To many it seems like just yesterday when Dr. Joseph M. Still presented his vision for a multi-disciplinary, world-class burn center to the administration of Doctors Hospital. With the support of local and corporate administrations and the idea that every patient would receive the highest quality of care, regardless of his or her ability to pay, the Joseph M. Still Burn Center opened in 1978 with one bed, two physicians, Drs. Joseph Still and Butch Garrison, and one nurse, Sue Nevil, who later became Mrs. Joseph Still.

As the Burn Center’s level of knowledge and expertise and its reputation for compassionate, excellent care grew, the unit soon expanded to 10 beds and in 1985 opened the self-contained facility of 25 beds. In 2005 the Burn Center opened a 34 bed step-down unit for a total of 59 beds.

Along with the rapid growth came significant changes in the way burn care was and is provided. While medical and technological advances inspired much of this change, Dr. Still and his staff pioneered several new procedures, including early excision and the use of cultured epithelial autografts.

According to Dr. Carlos Blanco, a world-renowned expert in burn care, physicians did not learn how to treat burn patients until the early 1920’s. “It used to be that a patient with a 20-30% surface area burn would die. They would go into shock and die. Once physicians began replacing fluids, patients would do better,” he said.

While burn patients’ chance of survival improved, the outlook for a severely burned patient was still bleak in the 1950’s and 60’s. According to Blanco, a person with a 45% surface area burn had a 50% chance of survival in 1967, and that patient remained in the hospital for approximately 45 days, one day for every percentage of surface area burned.

Currently, the national survival rate for all burns is 95%. And while more burn patients are surviving, their quality of life has also improved. Patients experience far fewer scars and deformities and report greater ease of returning to home, work or school.

(Continued on Back cover, see “Celebrating 30”)
When I came to the Joseph M. Still Burn Center as a physician’s assistant in 1990, I was impressed with the level of care and compassion that Dr. Joseph Still and Dr. Hermann Orlet provided to their patients. While a great deal has changed in the 30 years since Dr. Still founded the Burn Center, the quality of care and respect with which patients are treated has remained the same.

For over 30 years, the Joseph M. Still Burn Center has been dedicated to delivering the highest standard of care to burn patients and their families. What began as a two-bed unit in 1978 has since grown into a 59-bed center serving over 3,000 burn patients annually, making it one of the largest burn centers in the United States. The Burn Center treats 7.6% of the nation’s burn patients, 30% of which are children. The Center boasts a 97% survival rate for all burn patients with an average length of stay of .75 days per percent body surface burned.

These successes have not been accomplished by one person alone, but rather through the teamwork of more than 275 dedicated physicians, physician assistants, nurse practitioners, nurses, therapists and other staff who care for and support each burn patient. I want to take this opportunity to recognize the dedication and commitment of each and every staff member of the Burn Center, some of whom have been on staff since the Burn Center’s founding.

The Burn Center has continually been at the forefront of burn research and burn care and treatment. When a massive explosion occurred at the Imperial Sugar Company plant in Savannah, Georgia in February of 2008, 20 severely burned patients from that accident were admitted to the Burn Center.

When Disaster Strikes

Shortly after 7 pm on Thursday, February 7, 2008, the Joseph M. Still Burn Center at Doctors Hospital in Augusta, GA received a call from the Emergency Management Services Director in Savannah. A massive explosion had occurred at the Imperial Sugar Company in nearby Port Wentworth. It was an unprecedented industrial burn scenario, with dozens of victims in need of expert care. What happened next, including how incredible challenges facing both emergency workers and the Burn Center team were met, is told on the DVD which accompanies this issue of Burn Care Commentary. For additional copies of the documentary, please contact Beth Frits at 706.364.6400.

In the future, we will continue our efforts to educate the public about burns, to provide the highest quality of care to patients and their families, and to integrate the latest technologies into practice. With plans to expand to 75 beds in the next eighteen months, we will continue to be the Southeast’s regional center for burn care and a leader in burn research and treatment innovation. We look forward to more success ahead.

R. Fred Mullins, M.D.
Medical Director
Joseph M. Still Burn Center
While the causes of burns have not changed considerably over the last 30 years, the way burn care has been provided has changed drastically and is continuing to evolve. The major changes lie in burn treatments, surgical interventions, pain management, critical care, and the overall provision of care.

**EARLY 20th CENTURY:**
A patient with a 20-30% surface area burn would die.

**1967:**
A patient with a 45% surface area burn had a 50% chance of survival.

**2008:**
Joseph M. Still Burn Center boasts a 97% survival rate for patients with all burn types - higher than the 95% national average.

### Burn Treatments

Burn treatments include the dressings and products applied to wounds both before and after surgery. While the content of these products has not changed considerably over the last 30 years, the way in which they are delivered has changed.

### Then

Burn treatments in the past included:
- Silver nitrate dressings
- Hydrotherapy

A patient with a large burn was dressed in silver nitrate for three weeks and would be cleaned in a whirlpool tub one to two times a day and have his dressing changed each time. According to Dr. Hermann Orlet, one of the first surgeons hired by Still, it was "a painful ordeal." In three weeks time, if the patient were still alive and willing, he or she would be surgically debrided.

### Now

Hydrotherapy is still used today, but far less frequently. Today, silver remains the burn treatment of choice, but its delivery has changed. Silver is impregnated into dressings, which release silver into the wound over a seven-day period, thereby reducing frequency of dressing changes every four hours.

The products used today are made by a variety of different manufacturers and include:
- Silver gels and creams
- Silver foams
- Silver sprays
- Silver gauze and ointment
- A variety of dressings impregnated with silver

### In the Future

In the future, additional silver products will likely be developed. However, other metals such as copper and substances such as honey are being (Continued on Page 4)
investigated for their anti-microbial and healing properties. Companies are also integrating different types of fabrics into dressings to help control drainage from the wound and to provide more comfort to the patient. In the future, antibiotics or other substances may also be integrated into dressings.

Surgical Interventions

The most significant changes in burn care and treatment stem from surgical advances and the way in which surgery is now provided.

Then

Prior to the 1980’s, surgeons waited to operate on a burn patient until he or she had been dressed in silver nitrate for three weeks. In the early 1980’s, Doctors Still and Orlet began to experiment with early excision, meaning immediate removal of the dead skin and replacement with a temporary skin substitute such as pigskin or cadaver skin. Once the skin substitute wore off, it was replaced with the patient’s skin, which had been grafted or cultured in a laboratory. Considered revolutionary at the time, these procedures quickly became the standard of care.

Now

The surgical interventions used currently include:
- Early excision
- Application of temporary skin coverings
- Skin grafting
- Cultured epithelial autograft (CEA)

Depending on the type and size of the burn, temporary skin coverings such as Apligraf and Integra may be used in place of pigskin and cadaver skin. A bi-layer covering containing both the epidermis and the dermis, Apligraf helps the skin naturally regenerate itself. Integra helps build the dermal layer and create new blood vessels prior to skin grafting.

A commonly used technique for extensive burns at the Burn Center, CEA involves taking a postage-stamp sized piece of skin from the patient, culturing it in a laboratory and growing enough skin to cover a patient’s back from the sample in two to three weeks. Once the skin is ready, surgeons will transplant the CEA onto the prepared wound bed.

Early excision and the application of temporary skin coverings greatly reduce the number of infections a burn patient experiences, thereby improving his or her chances of survival.

In the Future

Stem cell research may shed light on how to develop ready-made, permanent skin coverings. Currently, there are a variety of skin substitutes from various sources. New sources and different modes of delivery are continually being investigated. Ultimately, the goal is to create a composite graft that contains both the dermal and epidermal layers of skin. This skin would be readily available and permanently applied. Physicians are also contemplating controversial procedures such as face transplants.

Pain Management

Management of burn pain has come a long way from the early days of patients screaming in agony during dressing changes to the current use of sophisticated medications and devices that minimize much of the pain.

Then

In the past, burn patients suffered from a great deal of pain during the healing and recovery process. Much of this pain stemmed from the lack of effective medications and devices. For example, patients endured:
- Painful dressing changes two or more times a day
- Beds that tilted upside down to minimize pressure
- Ineffective pain medications

Now

Today, a number of advances in medications and medical devices have significantly lessened patients’ pain and greatly improved the provider’s ability to manage the patient’s pain. Key advances include:
- Dressings that can be changed every three to seven days
- Beds that do not apply pressure to the body
- A combination of narcotic and sedative intravenous (IV) infusions

In the Future

The key to managing burn patients’ pain in the future lies in developing more effective, longer acting and less addictive pain medications.
Critical Care

A burn patient is one of the most challenging critical care patients because the burn is not just a skin injury, but can affect all organs of the body. One of the primary goals of providing critical care to a burn patient is to prevent organ failure as the body heals. Until there is coverage of the burn wound, the body continues to be predisposed to organ failure and sepsis.

Then

In the past, many burn patients died from multi-organ failure or sepsis. These deaths stemmed from a number of factors including:

- Poor modes of ventilation
- High incidences of infection
- Inability to adequately support organs in failure
- Insufficient means to monitor and evaluate critically ill patients
- Inadequate fluid resuscitation

Now

While many of the larger burn patients still experience multi-organ failure, survival rates and the quality of life have greatly improved. This can be attributed to the following:

- Sophisticated ability to monitor and treat patients in organ failure and sepsis
- Specialized protocols for fluid resuscitation
- Advanced antibiotic and inotropic medication
- Supplemental nutrition via duodenal tube

In his fourteen years at the Burn Center, Dr. Bruce Friedman has seen significant changes in the delivery of critical care for burn patients. “As our intensive care knowledge base expands, so does our ability to care for the patient. Most importantly, we have become better able to care for the extensive burn patients in critical condition,” he said.

In the Future

The critical care component of burn care will continue to evolve as new monitoring equipment and medications are developed. According to Friedman, antibiotic-resistant bacterial infections such as Methicillin Resistant Staphylococcus Aureus (MRSA) and necrotizing fasciitis (NF) are “no longer unique and are instead very common entities.” Currently, there are a number of antibiotics available to treat these infections, with more in development. Several challenges including multi-drug resistant infections and a lack of next generation antibiotics plague the future of critical care.

However, physicians are finding it more difficult to treat gram-negative organisms, due to a lack of effective antibiotics. “Some organisms are becoming more and more resistant to a point where they are not treatable. And there is very little help coming from the pharmaceutical industry due to government regulations that have damaged their ability to develop new antibiotics and treat patients. This has significant implications for the future,” said Friedman.

Provision of Care

From its inception, the Joseph M. Still Burn Center adopted a multi-disciplinary, team approach to burn care and treatment. This collaborative approach has not changed and will continue to define the way the Burn Center provides care.

What has changed, however, is the level of skill required to provide burn care. Burn physicians and nurses need more sophisticated training and skill sets than ever before. According to Simpson, “burn nursing was challenging then, but is even more challenging today. In the past, it was emotionally difficult. Today with advances in equipment and medication, you must have a higher level of skill and education.”

(Continued on Page 6)
Currently, there is a scarcity of physicians and nurses trained and willing to work in burn care. Additionally, there is a great need for creative training programs such as the Joseph M. Still Burn Center Critical Care Nursing Fellowship, which offers an innovative and successful approach to training new burn nurses. The Burn Center is working hard to train and mentor its young medical professionals with the hope that they can continue to carry out Still’s vision of providing high quality and compassionate care to each and every burn patient.

Burn Research:
The Past, Present & Future

Among the many traits that set the Joseph M. Still Burn Center apart is its emphasis on research and technology. Through its relationship with the Joseph M. Still Research Foundation, the Burn Center continually takes advantage of the latest technologies, products and devices. Created in 1988 by Dr. Still, the Joseph M. Still Research Foundation, Inc. is a non-profit, private organization dedicated to:

- Clinical trials evaluating drugs and medical devices in Phases II, III and IV to determine safety and efficacy
- Presentation of research data to professionals and medical organizations
- Dissemination of new knowledge in epidemiology and management of burn-associated injuries and wounds
- Networking with global research organizations

Under the leadership of Dr. Carlos Blanco, the Joseph M. Still Research Foundation has conducted numerous clinical trials evaluating drugs and medical devices, anti-infectives, and skin substitutes. For example, the Research Foundation was instrumental in helping various companies bring bio-engineered tissue and skin substitutes to market and participated in a multi-center post-marketing study for the only effective anti-sepsis drug currently available.

Currently, the Research Foundation is participating in studies investigating new:

- Silver dressings and products
- Pumps for negative pressure wound therapy
- Antibiotics for skin and soft tissue infection
- Anti-fungal drugs

In the future, burn research will continue to focus on identifying:

- Invasive infections that present a challenge to the management of burn patients
- Metals other than silver that will help prevent invasive infections
- Drugs for inhalation injury
- Alternative skin substitutes including permanent skin coverings
- New wound healing products

Given the number of patients cared for annually, the Burn Center will continue to be the center of choice for clinical trials and evaluation studies that will be used to improve the quality of treatment and care it delivers today and into the future.
The Burn Patient’s Perspective: The Past, Present & Future

Burned on his right hand and from the middle of his thighs down in a horrific automobile accident in March of 2007, Justin Scurry, twenty-one years old at the time, cannot say enough good things about the Joseph M. Still Burn Center. “My legs were burned to the bone. They were declared 3rd and 4th degree burns. The nurses and doctors at the Burn Center made sure I had everything I needed. They became my family,” said Scurry.

After spending approximately four months in the Burn Center and having his right leg and the digits of his right hand amputated, Scurry is now walking, fishing, and hunting. He spends time publicly speaking about his ordeal to students in his hometown of Columbia, South Carolina.

Had Scurry been burned twenty or thirty years ago, he would not have the active lifestyle he does today. According to Beretta Coffman, the lead physician’s assistant at the Burn Center, Scurry would have had both legs amputated if the accident had occurred twenty years ago. “Justin had an open knee joint. Twenty years ago, a below-the-knee amputation would not have been possible because knee replacement was not commonplace like it is today,” she said.

Twenty years ago Scurry’s legs may have been amputated due to a lack of effective treatment for deep tissue and bone infections. Today, highly effective antibiotics are available to better treat these infections. While Scurry’s length of stay would have been similar twenty years ago, his rehabilitation period (learning how to live without both legs) would have been much longer. Finally, the prosthetics he would have received twenty years ago would not have allowed him the mobility and traction he has today.

In the future, patients like Scurry may be able to replace their missing limbs with those grown in a laboratory. The current cloning of skin, bone and cartilage holds great promise for the future of burn care and treatment.

In the meantime, Scurry is determined to continue his active lifestyle. “Quitting is not in my vocabulary. I thank God for the Burn Center and the people there. They were always looking out for me and they’re the reason that I’m here today,” he said.

“Quitting is not in my vocabulary. I thank God for the Burn Center and the people there. They were always looking out for me and they’re the reason that I’m here today.”
— Justin Scurry, Joseph M. Still Burn Center patient

The Burn Center has always believed that caring for patients includes helping family members cope. To that end, the Southeastern Firefighters Burn Foundation, founded in 1988 by Dr. Joseph M. Still, has been offering support to burn patients and their families for twenty years.

While the Foundation began by providing patients with much needed assistance with prescriptions, anti-scarring garments and transportation to follow-up medical visits, it soon grew to include housing and meals for patients’ families. In 1998, the Shirley Badke retreat, named for a local burn survivor, was completed, offering a home away from home for family members. In 2002, a new and expanded facility, the Jeffrey Vaden Chavis House, was built and is currently able to house up to 50 guests. By providing low-cost and free housing, family members can remain an active part of their loved one’s recovery.

To learn more about the Burn Foundation and its support of burn survivors and families or to make a donation, go to www.theburncenter.org.
The aggressive surgical interventions and effective medical products used today have contributed to these higher survival rates and improved quality of life according to Dr. Fred Mullins, Medical Director of the Burn Center. "Burn care has improved greatly from both a surgical standpoint and the medical aspect. The cultured epithelial autographs have improved care and survival greatly.

The new silver dressings allow us to move patients out of the hospital more quickly and enables them to be more comfortable and mobile. The new antibiotics developed have been very important for survival," he said.

Tanya Simpson, a registered nurse and the Assistant Vice President for Burn Services, agrees. "There’s been a huge improvement in the care we once provided. There is a greater survival rate and better functional and cosmetic outcomes, which help with the psychosocial issues and re-entry into society,” she said.

Charles Gertler, a physician assistant at the Burn Center since 1982, believes the future holds great promise for burn care. "With the advent of new products, we will see continued improvement and better results concerning scarring and physical and occupational therapy. Patients will be able to cope better with the emotional issues and be more fully functioning so they can go back to school or work,” he said.

Dr. Bruce Friedman, a critical care intensivist, foresees significant breakthroughs in molecular biology that will change the way burn centers take care of patients. “There will be more improved monitoring equipment and technology will be more readily available, thereby improving the management of patients,” he said.

With plans to expand to 75 beds in the next 18 months, the Joseph M. Still Burn Center will be among the largest burn centers in the world. The Burn Center will continue to be the Southeast’s leading expert in burn care, drawing patients from Georgia, South Carolina, North Carolina, Tennessee, Mississippi, Alabama and Florida.

According to Shayne George, President and Chief Executive Officer of Doctors Hospital, the Burn Center is now the preferred provider of burn care in Georgia and throughout the southeast. George credits Mullins for this recent growth. "Dr. Mullins has done a fantastic job of growing services and creating awareness. One of the biggest successes is the collaboration between the physicians and hospital staff. The Burn Center uses a multidisciplinary approach and the care is well coordinated. The bond between the patients, the patients’ families and our caregivers is strong," he said.

As the Burn Center turns 30 and looks ahead to the future, Mullins and his staff intend to continue leading the way in burn care and treatment. To meet the growing need for follow-up care, Joseph M. Still Burn Centers, Inc., an independent practice led by Mullins, recently opened outpatient burn clinics in Atlanta, GA, Charleston, SC and Jackson, MS. These clinics allow patients to receive the specialized care they need at a clinic in or nearer to their hometown, saving patients valuable time and money.

In addition to providing the finest medical care, burn care is a healing of the spirit. The multi-disciplinary team of providers at the Joseph M. Still Burn Center will continue to provide the highest quality care with the greatest level of compassion and respect today and into the future.

"We will continue our efforts to educate the public about burns, to provide the highest quality of care to patients and their families, and to integrate the latest technologies into practice."

– Fred Mullins, M.D., Joseph M. Still Burn Center