THE SURGEON stood before the operating room doors at Shriners Hospital for Children–Galveston as he described the restorative surgery underway. Dr. David N. Herndon, the hospital’s chief of staff, said the patient, a woman from San Luis Potosi, Mexico, was admitted two months earlier with burns to half of her body. The surgery would release her left hand of its scar tissue, said Herndon, who also oversees The University of Texas Medical Branch at Galveston Blocker Burn Unit. “After she arrived here,” Herndon said, “we were able to cover her wounds really rapidly by modern surgical techniques we developed here at Shriners.”

A Galveston woman, with electrical burns that covered half her body and left her with one arm, was in another operating room for surgery to restore the contour of the skin on her back.

Herndon poked his head into yet another operating room where doctors worked on an 18-year-old who suffered burns to 70 percent of his body. “When are you going to be able to come into room two?,” Herndon asked one of his colleagues. “Quickly now, quickly now.” he said.

He had good reason to press. Herndon had four more surgeries scheduled that day and five the next. It’s a typical pace for a man who splits his time between Shriners and the UT Medical Branch – Galveston, where, since 1989, he has held the Jesse H. Jones Distinguished Chair in Burn Surgery.

Herndon next marched briskly along the skywalk that connects the hospitals. Once at UTMB’s burn unit, in the midst of a major renovation, Herndon checked on a patient who needed skin grafts on her head and arms.

Patients with burns to almost all of their bodies have a 50 percent chance of survival thanks to Herndon’s innovative care, spelled out in his authoritative book Total Burn Care, widely used as a how-to manual.

Herndon explained that speed is the key in burn treatment. His team pioneered the early removal of all burned skin and immediate replacement with skin from cadavers or the patients themselves. The practice lessens the chance of infection.

At the Galveston hospitals, he also developed the use of air beds for burn victims, use of ketamine to alleviate the need for a breathing tube and the administration of blood pressure medicine to reduce stress levels and lessen the likelihood of heart attacks.

These are among the practices Herndon passes along to the fellows he trains. The Jesse H. Jones Distinguished Chair in Burn Surgery, established through the generosity of Houston Endowment, has been instrumental in Dr. Herndon’s efforts to prepare tomorrow’s leaders in the field. About 200 of his former fellows are now improving upon Herndon’s teachings in their own medical practices, research and other fields around the globe. He now has 12 fellows under his wing.

Herndon remains optimistic that more discoveries lay ahead. “Our understanding of the human response to injury has been so greatly expanded,” he said. “This is a much more exciting time.”