

Stanford Hospital Health Notes

special feature

A community health education series from Stanford Hospital & Clinics

After The Worst Happens: Top Care Is Right At Hand But Pressed to Limits

Myron Hollister is a lucky man. Lucky enough to survive being hit hard by a car while riding his bicycle. Lucky to have been injured less than a 10-minute drive from the Stanford Hospital & Clinics Emergency Department. And lucky enough to arrive there on a quiet morning.

Hollister, 75, was quickly evaluated. He'd come away from the crash with five broken ribs, a punctured lung, a concussion, sprained shoulder and very nasty cuts and scrapes on his hands. His treatment proceeded quickly and deliberately.

"Everyone was very calm," said Hollister's wife Linda. "Everything was very efficient."

A week later, the Emergency Department was a very different place. A truck whose brakes had failed plowed into a car in the parking lot of a local grocery store. One person was fatally injured. Three others suffered serious injuries. They were all brought to

Stanford, the only Level 1 Trauma Center between San Jose and San Francisco.

"We provided excellent medical care, but our resources were stretched absolutely to the max."

— Dr. Bob Norris, Chief of the Hospital's Division of Emergency Medicine

More Patients, Same Space

"Right before that happened, we had two motorcycle crashes come in, one with a cracked liver. Then immediately afterwards, gunshot wounds came in," said Dr. Bob Norris, who heads the Hospital's Division of Emergency Medicine. "We provided excellent medical care, but our resources were stretched absolutely to the max. We had to take care of trauma patients in rooms that weren't designed for trauma care. If that accident had been twice as big, it would have been nearly impossible for us to have dealt with that."



After Myron Hollister, 75, was hit hard by a car while on his bike just a few blocks from his Palo Alto home, he went straight to the highest degree of emergency care at Stanford Hospital's Level 1 Trauma Center.

When Norris talks about stretched resources, he means square feet more than medical staff. Built in 1976, the Emergency Department, where the trauma center operates, now handles more than 46,000 annual visits in a space designed for less than half that number. Over

the course of 24 hours, between five and six trauma patients will arrive. Overall, patient arrivals at Stanford's Emergency Department are going up by about five percent each year.

Being Best Under Any Condition

What also stresses the current space is Stanford's status as a Level 1 Trauma Center. That is the highest care quality designation achievable, but it also means Stanford is ready to treat the most seriously injured patients, like Hollister. One of every three people who arrive at Stanford requires admission to the Hospital. The national average of hospital admissions at non-trauma emergency centers is just 13 percent.

As a Level 1 Trauma Center, Stanford is required by the Santa Clara County Emergency Medical Services Agency and the American College of Surgeons (ACS) to meet a long list of care criteria. It must have 24/7 availability of resuscitation equipment, specially trained trauma surgeons, other medical specialists in anesthesiology, orthopedics, neurosurgery and other fields, including nursing. The center must also serve as a regional resource and provide leadership in education, research and system planning.

In its most recent review of Stanford, the ACS team gave it perfect scores in all 176 criteria.

Comfortingly Close

The benefit to Stanford's neighboring communities is clear: Being treated at a trauma center improves a patient's chances of survival by 20 to 25 percent. And if a

Landlocked and always growing...



Computers are as close as can be to save space, but when all are in use, there's not much room for their users.



Treatment rooms are already packed with equipment and supplies—add a patient and medical staff and there's not much room to spare.



When shifts change, the only place for updates is between two doorways.

patient's injuries are of the most severe kind, treatment at Stanford raises that survival rate to 83 percent compared to the national average of about 68 percent. And Hollister is one of the 21 percent of Stanford's Emergency Department patients who come from either Palo Alto or East Palo Alto, brought by ambulance or coming directly from their homes.

"It takes a lot of work, logistics and team effort."

— Dr. David Spain, Chief of the Hospital's Trauma, Emergency and Critical Care Surgery Program

Stanford's Emergency Department is also certified as a Level 1 pediatric trauma center, one of only a few in California. About one in four of Stanford's emergency patients are children.

Several years before Linda Hollister got the phone call about her husband's crash, she'd paid a couple of visits to Stanford for emergency treatment for two of their children. "And I was glad then, too, for Stanford's closeness," she said. The Hollisters have lived in Palo Alto since the 1960s.

Creative Logistics Can't Always Beat Frustrating Space Crunch

After his swift initial evaluation and treatment, Myron Hollister came up against both the Hospital's and the Emergency Department's space crunch. No bed was then available for him in the Hospital, nor was one to be had within the core Emergency Department. He was wheeled off to wait in a nearby 11-bed care unit, a coping strategy in response to a landlocked department that already has seven patient beds in its hallways. The Emergency Department typically runs at 90 percent of its capacity and its treatment rooms can quickly become as densely packed as a rush hour train car, especially when a trauma patient arrives. As many as 10 people will speed into a space no bigger than a typical bedroom, one already congested by built-in cabinets. It becomes denser still when the essential tools of emergency care must also be squeezed in — IV pole,

INSIDE STANFORD'S EMERGENCY DEPARTMENT

Key facts:

- Stanford is the only Level 1 Trauma Center between San Francisco and San Jose
- One in five patients is from Palo Alto or East Palo Alto
- One in four patients is a child
- Treatment at a trauma center improves survival by 20 to 25 percent
- Survival rate for most severely injured or ill patients is 83 percent. National average is 68 percent

What is trauma?

Traumatic injuries are the leading cause of death in Americans over one year of age but under age 45. The following conditions require trauma care:

- penetrating injuries to head, neck, chest, back, abdomen, groin or extremities near elbow or knee
- suspected pelvic fracture
- been in an automobile crash with speed over 40 mph
- been a pedestrian hit by a car going greater than 20 mph
- fall of more than 15 feet if an adult



One room, three beds, dozens of carts, built-ins and shelves equals very cramped quarters.

What can you do to prevent a visit to the Emergency Department?

One of the most common reasons people come to a hospital for emergency care is a fall. The SHC Trauma Center created a Farewell to Falls program to help seniors avoid falls. Falls can be prevented by balance, mobility and strength training programs geared specifically at averting falls, medication review and home modifications. For more information on the program, phone (650) 724-9369. For a list of other prevention and safety programs, visit www.stanfordhospital.com, select Clinical Services, then A-Z guide and click on "T" and select "trauma services."

cardiac monitor, procedure boxes and trauma cart.

"It takes a lot of work, logistics and team effort," said Dr. David Spain, the Hospital's Chief of Trauma, Emergency and Critical Care Surgery. It also takes speed, skill, judgment, timing and collaboration, added trauma center program manager Janet Neff, a veteran of 20 years in emergency and trauma care.

Norris has frequent reminders of the impact of the space squeeze. When the Hospital does not have beds immediately available for emergency patients and the 11-bed unit is full, not only must new trauma patients be diverted, but Norris also knows that there



Linda Hollister is very happy to have her husband on the mend.

are people in the waiting room who will get tired of waiting and leave.

"We have a phenomenal team that really cares about our patients," Norris said, but the crowding and the waiting upsets patients and their families. It takes an emotional toll on the staff, too, he said. "They know how hard they are working, but sometimes it's very hard for patients to come away feeling satisfied about the overall experience."

Promise of Renewal

Norris and Spain are eager to move into a new, three times larger Emergency Department that will be part of the new Stanford Hospital, which will have the capacity to respond to a surge of patients from a natural or man-made disaster.

Myron Hollister is at home again, still a bit stiff and tolerating the pain of his still-healing ribs. Those are "coming along quite nicely," he said. His family is pressuring him, as is his doctor, not to get another bike.

Stanford Hospital & Clinics is known worldwide for advanced treatment of complex disorders in areas such as cardiac care, cancer treatment, neurosciences, surgery, and organ transplants. Consistently ranked among "America's Best Hospitals" by U.S. News and World Report, Stanford Hospital & Clinics is internationally recognized for translating medical breakthroughs into the care of patients. The Hospital is part of the Stanford University Medical Center, along with the Stanford University School of Medicine and Lucile Packard Children's Hospital at Stanford.