

When Plane-Crash Victims Arrived at Stanford Medicine, Response Teams Were Ready

By: Robert Dicks and Rosanne Spector

Years of disaster training and preparation culminated in an extraordinarily executed response July 6 when 55 injured passengers were brought to Stanford Hospital and Lucile Packard Children's Hospital for treatment after the crash of Asiana Airlines Flight 214 at San Francisco International Airport.

The Stanford hospitals were among nine in the Bay Area that were called into emergency action to evaluate and treat the crash victims. The disaster claimed two lives.

"The many hours we devote to disaster planning and training really paid off," said Brandon Bond, administrative director of the Office of Emergency Management for Stanford and Packard hospitals. "Throughout both of our hospitals, everyone immediately knew what to do to evaluate and treat these patients while maintaining normal hospital operations."

That preparation and readiness meant that emergency professionals from the Stanford Level-1 Trauma Center, the Marc and Laura Andreessen Emergency Department and the Office of Emergency Management had an incident response plan in place that had been well-rehearsed during many emergency drills and mock scenarios.

Officials at Stanford Medicine quickly activated the hospital command center after receiving word of the incoming casualties. They initiated a "code triage," bringing together cross-functional teams from emergency, trauma, operations, security



The first ambulance arrives at Stanford July 6 with victims of the Asiana Airlines crash at San Francisco International Airport.

Photo courtesy of Brandon Bond

and more to safely and efficiently coordinate the expected surge of patients.

Eric A. Weiss, MD, medical director for the Office of Emergency Management,

"...disaster planning and training really paid off..."

said the mobilization was rapid. "Within 30 minutes we had admitted or discharged most of the patients who were previously being treated in the emergency department, and we mobilized over 150 health-

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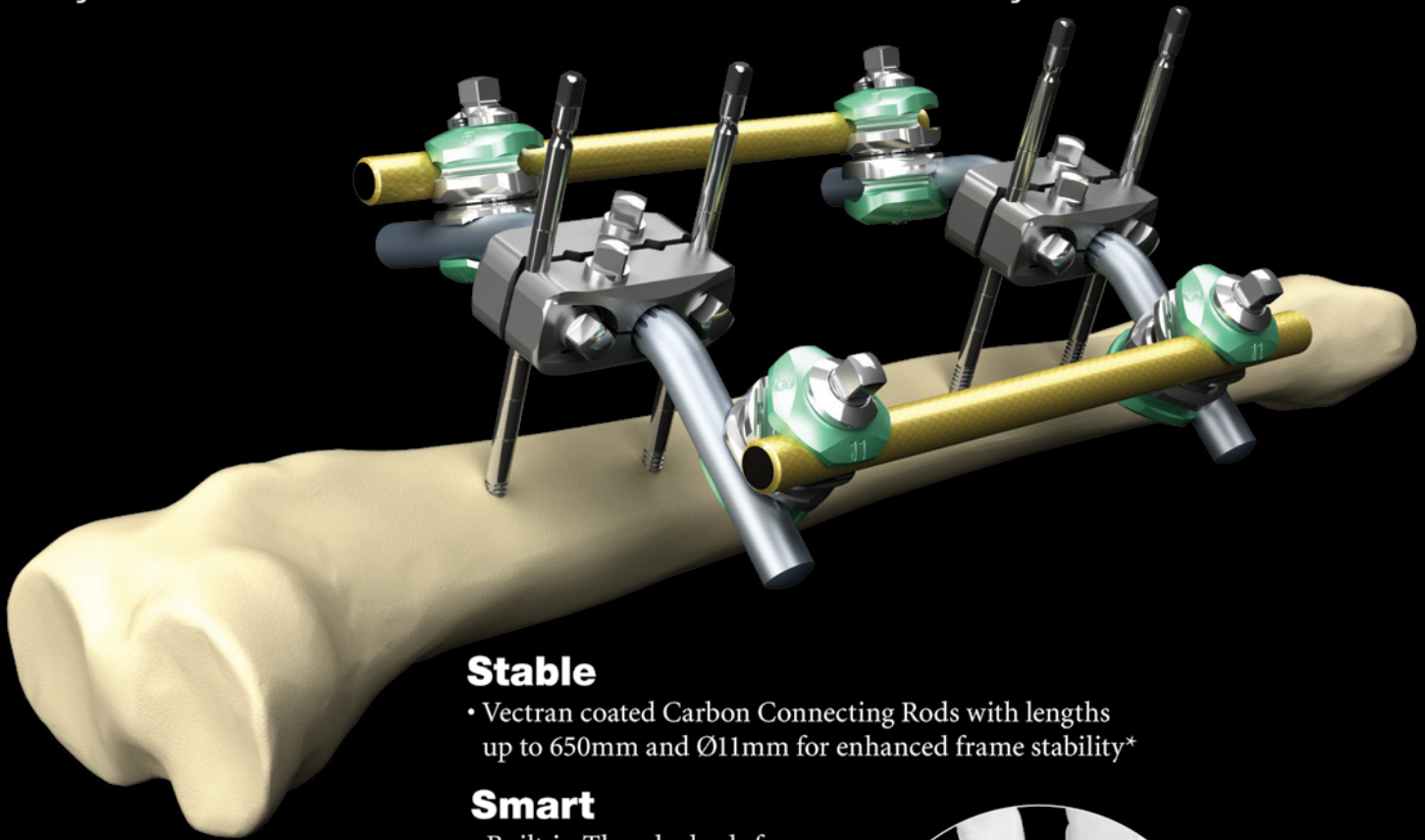
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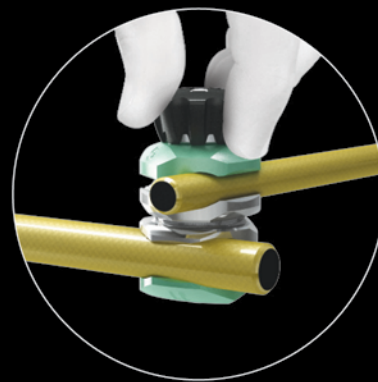
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*White Paper (NL11-NA-TR-2465): Comparison between the Hoffmann II MRI and the Hoffmann 3 Systems: The mechanical behavior of the connecting rods and a monoplanar bilateral frame. E. Wobmann, MSc; M. A. Behrens, MSc; S. Brianza, PhD; T. Matsushita, MD, DMSc; D. Seligson, MD. Based upon Biomechanical Test Reports from Stryker Trauma AG, Selzach; BML 11-072 and BML 11-059.

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Traveling Abroad This Fall? Be Prepared Before You Go.

Do you ever wonder what you would do if an emergency occurred while you were traveling in a foreign country, thousands of miles away from home? Who would you call? Where would you go? The U.S. Department of State website, travel.state.gov, provides comprehensive information about international travel and how to handle emergency situations overseas.

According to the U.S. Department of State website, consular personnel at U.S. Embassies and Consulates abroad and in the U.S. are available 24 hours a day, 7 days a week, to provide emergency assistance to U.S. citizens. Contact information for U.S. Embassies and Consulates appears on the Bureau of Consular Affairs website at <http://travel.state.gov>. Also note that the Office of Overseas Citizen Services in the State Department's Bureau of Consular Affairs may be reached for assistance with emergencies at 1-888-407-4747, if calling from the U.S. or Canada, or 202-501-4444, if calling from overseas.

U.S. consular officers are located in over 260 Foreign Service posts abroad. In addition, consular agents in approximately 46 foreign cities without U.S. Embassies or Consulates provide a more limited but still important series of emergency and other consular services.

Providing assistance to Americans during a crisis abroad, such as political upheaval or a natural disaster, is one of the most critical tasks consular officers

perform. During a crisis, consular officers look for missing Americans and help Americans return to the U.S., among many other duties to assist Americans. The State Department strongly encourages American citizens planning travel abroad to sign up for the Smart Traveler Enrollment Program so that they may find you during a crisis. It is free, it's confidential, and it's easily accomplished online at <https://travelregistration.state.gov>.

Registering your travel is important because the program makes it possible to contact a traveler if necessary, whether because of a family emergency in the United States or because of a crisis in the place the traveler is visiting. Did we mention- it's a FREE service provided by the State Department. Note that, in accordance with the Privacy Act, the Department of State may not release information about those registered without their express written authorization.

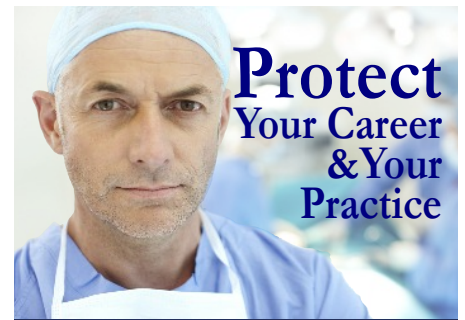
If your family needs to reach you because of an emergency, they can pass a message to you through the Office of Overseas Citizens Services, which can be contacted from within the United States at 1-888-407-4747 (toll free), and from overseas at 202-501-4444. The Office of Overseas Citizens Services will contact the U.S. Embassy or Consulate in the country in which you are traveling in order to pass the message to you.

For more tips on traveling abroad, visit travel.state.gov.

Did You Know?

The July 6, 2013 fatal incident at San Francisco International Airport involving Asiana Airlines Flight 214 represents the first fatal civil aviation accident in the United States since 2009.

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Refresh Your Trauma Skills (part four of a series)

As a civilian orthopaedic surgeon you may never need to manage more than one level-one trauma situation at a time or may never face a natural or man-made disaster. If, however, such a situation did occur, would you know how to most efficiently and effectively save lives with the limited resources at hand?

The Disaster Preparedness and Trauma Care Toolbox, comprised of published, peer-reviewed articles, course materials, newsletters, and an interactive, case-sharing blog, is a valuable resource that brings together the combined experience and knowledge of the Society of Military Orthopaedic Surgeons (SOMOS) membership. These surgeons are well-versed in the care of the combat wounded as it applies to humanitarian assistance and disaster relief. The *SOMOS Core Curriculum* and *Critical Skills List*, key components of the Toolbox, are derived from the objectives of the Combat Extremity Surgical Course, a program taught to military surgeons prior to deployment, and are presented in conjunction with the Wheelless' Online Textbook of Orthopaedics (www.wheelessonline.com/ortho/12821).

The following excerpt comes from the *SOMOS Core Curriculum* Extremity Soft Tissue Care and Amputation in an Austere Environment section, which details austere environment amputation procedures and soft tissue care.

IV. Extremity Fractures in an Austere Environment

Initial non-surgical and surgical management of extremity fractures

Initial assessment

Wound management

Debridement

Non-surgical management

Advantages

Principles

Splints and casts

Upper extremity

Lower extremity

Surgical management

Advantages of external fixation

Principles

Applying external fixation with limited resources and for stability for transport

Pin placement (includes video)

Femur

Knee (Fig 7)

Tibia



Figure 7. Distal femur may be bridged with additional bar-to-bar clamps.



Figure 12. Humerus external fixator.



Figure 13. Radiograph of same humerus external fixator.

Ankle

Humerus (Figs 12 & 13)

Elbow

Forearm

Care guidelines for upper and lower extremities fractures

Based on host nation's environment & available options for different patient groups

Must take into consideration availability (or unavailability) of follow-up care

To review the section in its entirety, visit: <http://www.wheelessonline.com/ortho/12793>

Disaster Response Course

Vail, Colorado – December 13-14, 2013

Developed by SOMOS, Co-Sponsored by AAOS, OTA and POSNA

Now in its third year, the Disaster Response Course (DRC) developed by the Society Military Orthopaedic Surgeons (SOMOS) and co-sponsored by the AAOS, Orthopaedic Trauma Association (OTA) and Pediatric Orthopaedic Society of North America (POSNA), is a full day of lectures and a half day of cadaveric skills lab born from the unique skills and experience of our military orthopaedic surgeons in the austere environments they have faced.

Why is it important to be registered in disaster response? When desperate situations created by disaster at home or abroad occur, registered disaster responders can connect more efficiently with volunteer organizations to act rapidly and deploy to help.

The Disaster Response Course offers hands-on lab training to address the application of orthopaedic care techniques critical to disaster-inflicted injuries and treating the wounded in austere environments where resources are scarce, electricity is rare, and injuries are traumatic. Vascular injuries, compartment syndrome and burns may be conditions not frequently treated by most surgeons



in their daily practice, but these injuries and more are commonly seen in disasters. In addition to addressing these hands-on clinical skills, this course covers important personal and team preparation, from working with the military and NGOs to cultural and ethical considerations.

The next course will be offered in Vail, Colorado at the Vail Marriot December 13-14, 2013. This training course is designed specifically to help prepare orthopaedic surgeons for the unique patient care requirements and personal challenges presented by the austere environments of a disaster. Orthopaedic care techniques critical to disaster-inflicted injuries and treating the wounded in austere environments are taught in a full day of lectures and a half day in a cadaveric skills lab.

For more information, email AAOS at disasterprep@aaos.org.

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Did You Know?

As of July 2013, the United States ranks #1 on the list of countries with the highest amount of fatal civil aviation accidents since 1945, amounting to 760 fatal civil aviation accidents and 10,505 lost lives.

Aviation Safety Network

Don't Overlook These Basics: 5 Ways Your Culture Can Improve Patient Satisfaction

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As healthcare professionals, we may lose sight of the standards that patients use to measure their level of satisfaction with a medical practice. It's time to take a step back and look at experience in the eyes of a patient.

Surprisingly, most patients gauge their level of satisfaction with a practice based on front-end office staff and the office facility. Even if you are the world's best physician, most patients will not differentiate between excellent, average and below-average care. Today's patients are more informed about healthcare than ever, but they typically do not know if you are using the newest device or procedure. Rather, patients measure satisfaction based on the overall experience of their visit. Luckily such factors involve practice culture, which can be influenced to create an overall positive patient experience. Here are five ways that culture can improve patient satisfaction.

1. Front desk staff. Your front-end office staff is truly the face and voice of your practice. They have the first interaction with new and potential patients; therefore for better or worse, they directly influence the first impression a patient has about your practice. Due to this, it is important for all front desk employees to greet patients warmly when they walk in or call the office. Remember that healthcare is a business and your patients are your customers. Like all industries, you should always strive for the highest level of customer service.

Poor customer service could cause a patient to go to another provider for care. For example, if an employee is rude over the phone when scheduling

an appointment, or if he/she does not greet a patient but just throws him a pile of paperwork to fill out, what does this show the patient? It shows that you do not care about customer service, so you do not care about them. If it appears that you do not care about the patient, what type of medical care can your patient expect to receive? Be prepared by also training your back office staff on how to greet and assist patients in the event that a front-end receptionist is on the phone or away from the front desk.

2. Office environment. The look and cleanliness of your office also influences your patient's level of satisfaction. Waiting rooms and treatment areas should be clean and comfortable. Sit in your waiting room to see it through the eyes of a patient. Make sure that magazines and office decor are up to date, that physician credentials and awards are displayed and relevant educational health brochures are available.

3. Wait time. No one likes to be kept waiting. Patient wait times are one of the most common complaints that patients have when it comes to practice satisfaction. Staying on schedule is important to help decrease wait time for a patient when scheduling an appointment, as well as how long they wait in the reception area and exam room before they are seen by a provider.

In reality, your office will sometimes fall behind schedule. If you are running late with appointments, make sure to keep your patients informed. Apologize for the delay and give an



estimated waiting time. Some practices now allow patients to leave the waiting room to run errands or handle phone calls. Other offices give out gift cards to patients who wait longer than 30 minutes to be seen by a provider. If you are running behind, implementing some of these ideas in your practice can save a patient from going to another provider due to a long wait time.



For more ways to improve patient satisfaction, see www.orthopreneurpub.com. Or, scan this Quick Code with your smart phone to take you directly to the complete article.

Response Teams *continued from page 1*

care providers dedicated to responding to the airplane tragedy,” said Weiss, who is also an associate professor of emergency medicine at the School of Medicine. “This included physicians, nurses, technicians, clerks, registration personnel, social workers, translators and other vital specialists from throughout Stanford and Packard Children’s hospitals.”

To evaluate and treat the influx of trauma patients from the crash, the hospitals mobilized seven trauma teams with fully trained surgeons and five perioperative teams. “We also implemented our rapid admission and rapid discharge plan, plus we set up an expansive and well-staffed triage area outside the emergency department to accommodate the surge of additional patients,” Weiss said.

Of the 55 patients evaluated and treated, 11 were admitted to Stanford Hospital and seven to Packard Children’s. “The injuries were of varying degrees,” said David Spain, MD. As chief of trauma and critical care surgery at Stanford, Spain was already on site when patients started arriving by ambulance and helicopter.

“Some of the injuries were life-threatening and serious,” added Spain, who is also a professor of surgery at the School of Medicine, noting that several surgeries were required.

Those involved in coordinating the hospitals’ response said it was obvious that the many hours devoted to emergency preparedness were worthwhile. “Everyone came together right away to deal with a rapidly evolving situation and do what they do best, which is save lives,” said Bond, who also leads the hospitals’ emergency preparation for other types of crises, such as power outages and earthquakes.

When Ann Weinacker, MD, chief of staff at Stanford Hospital & Clinics, reported to the command center shortly after the midday notification went out, it was already operational and fully staffed.

“What was remarkable was how calm and smoothly everything was running. It was incredibly well-organized,” she said.

She also did a walk-through of the emergency department and was amazed by what she saw. “The emergency department was calm,” said Weinacker, who is also a professor of critical care medicine at the medical school. “There was not a lot of drama. It was almost like business as usual — only there were many more people.



“The staff did a remarkable job of taking care of things,” she added. “I was just blown away with how well this worked and how expert everyone was in their job. Mostly we’re glad there was no greater loss of lives and no more severely injured people than there were. We all fear something really massive, where there are many, many more victims than there were.”

As treatment of the remaining hospitalized crash victims continues, Christy Sandborg, MD, vice president of medical affairs at Packard Children’s and a professor of pediatrics at the School of Medicine, reflected on the preparation and commitment of so many.

“The breadth of support in an emergency like this is impressive and heart-warming,” said Sandborg, who also acknowledged the many social workers and interpreters assisting the injured. “The planning, teamwork and quick thinking were truly inspiring, and it reflected a compassion and care that makes us all very, very proud.”

Lloyd Minor, MD, dean of the School of Medicine, commended the teams for the care they delivered. “Stanford Medicine’s faculty and staff have done an amazing job treating people from the crash,” Minor said. “As often happens in a crisis, many individuals stepped up and worked tirelessly to provide the best possible medical and social care to patients. But it was more than a willingness to help that was on display; it was the work of professionals trained to respond in an emergency situation. While this was the first time in decades that we activated our mass-casualty plan, staff took on their assigned roles with intelligence, compassion and creativity.”

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Did You Know?

Aside from 9/11, the 1979 crash of American Airlines Flight 191 in Chicago ranks as the deadliest civilian air disaster in US history, killing 273 people.

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Editorial: The Lowest Common Denominator and a Firm Grasp of the Obvious



Airplane crashes, earthquakes, acts of terror, and tornados destroy personal property, decimate public venues, and disrupt or end lives. In a stable democracy, such as the one in which we live, everything can be replaced except the lives and limbs. Disaster trained personnel, team preparation, and dedicated trauma surgeons are the last bastions and can convert disaster to major inconvenience. The recent airplane crash in San Francisco, the Boston Marathon bombing, and the Haitian earthquake demonstrate the value of training, preparation, and drills in saving lives and preserving limbs and the devastating consequences of being ill-prepared. The team is essential; the most skilled trauma surgeon is ineffective without a practiced and dedicated trauma team. However, it is a crucial mistake to forget that the final common denominator is the general, orthopaedic, and neurosurgi-

cal trauma surgeon. They alone can stabilize the patient, stop the bleeding, reduce and fix the fractures, amputate beyond-salvage limbs and decompress head and spine injuries. If the trauma surgeons are unprepared, the team will falter and potentially fail.

A disaster is a time for action, not reflection. Common sense, appropriate reasoning, and action must replace compulsive behavior. In times of disaster, a firm grasp of the obvious is crucial. Physicians must deal with events as they unfold; focus on what can be done in the context of the disaster and available resources; act decisively; and employ all training and resources automatically. Grasping the obvious requires that the disaster be evaluated in its entirety. The totality and severity of the injuries and the number of wounded must be comprehended and considered. We treat individuals; however, during a disaster, the total magnitude of events must be part of the care decision process. To save one is a blessing! But saving one at the cost of losing others — that may

compound the disaster.

It is important to determine if care will be within traditional standards or outside traditional standards of care. Triage, rapid assessment, and decisive actions are paramount to success. This requires preparation, practice, and performance — the three “P’s” of disaster care. If the trauma surgeon procrastinates, the patient that is before them may benefit, but countless others may suffer.

During and after a disaster, the optimum that can be or could have been done must be assessed. Too often, we laud ourselves on what we accomplished in isolation. In disasters, it is a paradox that the highest trained individual, the trauma physician, is the minimum common attribute essential for coordinated care. The trauma surgeon is the lowest common denominator, and we, as those surgeons, must deliver and lead from the emergency room and the operating theater.

L. Andrew Koman, MD