Perhaps one of the few positive legacies left in the wake of natural and man-made disasters suffered in the U.S. this last half decade, is our nation's first-hand understanding that disaster preparedness and management save lives. Medical professionals—those on the front lines as well as those who must deal with the long-term medical effects suffered by its victims—now have an opportunity to leverage this momentum to improve our services.

"As one of the largest acute burn treatment facilities in the Southeast, the Joseph M. Still Burn Center has a long history of answering disasters,” said Dr. Fred Mullins, Director of the Burn Center. "Over the years, we have learned to be more efficient, effective and successful in maximizing and amassing response resources.”

In the past five years alone, the Burn Center has responded to several of the country’s most devastating disasters—including the deadly train collision and subsequent chemical spill that occurred in Graniteville, South Carolina, on January 6, 2005. The collision caused a breach in one chlorine car, which resulted in the immediate release of an estimated 11,500 gallons of chlorine gas. Ultimately, nine persons died, at least 529 persons sought medical care, and within ten hours of the spill approximately 5,453 residents within a 1-mile radius of the site were forced to evacuate. One year later, area medical professionals are still seeing adverse health effects in the affected population.

Dr. Mullins received the initial call from local emergency management officials about two hours after the collision occurred. Shortly thereafter, an advance crew of Burn Center staff—Dr. Mullins, Dr. Bruce Friedman and Beretta Coffman, PA-C—arrived onsite and began setting up a triage tent. Hazardous Materials (HAZMAT) workers had already set up decontamination facilities to begin processing over one hundred people onsite or at work in the nearby textile mill at the time of the chlorine release.

A rapid epidemiologic assessment determined that, of the 511 persons examined in emergency departments after exposure to chlorine gas, 69 were hospitalized in seven area hospitals. One year later, an ongoing assessment is still under way to examine the public health impact associated with exposure to chlorine gas. Those exposed are being interviewed about their symptoms, the location and duration of the exposures, and demographic information necessary for monitoring any long-term health effects and psychosocial consequences.

"Our involvement at Graniteville showed us that we were far better prepared than one would expect us to be,” Dr. Friedman said. “Of course, much of our ability to respond was due to training we implemented as a result of 9/11.”

The Burn Center was one of many acute burn treatment facilities placed on high alert immediately following the terrorist attacks on the World Trade Center and Pentagon on September 11, 2001. Still in a state of alert later that winter,

(Continued on Page 2)
It is with great sadness and humility that it is I writing to you from this forum today. A visionary, an innovator, and my dear friend, Dr. Joseph M. Still, has passed. Viewing his life by the standards by which all men would hope to be judged—what they achieved, what they gave of themselves to the betterment of all—Joe Still was a great and generous man. But his works and deeds alone—and these were substantial, consistent and enduring—only tell the partial story of a man so exceptional, he literally touched thousands of lives in the most meaningful of ways possible: one-on-one.

It was while working with Dr. Still as a Physician's Assistant in the early 1990s that I became both impassioned and encouraged to go on to medical school to become a surgeon. And I was only one of many working with him over the years to benefit from his particular style of mentoring—one that encompassed not only an inexorable pursuit of clinical excellence and treatment solutions, but also unflinching dedication to personal growth. He had the uncanny ability to recognize our strengths before we found them and to understand our weaknesses before we discovered them. More importantly, he taught us that accepting our weaknesses is the greatest strength of all. Legacies like these are not the kind easily listed as bullet points on one's life-achievement portfolio.

While Dr. Still and I have been preparing for some time now for what we and all his team had come to know in our hearts was inevitable, I know I can never hope to fill his shoes. What I can promise, however, is that working together, we at the Burn Center will do all in our power to continue his work, expand on his vision and honor his memory. I bet he'll be watching.

R.F. Mullins, M.D.
Director of the Joseph M. Still Burn Center

(Continued from Page 1)

Answering Disaster: Burn Center Responds

the Burn Center responded to a deadly fire in Lima, Peru. The fire, initially started when someone set off fireworks in the Mesa Redonda shopping area in Lima’s historic center, spread rapidly. It consumed five blocks in five minutes, eventually killing nearly 300 people and wounding hundreds more, largely poor Peruvian workers at market to purchase fireworks in celebration of the upcoming New Year.

Upon hearing of the disaster, the Burn Center made contact with USAID (United States Agency for International Development) and immediately mobilized an eight-member team. Recognizing that Lima’s medical facilities were already overburdened, especially those devoted to acute burn care, the team amassed medical supplies and medications for the journey. The team worked non-stop for three days. Upon returning, it continued its mission by sending thousands of dollars in equipment donations—much in the form of donations made by contacting medical supply companies and distributors in the U.S. The Burn Center was later invited to join the Disaster Medical Assistance Team (DMAT), a component of the National Disaster Medical System.

More recently, the Burn Center responded to calls for aid in the aftermath of Hurricanes Francis and Katrina (see, Case Study: Two Faces of Katrina).

Beyond learning more about emergency preparedness and medical disaster management, Dr. Friedman said there is one lesson he has personally learned from these recent experiences.

"There are a lot of people that care. The key to giving your best in an emergency situation is to have a plan in place and know the exact parameters of your capabilities so you can operate seamlessly as a team," Dr. Friedman said.
Pre-Planning:
Hospitals in the vicinity of major chemical industries or major transportation routes should already be aware of the possibility of hazardous chemical accidents and it is imperative that they be prepared to effectively manage situations involving many persons contaminated with hazardous chemicals.

It is also important that emergency and critical care physicians be knowledgeable regarding the clinical manifestations and treatment of certain toxic chemicals that workers and other members of the population may be exposed to in their community.

An effective chemical accident response plan has the following characteristics:

1. It specifies who is in charge.
2. It describes the functions that must be performed.
3. It specifies who is in charge of each function.
4. It identifies resources available for response.
5. It facilitates coordination between responding parties.
6. It is known and understood by all potential responding personnel and government officials.

Onsite Medical Response
As with rescue personnel, first-responder medical staff should also be protected. This includes gowns, gloves, masks and occasionally self-contained breathing devices.

Ideally, patients contaminated with hazardous chemicals should be brought initially to a special, pre-designated decontamination suite containing a shower with a container to hold drainage water. Rescuers and victims should remove all clothing. This should be bagged and discarded safely. Under no circumstances should contaminated patients be brought into regular patient care areas due to the danger of contaminating other patients, medical staff and equipment.

Remember to irrigate eyes and skin for dermal decontamination and to give 100% oxygen or inhalation exposure.

(a) First priority patients include those with respiratory failure or insufficiency (e.g. airway obstruction secondary to laryngeal edema, impaired ventilation or oxygenation due to chemical pneumonitis).

(b) Second priority patients include those with circulatory failure or insufficiency (e.g. severe hemorrhage).

(c) Third priority patients include those with severe burns.

(d) Fourth priority patients include all other patients.

Triage serves as a valuable tool for determining priorities for offering:

Hospital Response
Hospital emergency departments must close off the air systems to rooms in which contaminated patients are taken so toxic products do not get into the ventilation system and circulate to other parts of the hospital. After rescuers and victims are thoroughly rinsed, they may leave the decontamination area and enter the emergency department proper for definitive care. Hospital personnel should leave their gowns, gloves, etc., in the contaminated area.

Patients reporting directly to emergency departments should be prioritized as above (see Onsite Response).

Unlike trauma, with chemical exposure a large number of casualties may have a single system injury, such as respiratory injury. If the emergency department receives large numbers of victims who all have an identical injury, the resources needed to treat that one injury may be depleted. For this reason, carefully selected medical equipment should be available and ready to use in the stores of the local EMS system, health departments or Civil Protection organizations if possible. Example of such equipment includes:

- Oxygen
- Inhalation devices (e.g. nasal prongs, face-masks/CPAP system)
- Selected antidotes
- Cardiotonics
- Circulatory stimulatory drugs
- Infusion solutions
- Infusion sets (i.e. needles, syringes)
- Dressings

* Edited by Philippe Bourdeau and Gareth Green @ 1989 SCOPE. Published by John Wiley & Sons Ltd

** Information excerpted in this article is related to medical professionals.

For complete chemical emergency response information visit:
"Dreams are the touchstone of our character."

Joseph M. Still Jr., M.D.
July 25, 1938 - February 1, 2006

Guest Column:
by Anna Seigler, Publisher, C.S.R.A. M.D. News

The following tribute appeared in the March/April 2006 issues of the Central Savannah River District (CSRA) M.D. News, a business and lifestyle magazine for physicians published bi-monthly. It is reprinted here, in full, with permission from the publisher.

Paradoxically it was his heart that failed him when it was so much of his heart he generously gave to others.

Joseph M. Still, the young man at 13 was always striving for excellence. As an Eagle Scout he received numerous honors and achievements leading to his nomination of the "Outstanding Young Men in America." A grand beginning to the "Guiding Light," as one nurse stated of Dr. Joseph M. Still; our "Guiding Light" we would all witness to shine so very brightly on others through his smile, encouraging words, and his hands to lift up those in need.

In 1973, Augusta was first graced with this "Outstanding Young Man" turned doctor working at Doctors Hospital (formerly known as Humana Hospital) as a board-certified physician by the American Board of Surgery and the American Board of Plastic Surgery.

It was in 1978 that Dr. Still saw the need to create a burn unit, when a burn patient was admitted to Doctors Hospital, and no other hospital would accept the referral because no facility was equipped to treat a burn patient. It was through this need, the need for a burn unit, that his vision grew, and in 1985, guided by his dreams and under his leadership, the Joseph M. Still Burn Center opened as a 25-bed, self-contained unit. Today, it has grown to the largest in the United States, to 58 beds.

His dreams and vision were only beginning with the 25-bed Joseph M. Still Burn Unit. He worked to touch every facet of a burn patient's life by offering a place for their out-of-town families to stay, by Dr. Still's founding of the Southeastern Firefighter's Burn Foundation, a nonprofit organization to provide housing and meals at no cost to the injured patient's family.

He never stopped dreaming, creating for his patients and their needs, when several years ago, Dr. Still formed the Research Consortium, Inc., a nonprofit research organization to help his burn patients with new drug studies and new skin developments to enhance their healing.

"Anybody can sympathize with the sufferings of a friend, but it requires a very fine nature to sympathize with a friend's success."

- Oscar Wilde

Requiring "a very fine nature to sympathize with a friend's success" is the very essence of the foundation Dr. Joseph M. Still Jr. stood upon. It was Joseph M. Still Jr., M.D., the husband, dad, grandfather, colleague and friend who lived his life to encourage. He used his great mind and hands to heal, but his heart, the true essence of his being, he so freely gave to others, delighting in their success. Lori Mabry, a burn survivor saved by Dr. Still, says, "He was not only my doctor, he became my friend, my..."
Dr. Robert Mullins, the doctor Joseph M. Still Jr., M.D., selected and groomed as his successor, shares, “Dr. Still taught me to accept my weaknesses, and through recognizing these weaknesses, it will only make me stronger.”

Another colleague, Dr. S.M. Abu Zaheed Hassan, laughs when he remembers, “Dr. Still was happier than I was when I received my green card. Dr. Still was a very noble man.”

Shirley Badke, a burn patient of Dr. Hermann Orlette under the Joseph M. Still Jr. Burn Center, shares a similar story to Lori Mabry, one of the many burn patients under Dr. Still’s care: “He was a great friend, and I loved him.” Shirley smiles when she shares the “opportunities” Dr. Joseph Still granted her. “On Susan Still’s second launch into space, Dr. Still chartered four buses for a four-day trip to Cape Canaveral, Florida to watch the launch, not just to watch the launch, but to sit in the sacred seat of the families of the astronauts. Another exciting opportunity was when he asked me to do him a favor by going with him to Boston for a morale booster trip for the employees of the enzyme lab where they grow skin. The lab, known world-wide for perfecting skin growth, takes a postage size amount of skin, the largest organ of our bodies, and grows skin for burn patients after a 21-day process.

Dr. Still acted like I was doing him a favor! It is because of Dr. Still and his staff that I have the strength and obligation to feel well, stay well, eat right and exercise with all the hours they put into saving my life; I want to make them proud of my progress.”

One of many of Dr. Still’s dreams, a place for people to stay while their family members are in the burn center, is named after Shirley, called the Shirley Badke Retreat. She proudly says, “He gave to everyone, he has left such a legacy.”

Dr. Still’s daughter, Susan Still-Kilrain, an astronaut and the second female to pilot the space shuttle, read her last letter to her daddy saying, “It was you, Daddy, who encouraged me to reach for the stars, literally.”

“Fame is a vapor, popularity an accident, riches take wing, and only character endures.”

- Horace Greeley (1811 - 1872) New York newspaper editor

It was on February 6, 2006, celebrating the life of Joseph M. Still Jr., M.D., a visionary, a pioneer for burn patients, that even the skies over Augusta seemed to be weeping, shedding tears over our great loss, the loss of a true hero, a man filled with love, the man who generously shared his love by implementing all of his kind deeds to help others, and through his love, gave so many a piece of his heart. It was Joseph M. Still Jr., M.D., who gave of his heart, and placed a precious part of himself in the hands of many, many people, and it will be those who have a piece of his heart who will keep his legacy living on forever.
Case Study: Two Faces of The Storm

While millions watched media coverage of Hurricane Katrina's devastation from afar, several nurses from the Burn Center experienced its aftermath firsthand, but from distinctly unique perspectives. Their personal reflections and insights not only illustrate the complexities of human nature when faced with extreme diversity, but a sampling of the practical rose when orchestrating disaster relief.

Lore's Story: Lore Rogers, RN, BSN, is no stranger to disasters. She served on the eight-member Burn Center team that had given medical aid following a deadly fire in Lima, Peru in 2002. She has also been on several medical volunteer missions to Honduras with her church. So when the call came just two weeks after Hurricane Katrina from the Burn Center's parent company, Healthcare Corporation of HCA, Lore and her fellow burn team associate, Pat Samonsky, RN, were ready and willing.

When she arrived at her assigned hospital, Southwest Medical Center in Lafayette, Louisiana, its usual 100-bed capacity had tripled. Most of the medical staff had been working 16-18 hour shifts for over two weeks straight, catching short naps on air mattresses strewn en masse on the lobby floor.

Assigned as night shift Emergency Department staff nurse, Lore began working within hours of her arrival.

"Most of the patients there were evacuees from New Orleans—those with long-term illnesses such as diabetes or high blood pressure. After two weeks without medication, proper monitoring or even proper food, most of them were physically very sick and emotionally exhausted," Lore said.

In fact, according to Lore, several of the patients she examined had suffered mild to fatal heart attacks due to extremely high levels of stress. She remembers a group of evacuees who sat and watched as an 85-year-old member of their family died of heart failure.

“They had just lost every material asset they owned. Their home was under water and would probably never be reclaimed due to its close proximity to what had once been beachfront property. They said they felt he had ‘died of a broken heart,’” Lore said.

All in all, Lore spent about eight days in Lafayette. While waiting on the bus to leave, Lore overheard one of the incoming nurse replacements complain about her shift assignment.

"I got right off the bus and told one of the people processing incoming recruits to tell that nurse to ‘stay on the bus or adjust your attitude! In a disaster situation, the last type of ‘expert' needed is the kind that knows everything about what's going wrong.” Lore said.

Lore's Message: "Be whatever you need to be to best facilitate the situation. Above all, be supportive, loving and helpful to both the disaster victims and the aid workers you have come to help."

Keith’s Story: Keith Donker, RN, also with the Burn Center, responded to Katrina’s devastation in a different capacity than that of medical professional. In addition to being a nurse, he is also an avid pilot and part-time charter bus driver.

When it became apparent that thousands of people had been forced to weather the storm in the New Orleans Convention Center and Superdome, Keith decided his skills would be best utilized in the area of evacuation aid.

About three days after the hurricane, he pointed a charter bus toward New Orleans with little more than a full tank of gas, assorted snacks, and steely determination. Around Meridian, Mississippi, the deserted roads became littered with tornado-tossed debris. By the time he reached La Place, Louisiana, he had reached the navigable end of the line.

"The military had set up a staging area in La Place. Here I'm thinking, Great, I can refuel, get some food and wait for further orders,” Keith said. “That didn't happen.”

At La Place, he along with another 1,000 other bus drivers, waited. And waited. And waited. Finally, they were allowed to proceed to New Orleans. Even though he had already experienced several days of general confusion and disorganization in La Place, he said he was totally unprepared for the chaos and unrest that unfolded during the next phase of his journey.

"Barring the first few loads from New Orleans, which were mostly the elderly and ill, we drivers were dealing with people who were angry, frustrated, and quite frankly, probably not of the highest moral integrity or intent prior to the hurricane," Keith said.

According to Keith, in New Orleans, the sounds of gunshot were never far off. Evacuation buses had to be protected by guards in riot gear and escorted by armed vehicles while en route. At one point, Keith said the staging and loading area near the Convention Center became so volatile, it was moved several blocks away to facilitate crowd control. In fact it wasn't unusual for Keith to find used syringes on the bus while cleaning it after evacuee drop-off. In one instance, he said a fellow driver was overtaken by a passenger insisting on a different radio station. Another passenger, coming to the driver's aid, wrestled with the unhappy listener, causing the entire bus to veer off the road and overturn. One person died in the incident.

In spite of his unpleasant and often harrowing experience, Keith stoically volunteered for evacuation aid several weeks later when Hurricane Rita made landfall just several hundred miles east of Katrina. And he says he would do it again. And again.

Keith’s Message: "As a nurse, it was sometimes hard to see people who were obviously ill knowing that in other circumstances I would be able to help them. But in the end, responding to an emergency or disaster is about fitting in with the skill-set(s) and expertise you can offer to do the greatest good. I knew transporting people from this devastation could impact more lives, so that's the know-how I chose to contribute."
1. Stop the burning process. Use Airway and C-Spine precautions. Treat according to CPR protocol.

2. Administer high flow 100% oxygen per mask. Intubate, if inhalation injury is present or suspected. Be prepared to suction airway and support ventilation.

3. Place two large bore IV's in a non-burned extremity if possible. Use femoral approach if central line place is only alternative. Calculate fluid rate using the Parkland Formula. Titrate Ringers Lactate based on urine output.
   \[4cc \times kg \text{ body weight} \times \% \text{ TSBA.}
   \]
   Give 1/2 of calculated volume in first 8 hours post-injury.

4. Place foley, discard initial urine in bladder.

5. Give all pain meds IV route. Use cool water on wounds; NO ICE. Provide tetanus toxoid IM if indicated.

6. NG tube if nausea/emetis, or if burn wounds are greater than 20% TBSA. Keep patient NPO.

7. Seek guidance of Burn Center surgeon for circumferential burns of chest or extremity.

8. Obtain patient history: how patient was burned, concomitant injuries, allergies, medical history, current meds, last meal, drug and/or alcohol history.


10. Elevate head and upper extremities as soon as practical. (Note: C-Spine should be cleared.)

For information on Patient Referral Criteria, visit our the Care Professionals section of our website at www.josephmstillburncenter.com

Excerpted from Guidelines for the Operations of Burn Units (p.p. 55-62), Resources for Optimal Care of the Injured Patient: 1999, Committee on Trauma, American College of Surgeons.
Outreach News: Burn Patient Touch By Angels

What began as a heartbreaking story for a family of Hurricane Katrina evacuees came to a happy ending recently with the help of some angel wings. 38 percent of her body. She and her mother, Peggy Saik, were flown to the Joseph M. Still Burn Center at Doctors Hospital where Brandy received immediate treatment for her burns. Daniel was admitted to a Mississippi hospital with minor injuries.

Upon release from the Burn Center, Brandy and her mother encountered a new problem: with no vehicle, limited funds, and lacking the personal identification required for a commercial flight home, the two women were unable to return to their family in Mississippi. That’s when some angels stepped in to help.

Emile Delegram, a volunteer with the Southeastern Firefighter’s Burn Foundation, heard of Brandy’s plight and arranged for an “Angel Flight.” Mother and daughter were reunited with their family shortly thereafter. Angel Flight of Georgia, Inc. is a non-profit organization providing free air transportation to and from treatment facilities for those with medical needs who are financially distressed or unable to travel on public transportation. Missions include routine treatment flights, compassionate care, and others referred by healthcare providers. The Southeastern Firefighters Burn Foundation is a non-profit organization that works in partnership with the Burn Center to provide support services to burn survivors and their families including living accommodations and meals.

The Joseph M. Still Burn Center at Doctors Hospital is a 58-bed burn center that admits over 2,000 patients annually from throughout the Southeast. A third of its patients are children. For more information about burn prevention or the Joseph M. Still Burn Center at Doctors Hospital, contact Beth Frits, 706.364.6400.

If you know of someone who would like to be added to the Burn Care Commentary mailing list, or to make suggestions for future topics, please call 706.364.6400, or email bethfrits@bellsouth.net.