

Raising *trauma care* to

Critically injured patients can be treated close to home

► **THIS PAST SPRING, A CARLOAD OF TEEN-AGERS TRAVELING TOO FAST CRASHED ON HIGHWAY 17 NEAR FLORENCE.** Four teens had life-threatening injuries—one had a severe injury to the aorta, the main artery that takes blood from the heart to the rest of the body, and two others suffered lung damage. They needed immediate, expert trauma care if they were to survive.

Luckily for them, Grand Strand Regional Medical Center is in the midst of upgrading its trauma care. Instead of having to move the injured teens across the state to another hospital—and lose valuable time treating the injuries—they were whisked to Grand Strand Regional Medical Center. Under the

direction of Lewis Dickinson, MD, medical director of trauma service and chief of surgery, the emergency department (ED) and its staff were ready and waiting to begin treatment within what trauma surgeons call “the golden hour.”

“If you begin treatment of acute trauma within an hour of the accident, you can lower death rates by 25 percent,” says Dr. Dickinson. In this case, all four teens survived.

This is just one example of why Grand Strand Regional has committed an extraordinary amount of time, energy and funding to achieve Level II accreditation from the American College of Surgeons (ACS). The hospital currently has

a state-based Level III designation. The only other nearby Level II centers are in Anderson, S.C., and Wilmington, N.C.

“To go from a state Level III to a national Level II is a big jump,” says Dr. Dickinson. “The hospital’s administration really became committed to making that jump about six months ago and has given us all the resources we need to make the upgrade.”

A needed service

Trauma is defined as a serious and life-threatening physical injury with the potential for secondary complications such as shock, respiratory failure or even death.



a new level

Nationally, trauma is the leading cause of death for all Americans between the ages of 1 and 44. One in 14 Americans suffers a nonfatal traumatic injury every year.

Closer to home, Horry County had the highest death rate in the state for car accidents in 2009. “Trauma is inevitable here,” says Dr. Dickinson, who grew up in Myrtle Beach and trained in trauma care in Philadelphia. “Our large tourist population increases the risk of injuries from car accidents, fights and falls. Our agricultural and construction industries also pose opportunities for serious injuries. We want to raise the level of care through improved response and resources in order to optimize the treatment of our patients.”

As a Level III center, the hospital’s physicians and nurses already provided a very high level of care. After all, they see more than 67,000 patients annually in the main hospital ED and the South Strand Ambulatory Care Center. “The staff here is excellent, and they are very much on board to take it to the next level,” says Ben Davis, MD, general/critical care surgeon, who arrived in May from Las Vegas, where he helped another hospital make this same transition to Level II status. “Still, a change like this is a big challenge for all staff levels, from maintenance to the highest levels of administration. In the end, it revolves around the people providing the care.”



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A book-full of requirements

Becoming a Level II trauma center requires meeting “a whole book-full of standards and requirements,” says Dr. Dickinson.

For example, all the major surgical specialties, including specially trained trauma and general surgeons, orthopedic surgeons and neurosurgeons, must be on-call and clearly committed to being in the ED when the patient arrives. An operating room and staff must be available 24/7.

Trauma center designation also requires that the hospital meet certain response times and training, quality improvement and community education standards. That education includes working with state and local emergency medical service (EMS) providers—such as

police, fire, medical helicopter and ambulance companies—so they know exactly what the hospital’s capabilities are for caring for their trauma patients.

“Helicopters have been flying out of Myrtle Beach more often than into it, so we are meeting with the service to help get victims of traumatic accidents in our catchment area brought here quickly,” says Dr. Dickinson. To that end, the hospital has built a new helicopter pad for safe transfer of our patients, EMS personal and our staff. “We will also ensure that all will be trained and know what to do when the chopper lands,” Dr. Dickinson says. “We want to be sure everybody is talking the same language.” The hospital is also discussing joining efforts with our pre-hospital providers



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Raising *trauma care* to a new level

Trauma by the numbers

THE TOTAL NUMBER OF DEATHS FROM
INJURY IN THE UNITED STATES IN 2007,
THE MOST CURRENT YEAR AVAILABLE

DEATHS FROM ALL INJURIES:

**Number of
deaths** ▶ 182,479
**Deaths per
100,000
population** ▶ 60.5

MOTOR VEHICLE TRAFFIC DEATHS:

**Number of
deaths** ▶ 42,031
**Deaths per
100,000
population** ▶ 13.9

ALL FIREARM DEATHS:

**Number of
deaths** ▶ 31,224
**Deaths per
100,000
population** ▶ 10.4

Source: U.S. Centers for Disease Control and
Prevention, www.cdc.gov/nchs/fastats/injury.htm



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for educational opportunities such as utilizing our anesthesiologists to help enhance treatment methods for difficult airway management cases.

Education will extend to the general community as well. “We’ll go into schools and talk about the dangers of certain actions like texting while driving,” he says. “We will also cover water hazards, bike and ATV safety, guns, gang violence and more. Education is the best means to prevention in trauma.”

Bigger is better

The hospital is undergoing a \$54 million renovation, which will incorporate expansion to meet Level II requirements. Many new pieces of medical equipment and 50 patient beds will be added, as will new rooms in the ED for taking X-rays and performing immediate surgical procedures. About 70 full-time staff members will be added to our existing complement of staff as we transition throughout the year. This will assist in our immediate response and the ongoing treatment of our patients.

Level II-worthy trauma care does not end in the operating room. “It’s not just about the first hour or first 24 hours,” says Dr. Dickinson. “It extends to recovery, rehabilitation, occupational and physical therapy and moving the patient from acute care to an outpatient center or full discharge. All of the care provided is monitored from pre-hospital to discharge to ensure we are optimizing the care that we provide.”

Evaluators from the ACS will visit Grand Strand Regional later this fall. “They will go over our plans and show us where we need to tweak things,” Dr. Dickinson says. The hospital will then perform as a Level II center for a year. “If we meet all the national and state benchmarks, the ACS will give us Level II verification in November 2011,” he adds.

If it seems like a lot of work, it is. But it is all being done for the health and safety of the people who live and visit here. “This new service will be a tremendous benefit to this region of South Carolina,” says Doug White, Grand Strand Regional’s chief executive officer.

