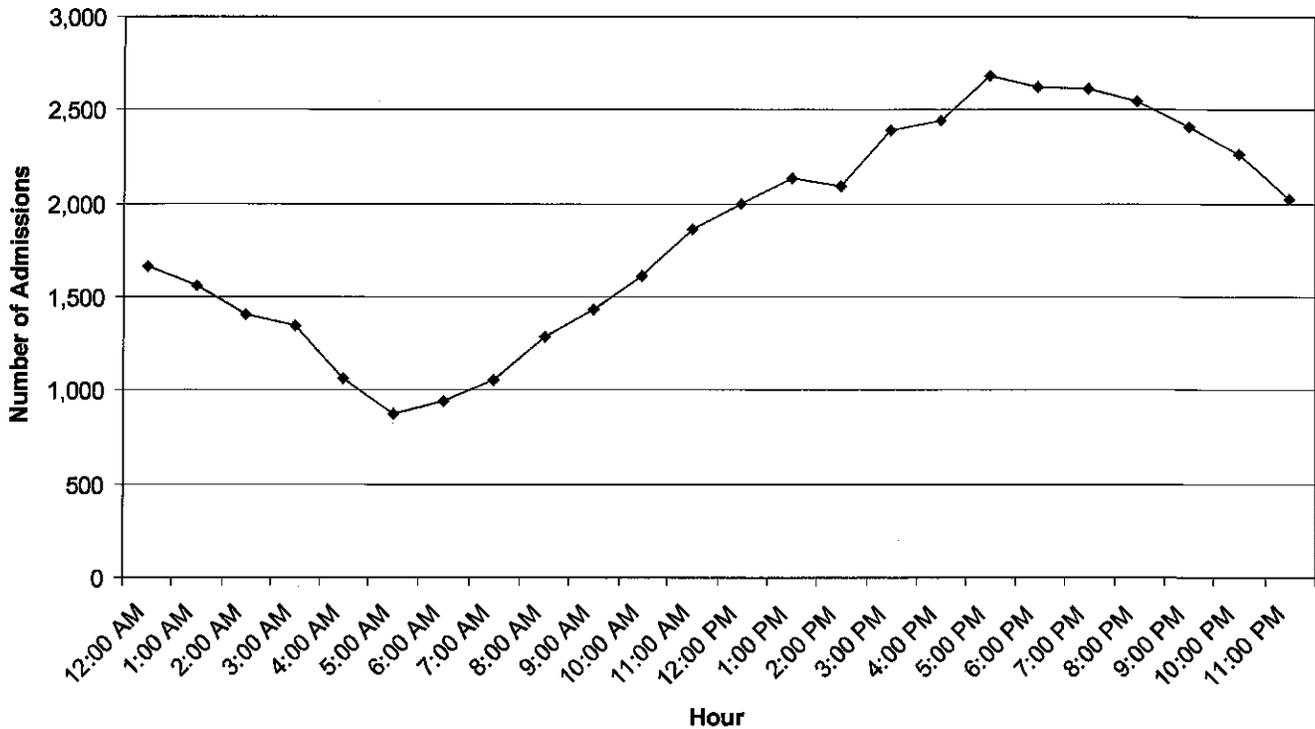


Figure 11 shows the number of patients admitted to Florida's trauma centers by hour of the day in 2010. The hourly number of admissions exhibits a cyclical diurnal pattern, peaking during the 5:00 p.m. hour and bottoming out during the 5:00 a.m. hour. This information is useful for allocating maximum trauma center personnel and equipment resources during the afternoon and evening hours, when the number of trauma admissions is highest.

FLORIDA TRAUMA REGISTRY 2010

GLASGOW COMA SCALE

The Glasgow Coma Scale (GCS) is applied to all arriving trauma patients. It measures the functional status of the central nervous system (brain and spinal cord) at any point in time during the delivery of care. Neurological abnormality can occur due to direct injury to the brain and/or spinal cord, or due to blood loss, lack of oxygen, or the effects of alcohol and drugs.

**FIGURE 11:
FLORIDA TRAUMA CENTER ADMISSIONS BY HOUR, 2010**

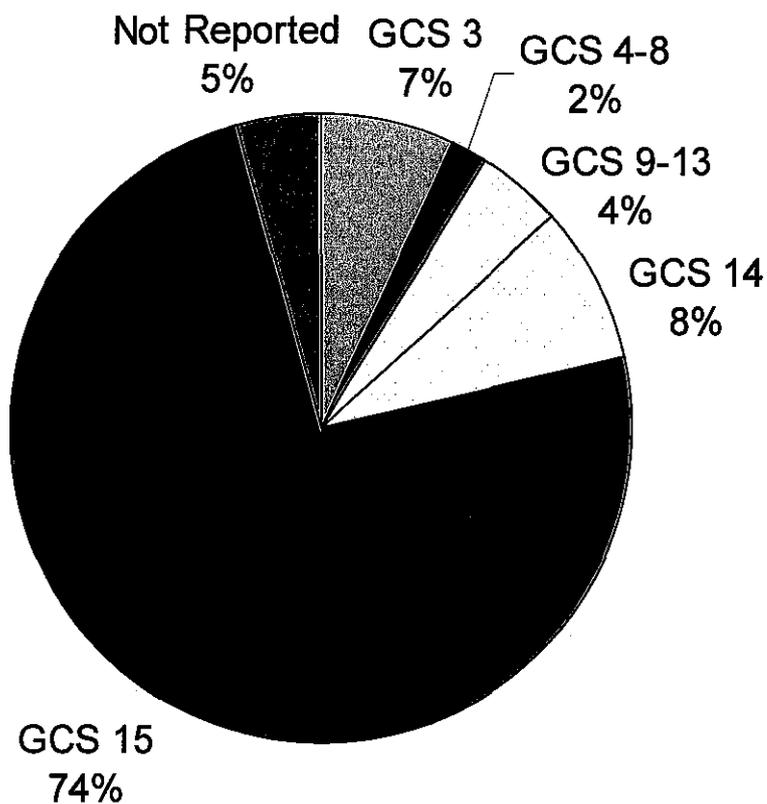
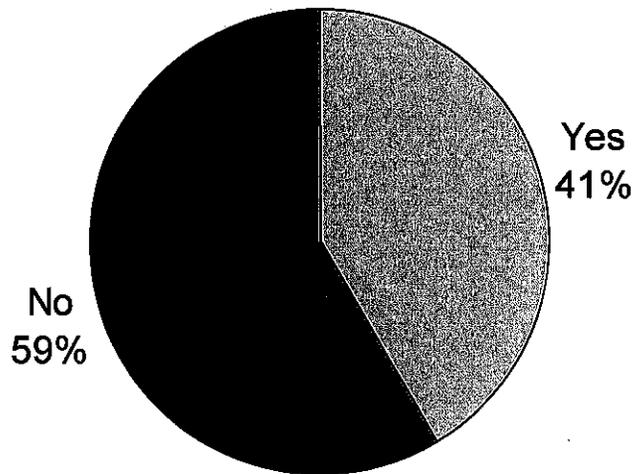


Figure 12 shows the distribution of GCS scores at the time of the patients' admissions to Florida's trauma centers in 2010. GCS scores are measured on a scale of 3-15, based on the sum of three physiological measures: eye opening (scale of 1-4), verbal response (scale of 1-5), and motor response (scale of 1-6). The lower the GCS score is, the greater is the likelihood for neurological abnormality due to physical trauma to the central nervous system.

FLORIDA TRAUMA REGISTRY 2010

TRAUMA TEAM ACTIVATION

FIGURE 13:
TRAUMA TEAM LEVEL ONE ACTIVATIONS AS A PERCENTAGE OF
TOTAL FLORIDA TRAUMA CENTER PATIENT VOLUME, 2010



When a trauma team is activated, the medical, nursing, and technical personnel dedicated to the care of the trauma patient, are called to receive the arriving patient in the emergency department. Florida's trauma-center standards require that these resources be continuously available at each trauma center. Figure 13 shows that Level One (the highest level) activation of the trauma team was necessary for 41 percent of trauma patients transported to Florida's trauma centers in 2010. The cost of these resources is invested up-front by each trauma center. These costs cannot be recovered from patient billings, because reimbursements are charged only when a service is provided, and not during the readiness phase when the trauma team awaits the arrival of the next trauma patient.

FLORIDA TRAUMA REGISTRY 2010

EMERGENCY DEPARTMENT DISPOSITION

**FIGURE 14:
DISPOSITIONS OF TRAUMA PATIENTS FROM
FLORIDA TRAUMA CENTER EMERGENCY DEPARTMENTS, 2010**

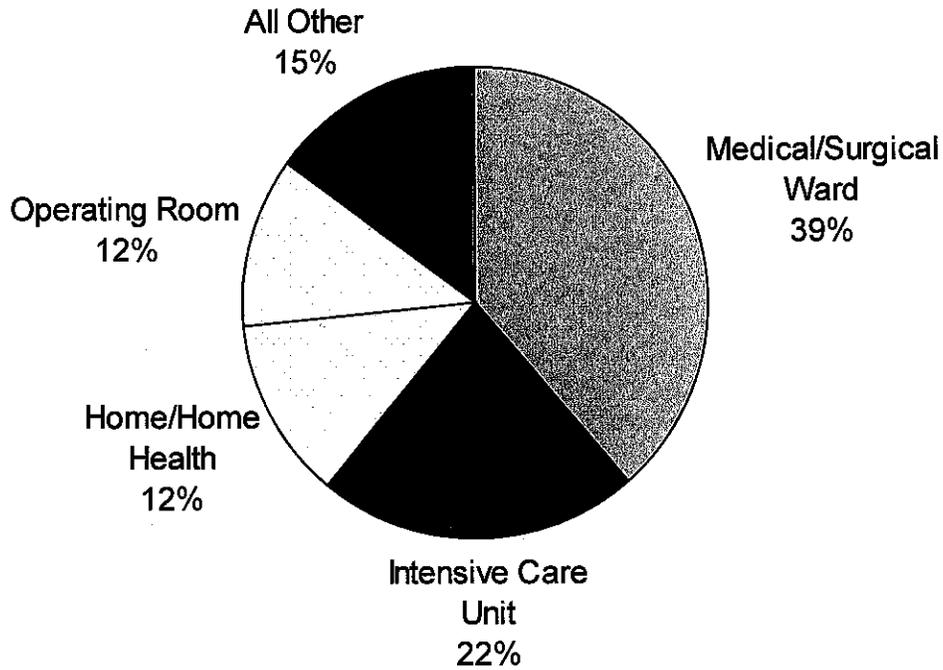


Figure 14 and Table 9 show the dispositions of trauma patients after receiving initial treatment in one of Florida's trauma center emergency departments in 2010. About 81 percent of trauma patients were admitted or transferred to another facility after receiving initial treatment in one of Florida's trauma center emergency departments in 2010.

FLORIDA TRAUMA REGISTRY 2010

**TABLE 9:
DISPOSITIONS OF TRAUMA PATIENTS FROM FLORIDA TRAUMA CENTER EMERGENCY DEPARTMENTS, 2010**

Disposition	Number	Percent
Medical/Surgical Ward	17,188	39%
Intensive Care Unit	9,855	22%
Home/Home Health	5,544	12%
Operating Room	5,112	12%
Telemetry	1,305	3%
Burn Admit/Transfer	583	1%
Death	547	1%
Pediatrics Admit	509	1%
Stepdown Unit	461	1%
Orthopedics Admit	453	1%
Transfer to Another Facility	320	<1%
Left Against Medical Advice	200	<1%
Dead on Arrival	131	<1%
Jail	106	<1%
Labor and Delivery	33	<1%
Psychiatry Admit	25	<1%
Other/Not Reported	2,016	5%
Total	44,388	100%

FLORIDA TRAUMA REGISTRY 2010

HOSPITAL DISPOSITION

FIGURE 15:
DISPOSITIONS OF TRAUMA PATIENTS FROM FLORIDA TRAUMA CENTER HOSPITALS, 2010

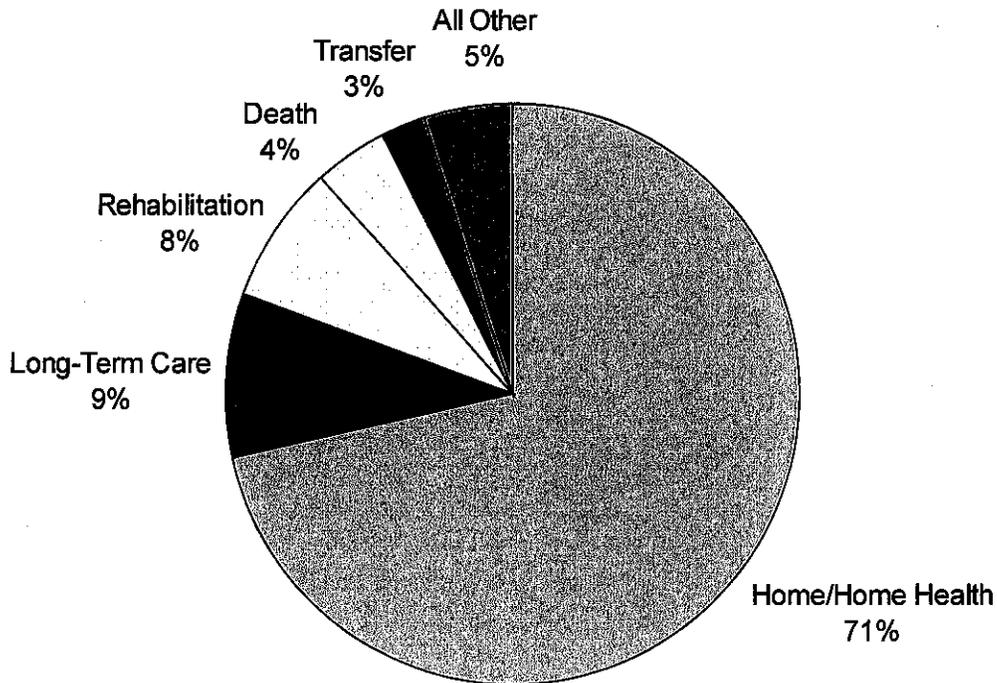


Figure 15 and Table 10 show the dispositions of trauma patients from Florida's trauma center hospitals in 2010 after completion of acute inpatient care. Patients discharged to home, home health, rehabilitation, and jail have recovered significantly, and have a good potential to return to the community as productive citizens. The fact that 80 percent of trauma patients were discharged from Florida's trauma center hospitals in 2010, with a good potential for recovery, is testimony to the effectiveness of Florida's trauma system.

FLORIDA TRAUMA REGISTRY 2010

**TABLE 10:
DISPOSITIONS OF TRAUMA PATIENTS FROM FLORIDA TRAUMA CENTER HOSPITALS, 2010**

Disposition	Number	Percent
Home/Home Health	25,356	71%
Long-Term Care	3,248	9%
Rehabilitation	2,748	8%
Death	1,506	4%
Transfer	913	3%
Jail	467	1%
Mental Health/Drug Referral	275	<1%
Left Against Medical Advice	231	<1%
Hospice	180	<1%
Other/Not Reported	600	2%
Total (inpatient only)	35,524	100%

FLORIDA TRAUMA REGISTRY 2010

HOSPITAL LENGTH OF STAY

**FIGURE 16:
HOSPITAL LENGTHS OF STAY IN FLORIDA TRAUMA CENTERS, 2010**

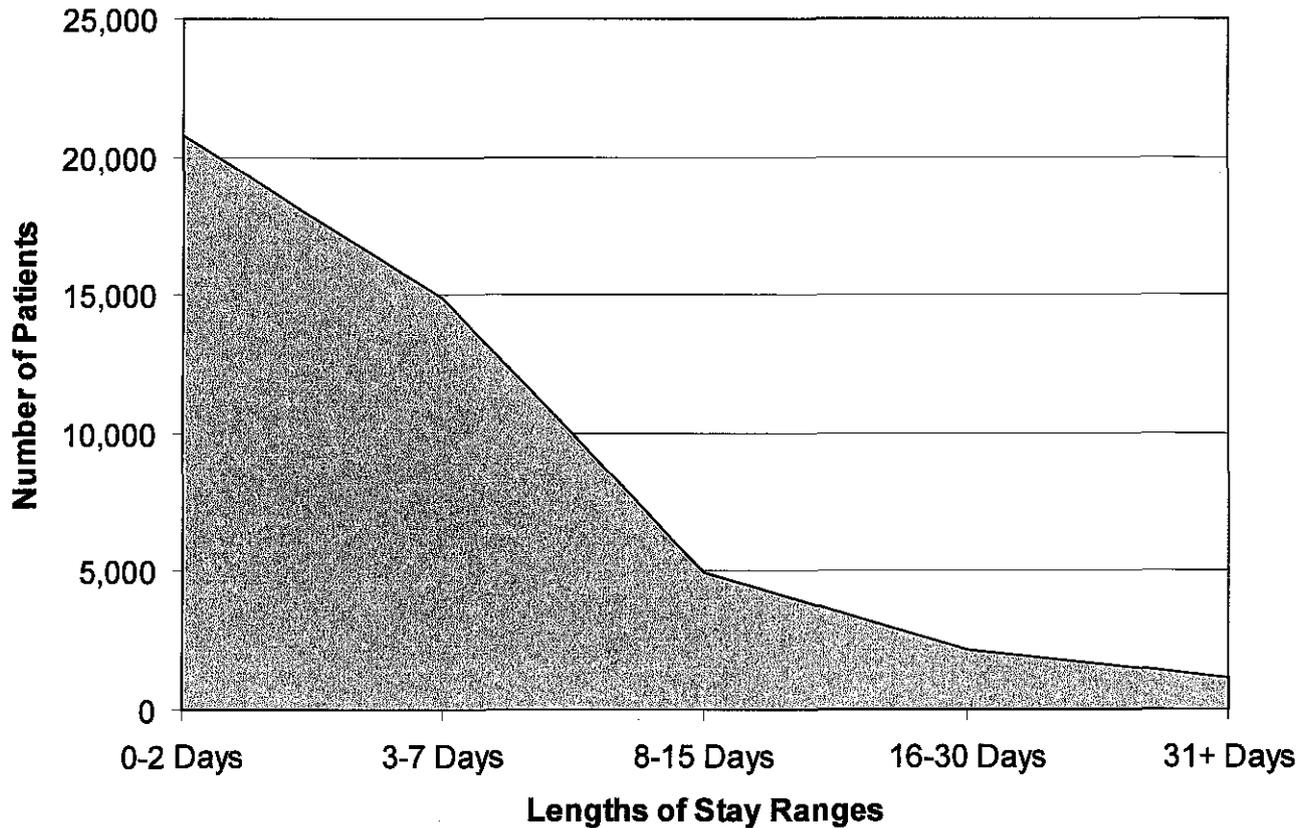


Figure 16 and Table 11 show hospital lengths of stay (LOS) of Florida's trauma center patients in 2010. Hospital LOS of three or more days are indicative of severe injury. In 2010, 52 percent of Florida's trauma center patients had hospital LOS of three or more days. This shows that Florida's trauma system goal of delivering the most severely injured patients to trauma centers is being met.

**TABLE 11:
HOSPITAL LENGTHS OF STAY IN FLORIDA TRAUMA CENTERS, 2009**

Lengths of Stay Ranges	Number	Percent
0-2 days	20,760	47%
3-7 days	14,869	34%
8-15 days	4,926	11%
16-30 days	2,157	5%
31+ days	1,155	3%
Not Reported	521	1%
Total	44,388	100%

FLORIDA TRAUMA REGISTRY 2010

LENGTH OF STAY IN INTENSIVE CARE UNITS AS A MEASURE OF RESOURCE UTILIZATION

FIGURE 17:
LENGTHS OF STAY REPORTED IN FLORIDA TRAUMA CENTER INTENSIVE CARE UNITS, 2010

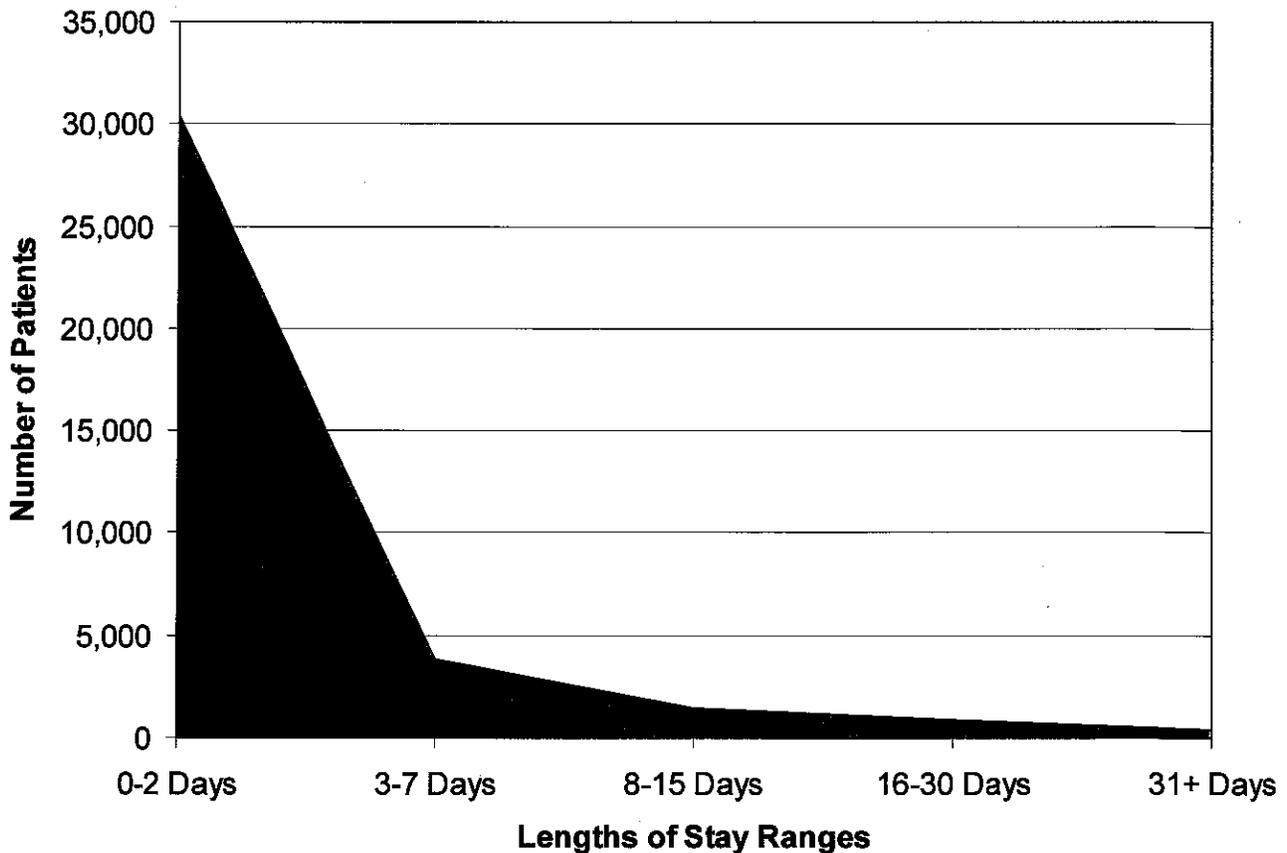


Figure 17 and Table 12 show lengths of stay (LOS) of Florida's trauma center patients in intensive care units (ICU) in 2010. This data reflects trauma center critical care resource utilization. Lengths of stay of three or more days in a trauma center's ICU are indicative of severe injury. In 2010, 18 percent of Florida's trauma center patients needing intensive care had an ICU LOS of three or more days.

TABLE 12:
LENGTHS OF STAY REPORTED IN FLORIDA TRAUMA CENTER INTENSIVE CARE UNITS, 2010

Lengths of Stay Ranges	Number	Percent
0-2 Days	30,400	82%
3-7 Days	3,823	10%
8-15 Days	1,415	4%
16-30 Days	882	2%
31+ Days	339	1%
Total with ICU LOS	36,859	100%

FLORIDA TRAUMA REGISTRY 2010

INJURY SEVERITY SCORE

The Injury Severity Score (ISS) estimates the risk of death from a given set of bodily injuries. The overall ISS is calculated by assigning an Abbreviated Injury Severity (AIS) score, from one to five, to each of six body regions: head, face, chest, abdomen, extremities, and external. The three most severely injured body regions with the highest AIS scores are each squared and then added together to calculate the overall ISS. An ISS of 15 or more indicates severe injury.

**FIGURE 18:
DISTRIBUTION OF INJURY SEVERITY SCORES OF FLORIDA TRAUMA CENTER PATIENTS, 2010**

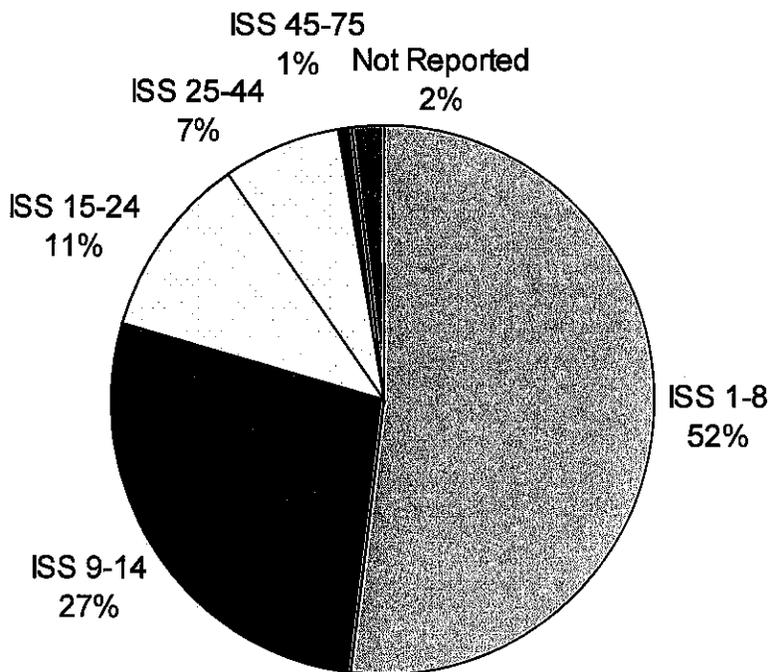


Figure 18 and Table 13 show the distribution of ISSs of Florida's trauma center patients in 2010. About 19 percent of trauma patients treated in Florida's trauma centers in 2010 had an ISS of 15 or more, indicating severe injury.

**TABLE 13:
DISTRIBUTION OF INJURY SEVERITY SCORES OF FLORIDA TRAUMA CENTER PATIENTS, 2009**

Injury Severity Score Ranges	Number	Percent
1-8	23,046	52%
9-14	12,170	27%
15-24	4,852	11%
25-44	3,078	7%
45-75	399	1%
Not Reported	843	2%
Total	44,388	100%

**FIGURE 19:
DISTRIBUTION OF INJURY SEVERITY SCORES OF
FLORIDA TRAUMA CENTER PATIENTS BY AGE GROUP, 2010**

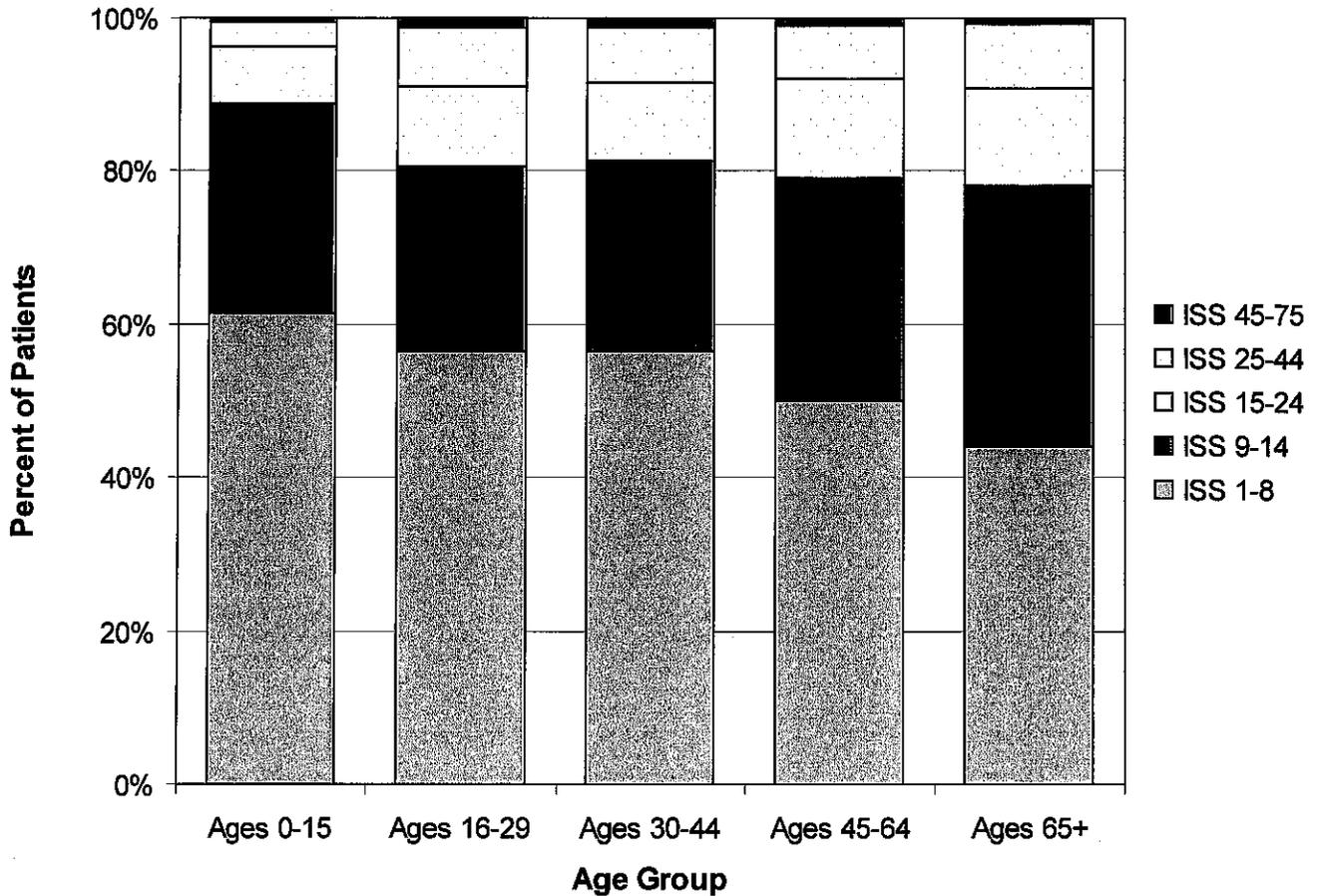


Figure 19 shows the distribution of Injury Severity Scores for Florida's trauma center patients in 2010 by age group. The proportion of more severe injuries (ISS of nine or greater) increases with each successively older age group, until such injuries make up 56 percent of those treated in the 65-year-old and older age group. An injury in this age group is often more severe than the same injury in younger age groups, due to the impact of other diseases and health conditions that are often present in older patients.

FLORIDA TRAUMA REGISTRY 2010

**FIGURE 20:
DEATHS BY INJURY SEVERITY SCORE OF FLORIDA TRAUMA CENTER PATIENTS, 2010**

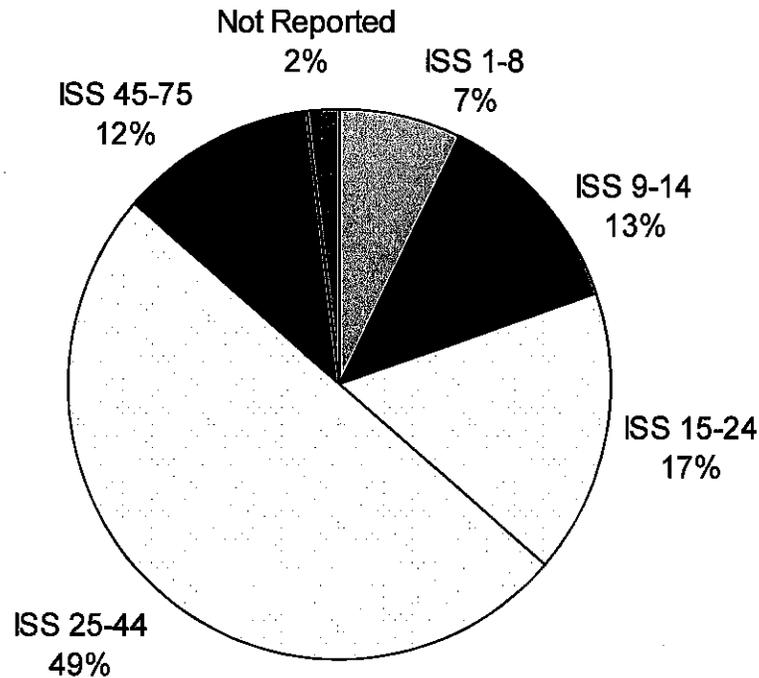


Figure 20 shows a breakout of the deaths of Florida's trauma center patients in 2010 by the range of the ISSs. The greater the ISS is, the greater the likelihood of death is. However, 20 percent of the 2,184 trauma center patients who died in 2010 had an ISS of 14 or less. This shows the problem with using the ISS to predict patient outcomes. The ISS does not accurately assess the impact of severe injuries to a single body region (for example, a gunshot wound to the abdomen, or an isolated brain injury). Patients with low ISS scores have also often been shown to have longer hospital stays.

Due to this weakness of the ISS to predict death, disability, and resource utilization accurately, the Office of Trauma uses the International Classification Injury Severity Score (ICISS) to calculate injury severity for the purpose of calculating funding for verified trauma centers, as specified in Rule 64J-2.019, *Florida Administrative Code*.

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