



## 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 was also established. Provisional Level I status as a Trauma Center was granted effective October 1, 2004, confirming UF & Shands' commitment to excellence in trauma care.

From October 1, 2004 through September 30, 2008, Shands at the University of Florida has cared for more than 8,000 trauma patients; nearly 7 trauma patients daily. During that same time period the population in the Shands at UF twelve-county trauma service area has grown from 850,000 in 2004 to just over 1 million people. Thirty-one percent of the trauma patient population are critically injured with an Injury Severity Scores greater than 15.

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### Demographics

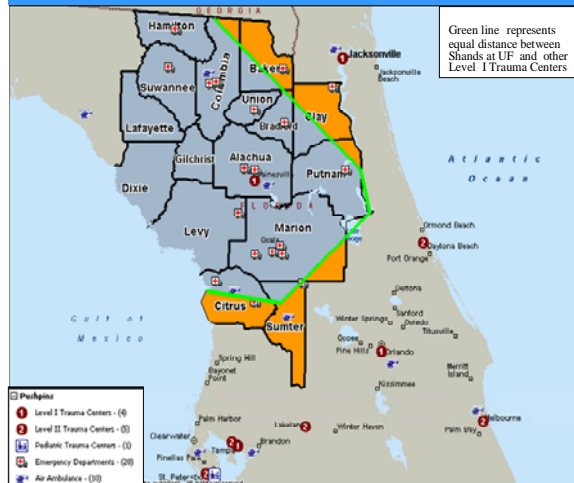
- **Counties= 12 w/  
\*1 mill+ people**
- **Acute Care  
Hospitals= 16**
- **Pre-hospital  
providers= 15**
- **Helicopters= 5**



*"Since 2004 the service area population has grown from 850,000+ to just over 1 million, which represents a 15% increase."*

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## Shands at UF Level I Trauma Center Service Area



Green line represents equal distance between Shands at UF and other Level I Trauma Centers

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The care provided is rendered by a multidisciplinary team that includes many experts in the care of trauma patients. The adult trauma patient population is cared for by the Division of Acute Care Surgery and comprises a team of nine trauma surgeons. The pediatric trauma patients are cared for by the Division of Pediatric Surgery and a team of four pediatric trauma surgeons.

The care provided is rendered by a multidisciplinary team that includes pre-hospital personnel, University of Florida trauma surgeons, emergency medicine physicians, consult physicians, nurses and ancillary staff. The objective of Shands' Trauma Team is to:

- Provide initial resuscitative care required for critically injured patients
- Provide easy accessibility to radiology, blood banks, laboratory services and operating rooms
- Provide necessary intensive care - both diagnostic and therapeutic - for all trauma patients admitted to Shands at the University of Florida

- Provide outreach activities on trauma prevention, including public education and continuing education for staff, physicians, nurses, allied health personnel and community physicians
- Provide all necessary team coordination in cases of complex, multi-system trauma
- Provide clinical experience and teaching for residents, nurses, physician extenders, emergency medical technicians and other allied health care professionals
- Perform trauma research designed to produce new knowledge applicable to the care of injured patients

### **Trauma Statistics for FY 2008 (July 1, 2007 – June 20, 2008)**

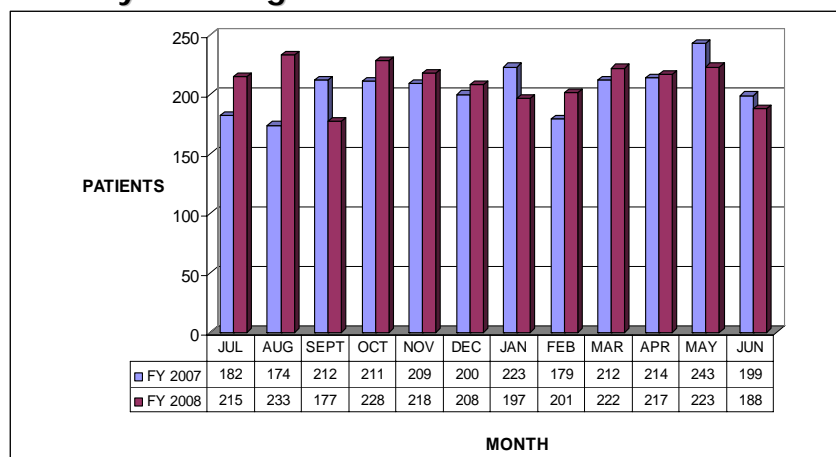
#### **Facts and Figures FY 08**

- 2,527 total trauma patients
  - 1,073 (42.5%) Trauma alert patients
  - 2,132 (84.4%) Adult trauma patients
  - 395 (15.6%) Pediatric trauma patients
  - 755 (30%) ISS > 15
- Impact on Patient Outcomes
  - 4.2% overall mortality rate (excluding deaths in ED)
  - <0.1 mortality index
  - 6.9 days average hospital length of stay
  - <0.1 hospital length of stay index
  - 2.35 days average ICU LOS

**Figure 1. Volume of Trauma Patients**

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#### **Monthly Discharged Trauma Patients**



FY 2007 N=2458  
FY 2008 N=2527

Source: SUF Trauma Registry

**Figure 2. Mortality Rate by Mechanism of Injury**

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**Mortality Rate July 1, 2007 – June 30, 2008**

**Deaths Among All Trauma Patients**

Mechanism of Injury	Number	Percent
Motor Vehicle Crash	49	37.1%
Fall	24	18.2%
Gunshot Wound	16	12.1%
Motorcycle Crash	8	6.1%
Burn	7	5.3%
MVC vs Pedestrian	6	4.5%
Assault	4	3.0%
MVC vs bicycle	3	2.3%
Bicycle Crash	2	1.5%
MVC/Non Traffic Crash	2	1.5%
Stab Wound	2	1.5%
Struck by Falling Object	2	1.5%
Train Accident	1	0.8%
Child Abuse	1	0.8%
Hanging / Suffocation	1	0.8%
Injured around or in Water	1	0.8%
Injured by Animal	1	0.8%
Self Inflicted Injury	1	0.8%
Tractor Accident	1	0.8%
Total	132	100%

**Deaths Among All Trauma Patients in the ED**

Mechanism of Injury	Number	Percent
Motor Vehicle Crash	15	57.7%
Gunshot Wound	4	15.4%
MVC vs Pedestrian	2	7.7%
Fall	1	3.8%
Burn	1	3.8%
Bicycle Crash	1	3.8%
Stab Wound	1	3.8%
Hanging / Suffocation	1	3.8%
Total	26	100%

**SUF Mortality= 4.2%**  
**(excludes deaths in ED)**

**NTDB 2007 Mortality Rate = 4.44%**



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**Trauma Committee Goals/Accomplishments for CY 2008:**

1. Completed successful Shands at UF Level I Trauma Center site survey and Brain and Spinal Cord Injury Program site survey on June 11-12, 2008. Shands at UF was recognized by the FDOH survey team as the model program for Performance Improvement for the state of Florida.
2. *Algorithm for Communication between IR and Trauma Surgeon* implemented for trauma patients needing emergent Interventional Radiology, February 19, 2008.
3. Wound infection rate for Trauma and Emergency Surgery Services is being monitored. During the 4th quarter 2008 there were no Class I category wound infections. We continue surveillance with SUF Infection Control.

**Trauma Committee Goals for CY 2009:**

1. Implement successful Telemedicine Trauma Network for trauma patient consultation and educational training sessions between Shands at UF Trauma Center and a SUF system hospital.
2. Improve upon the process of assessment and evaluation of trauma patients that require acute rehab services consultation and timely documentation of follow-up by the primary physician.
3. Develop safety measures for handoffs in the care of trauma patients during the initial resuscitation phase of care.

### 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. Following is a list of regular conferences and continuing education conferences and courses.

- Disaster Management and Emergency Preparedness (DMEP)
- 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
- 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 4-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 & 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

### Injury Prevention and Community Awareness:



#### **“Gator Watch 2008: 96 Hours Trauma Free Campaign”**

**Mission:** Gator Watch aims to raise awareness that students, as well as area residents, are at high risk for traumatic injury on football game weekends, often because of car accidents or other incidents resulting from alcohol consumption. The impetus for the campaign came from several years of increasing injury and deaths on game weekends. We have planned multiple events and developed materials to share with students to help them make good decisions and watch out for other Gators whose judgments may be impaired.

With UF first lady Chris Machen taking the lead, UF, Shands HealthCare, UF Student Government, and the UF Orthopaedics and Sports Medicine Institute a kick-off campaign for Gator Watch successfully occurred during the weekend of the South Carolina game – November 13 – 17, 2008. The campaign combined increased alcohol awareness with an emphasis on Gators "watching" out for each other. We provided tools to decrease risk-taking choices. The campaign encourages students to **WATCH: Watch** out for each other, **Act** responsibly, **Take** a taxi, **Call** for help, but still **Have** fun.

**Goal:** To prevent alcohol-related trauma for the 96 hours surrounding the game, starting at 8 a.m. on Thursday, November 13, 2008, and ending at 8 a.m. on Monday, November 17, 2008.

**Sponsors:** UF Student Government and other campus groups, in cooperation with Shands Healthcare and the University of Florida

**Events:**

- Nov. 13: Kick-off Gator Night Out, Flavet Field, 6 p.m. to 10 p.m.  
*Event will feature ShandsCair helicopter, self-assessing computer program to gauge "safe" level of alcohol consumption, giveaways, ambulance, information booth. We are piggy-backing on a University of Florida Police Department safety event already scheduled and featuring GPD, ASO, Fish and Wildlife etc.*
- Nov 14: Reitz Union Tabling, Reitz Union Colonnade, 11 a.m. to 2 p.m.
- Nov. 15: Gameday presence – Hours TBA  
*Event will feature group of UF & Shands healthcare professionals handing out Gator Watch emergency cards, t-shirts and other giveaways. They also will provide information about the UF & Shands Trauma Program, as well as limited demonstrations of trauma equipment and procedures.*

**Advertising/Media Support**

- Broadcast media: TV and audio PSAs by UF football coach Urban Meyer
- Print media: The Gainesville Sun, The Independent Florida Alligator, Inside UF
- Online media: UF Home Page and other UF & Shands sponsored Web support, Gator Times, The Gainesville Sun calendar, Facebook
- Lighted marquis signs on UF campus at SW 34<sup>th</sup> Street and Hull Road and W. University Avenue and Gale Lemerand Drive will scroll Gator Watch logo and message
- Gator Watch logo: Will be put on everything
- Table banners: Will Sport Gator Watch logo
- Emergency cards: Pocket-sized pamphlets with space for friends names and numbers
- T-shirts: Will sport Gator Watch logo
- Door hangers: Will sport Gator Watch logo and encourage students to participate in Gator Watch. The door hangers are to be put in all residence halls on Wednesday, November, 12, 2008. Students will be able to fill in a section with their name and telephone number and bring them to Gator Night Out Thursday for a free prize.

**Research:**

Start Date	Title	Primary Investigator	In Progress or Submitted to IRB
1/16/07	"Plain X-ray, Computed Tomography, and MRI evaluation of Cervical Spine and Spinal Cord Injuries in the Setting of Acute Trauma and the Comatose patient"	M Lynn, MD L. Lottenberg, MD RP Jacob, MD	In Progress
1/13/07	"All-Terrain Vehicle (ATV) Injuries at a University Based Level I Trauma Center"	R. Winfield, MD	Presented at: Multidisciplinary Trauma Conference December 2007 Eastern Association of Trauma January 2008
7/24/07	"Biomarkers of Brain Injury: Magnitude, Secondary Insults and Outcome"	S. Robicsek, MD	In progress
8/2007	"Sturgeons vs. Surgeons: Leaping Fish Injuries at a Level I Trauma Center"	J. Wilson, MD G. Burgess, MD R. Winfield, MD L. Lottenberg, MD	Presented at: SESC Poster Competition February 2008 Pending publication in The American Surgeon
12/4/07	"Determining Feasibility of Studying Biochemical Markers of Severe Pediatric Traumatic Brain Injury and Attentional	S. Heaton, Ph.D.	In Progress
12/2007	Impact of telemedicine upon rural trauma care.	Duchesne JC, Kyle A, Simmons J, Islam S,	J Trauma. 2008 Jan;64(1):92-7; discussion 97-8.
12/2007	Blunt aortic injuries in children. J Pediatr Surg, <i>in press</i> , 2008.	Anderson S	J Pediatric Surg, in press 2008
1/2/08	"Plan to research families of the critically ill"	S. Knapp, RN	In Progress
1/9/08	"Once-Daily Versus Twice-Daily Enoxaparin for Venous Thromboembolism Prophylaxis in High Risk Trauma Patients"	S. Bush, Pharm. D.	In Progress
2/12/08	""Assess the incidence of PE and DVT in high-risk trauma patients with and without IVCF prophylaxis"	R. Lottenberg, MD A. Rajasekhar, MD	In Progress
2/22/08	"Retrospective Study of the Bard G-2 Retrievable Vena Cava Filter"	J. Caridi, MD	In Progress
4/1/08	"N-Acetylsteyine for the Prevention of Radiocontrast Induced Nephropathy in Severe Trauma Upon Presentation to the Emergency Department"	M. Fox, Pharm D	In Progress
4/10/08	"Personal Media Use and Injuries in University of Florida Students"	H. Edwards P. Rausch	In Progress
4/18/08	"Cardiac Injuries In Children"	S. Islam, MD	In Progress

4/18/08	Renal Injuries In Children	S. Isman, MD	In Progress
5/01/08	Neuro-Cognitive Subtypes of Traumatic Brain Injury: Relevance to Cognitive Rehabilitation	W. Perlstein, MD	In Progress
2/09	A Massive Pulmonary Embolism Treatment Protocol: How Trauma Performance Improvement Effects Outcome Throughout the Hospital System	L. Lottenberg, MD	Presentation at southeastern surgical congress
2/09	The Massive Transfusion Protocol: Saving Lives with Quality Improvement	L. Lottenberg, MD	Presentation at southeastern Surgical Congress
01/09	A Simulation-Based Training Program Using Landmark Identification and Ultrasound Guidance to Improve the Safety of Subclavian Central Venous Catheter Insertion in Critically Ill Patients	L. Lottenberg, MD	Poster presentation at EAST
3/09	Traditional Resuscitative Practices Fail to Resolve Metabolic Acidosis in Morbidly Obese Patients Following Severe Blunt Trauma	R. Winfield, MD	Resident paper competition winner state of Florida, region IV and pending presentation at national COT
2/09	Genomic Expression Analysis is Dependent Upon Method of PMN Isolation	E. Warner, MD	Resident paper competition winner (basic science) state of Florida, podium presentation at Western Trauma Association meeting

Updated: 03/04/09