ARKLAND Memorial Hospital, Dallas, treats an average of 272 emergency cases a day. It is adjacent to and is the major teaching hospital for the University of Texas Southwestern Medical School. It is staffed by the faculty of the medical school and has 150 interns and residents in all medical specialties. It is a modern hospital, well equipped, one of which any community might be proud. Today—and for none of these reasons—Parkland has a new reputation all over the world, and historians are typing its name into manuscripts that will be textbooks for generations to come. This has happened because three particular gunshot victims were carried there out of the bright November sunlight, two to die and the third to leave by wheel chair almost two weeks later, his arm in a sling.

Many Texas physicians have visited Parkland hospital; many have worked or trained there. Members of the Parkland staff are their acquaintances and friends. Many Texas physicians know personally the surviving gunshot victim, Gov. John Connally; some personally knew President John F. Kennedy who died in Trauma Room 1; perhaps a few even knew Lee Harvey Oswald, the man

charged by Dallas authorities with the assassination of the President and who was himself shot two days later.

The assassination of President Kennedy, the wounding of Governor Connally, and the fatal shooting of Oswald are events of profound import to people everywhere, but they have special, personal meaning for Texans. So because a Texas hospital and Texas physicians figured prominently in this tragedy, the *Texas State Journal of Medicine* records for its readers of the medical profession a full account of treatment given a never-to-be-forgotten trio.

When President John F. Kennedy in a moribund condition entered Parkland on Nov. 22, there was never opportunity for medical history taking. Such a history, had it been taken, would have shown that the patient "had survived several illnesses, the dangers of war, the rigor of exposure in icy waters, and . . . had waged grueling electoral campaigns in spite of a serious and painful back injury."*

Parkland records show that the President arrived at the emergency room sometime after 12:30 p.m. (There is conflict as to the exact moment.) At 1 p.m. Dr. William Kemp Clark, associate professor and chairman of the Division of Neurosurgery of the University of Texas Southwestern Medical School, declared him dead. During the interim of less than 30 minutes, continuous resuscitative efforts were made.

Later that day, several attending physicians filed reports. The following identifies these physicians and gives the gist of their reports:

Charles J. Carrico.—Dr. Carrico was the first physician to see the President. A 1961 graduate of Southwestern Medical School, he is 28 and a resident in surgery at Parkland.

He reported that when the patient entered the emergency room on an ambulance carriage he had slow agonal respiratory efforts and occasional cardiac beats detectable by auscultation. Two external wounds were noted; one a small wound of the anterior neck in the lower one third. The other wound had caused avulsion of the occipitoparietal calvarium and shredded brain tissue was present with profuse oozing. No pulse or blood pressure were present. Pupils were bilaterally dilated and fixed. A cuffed endotracheal tube was inserted through the laryngoscope. A ragged wound of the trachea was seen immediately below the larynx. The tube was advanced past the laceration and the cuff inflated. Respiration was instituted using a respirator assistor on automatic cycling. Concurrently, an intravenous infusion of lactated Ringer's solution was begun via catheter placed in the right leg. Blood was drawn for typing and crossmatching. Type O Rh negative blood was obtained immediately.

In view of the tracheal injury and diminished breath sounds in the right chest, tracheostomy was performed by Dr. Malcolm O. Perry and bilateral chest tubes inserted. A second intravenous infusion was begun in the left arm. In addition, Dr. M. T. Jenkins began respiration with the anesthesia machine, cardiac monitor and stimulator attached. Solu-Cortef (300 mg.) was given intravenously. Despite those measures, blood

*Profile in Courage, *MD* Medical Newsmagazine 7:91 (Dec.) 1963.

Editor's Note.—One of the purposes of the *Texas State Journal of Medicine* has been to serve as a historical record of events affecting Texas medicine.

Although the advisors and editors of the *Journal* believe that this record of the medical treatment of President John F. Kennedy, Gov. John Connally, and Lee Harvey Oswald is also of current interest, it is their sincere belief that the historical importance of the record is of even greater value.

The record of medical treatment of three earlier assassinated Presidents of the United States (page 74) undoubtedly has provided students of gunshot wounds a significant record of the treatment available during the particular points in history at which these men died. A review of their treatment may also have aided in the search for better treatment of other victims.

There were several forms in which this record could have been carried, some of which might have provided easier reading, usually an important goal of this *Journal*. The advisors to the *Journal* considered providing a composite review or a reconstructed scene of the events in the operating rooms at Parkland, but to some extent other publications have done this and it was felt that the impressions of the individual participating physicians, written in a period of strain, without consideration for rhetoric, was perhaps of greatest value to medical history.

Therefore, the *Journal* presents the reports showing the separate views of the physicians in charge to let the reader see for himself part of history as it was recorded a few hours after the events of Nov. 22 and Nov. 24. Like the various aspects of the four gospels, as reported by Matthew, Mark, Luke, and John, it is hoped that this form will provide an insight not possible in a more concise, composite presentation.

pressure never returned. Only brief electrocardiographic evidence of cardiac activity was obtained.

Malcolm O. Perry.—Dr. Perry is an assistant professor of surgery at Southwestern Medical School from which he received his degree in 1955. He is 34 years old and was certified by the American Board of Surgery in 1963.

At the time of initial examination of the President, Dr. Perry has stated, the patient was noted to be nonresponsive. His eyes were deviated and the pupils dilated. A considerable quantity of blood was noted on the patient, the carriage, and the floor. A small wound was noted in the midline of the neck, in the lower third anteriorly. It was exuding blood slowly. A large wound of the right posterior cranium was noted, exposing severely lacerated brain. Brain tissue was noted in the blood at the head of the carriage.

Pulse or heart beat were not detectable, but slow spasmodic respiration was noted. An endotracheal tube was in place and respiration was being controlled. An intravenous infusion was being placed in the leg. While additional venesections were done to administer fluids and blood, a tracheostomy was effected. A right lateral injury to the trachea was noted. The cuffed tracheostomy tube was put in place as the endotracheal tube was withdrawn and respirations continued. Closed chest cardiac massage was instituted after placement of sealed-drainage chest tubes, but without benefit. When electrocardiogram evaluation revealed that no detectable electrical activity existed in the heart, resuscitative attempts were abandoned. The team of physicians determined that the patient had expired.

Charles R. Baxter.—Dr. Baxter is an assistant professor of surgery at Southwestern Medical School where he first arrived as a medical student in 1950. Except for two years away in the Army he has been at Southwestern and Parkland ever since, moving up from student to intern to resident to faculty member. He is 34 and was certified by the American Board of Surgery in 1963.

Recalling his attendance to President Kennedy, he says he learned at approximately 12:35 that the President was on the way to the emergency room and that he had been shot. When Dr. Baxter arrived in the emergency room, he found an endotracheal tube

in place and respirations being assisted. A left chest tube was being inserted and cutdowns were functioning in one leg and in the left arm. The President had a wound in the midline of the neck. On first observation of the other wounds, portions of the right temporal and occipital bones were missing and some of the brain was lying on the table. The rest of the brain was extensively macerated and contused. The pupils were fixed and deviated laterally and were dilated. No pulse was detectable and ineffectual respirations were being assisted. A tracheostomy was performed by Dr. Perry and Dr. Baxter and a chest tube was inserted into the right chest (second interspace anteriorly). Meanwhile one pint of O negative blood was administered without response. When all of these measures were complete, no heart beat could be detected. Closed chest massage was performed until a cardioscope could be attached. Brief cardiac activity was obtained followed by no activity. Due to the extensive and irreparable brain damage which existed and since there were no signs of life, no further attempts were made at resuscitation.

Robert N. McClelland.—Dr. McClelland, 34, assistant professor of surgery at Southwestern Medical School, is a graduate of the University of Texas Medical Branch in Galveston. He has served with the Air Force in Germany and was certified by the American Board of Surgery in 1963.

Regarding the assassination of President Kennedy, Dr. McClelland says that at approximately 12:35 p.m. he was called from the second floor of the hospital to the emergency room. When he arrived, President Kennedy was being attended by Drs. Perry, Baxter, Carrico, and Ronald Jones, chief resident in surgery. The President was at that time comatose from a massive gunshot wound of the head with a fragment wound of the trachea. An endotracheal tube had been placed and assisted respiration started by Dr. Carrico who was on duty in the emergency room when the President arrived. Drs. Perry, Baxter, and McClelland performed a tracheostomy for respiratory distress and tracheal injury. Dr. Jones and Dr. Paul Peters, assistant professor of surgery, inserted bilateral anterior chest tubes for pneumothoraces secondary to the tracheomediastinal injury. Dr. Jones and assistants had started three cutdowns, giving blood and fluids immediately. In spite of this, the President was pronounced dead at 1:00 p.m. by Dr. Clark, the neurosurgeon, who arrived immediately after Dr. McClelland. The cause of death, according to Dr. McClelland was the massive head and brain injury from a gunshot wound of the right side of the head. The President was pronounced dead after external cardiac massage failed and electrocardiographic activity was gone.

Fouad A. Bashour.—Dr. Bashour received his medical education at the University of Beirut School of Medicine in Lebanon. He is 39 and an associate professor of medicine in cardiology at Southwestern Medical School.

At 12:50 p.m. Dr. Bashour was called from the first floor of the hospital and told that President Kennedy had been shot. He and Dr. Donald Seldin, professor and chairman of the Department of Internal Medicine, went to the emergency room. Upon examination, they found that the President had no pulsations, no heart beats, no blood pressure. The oscilloscope showed a complete standstill. The President was declared dead at 1:00 p.m.

William Kemp Clark.—Dr. Clark is associate professor and chairman of the Division of Neurosurgery at Southwestern Medical School. The 38-year-old physician has done research on head injuries and has been at Southwestern since 1956.

He reports this account of the President's treatment:

The President arrived at the emergency room entrance in the back seat of his limousine. Governor Connally of Texas was also in this car. The first physician to see the President was Dr. Carrico.

Dr. Carrico noted the President to have slow, agonal respiratory efforts. He could hear a heart beat but found no pulse or blood pressure. Two external wounds, one in the lower third of the anterior neck, the other in the occipital region of the skull, were noted. Through the head wound, blood and brain were extruding. Dr. Carrico inserted a cuffed endotracheal tube and while doing so, he noted a ragged wound of the trachea immediately below the larynx.

At this time, Drs. Perry, Baxter, and Jones arrived. Immediately thereafter, Dr. Jenkins and Drs. A. H. Giesecke, Jr., and Jackie H. Hunt, two other staff anesthesiologists, arrived. The endotracheal tube had been connected to a respirator to assist the President's breathing. An anesthesia machine was substituted for this by Dr. Jen-

kins. Only 100 per cent oxygen was administered.

A cutdown was performed in the right ankle, and a polyethylene catheter inserted in the vein. An infusion of lactated Ringer's solution was begun. Blood was drawn for typing and crossmatching, but unmatched type O Rh negative blood was immediately obtained and begun. Hydrocortisone (300 mg.) was added to the intravenous fluids.

Dr. McClelland arrived to help in the President's care. Drs. Perry, Baxter, and McClelland did a tracheostomy. Considerable quantities of blood were present in the President's oral pharynx. At this time, Dr. Peters and Dr. Clark arrived.

Dr. Clark noted that the President had bled profusely from the back of the head. There was a large (3 by 3 cm.) amount of cerebral tissue present on the cart. There was a smaller amount of cerebellar tissue present also.

The tracheostomy was completed and the endotracheal tube was withdrawn. Suction was used to remove blood in the oral pharynx. A nasogastric tube was passed into the stomach. Because of the likelihood of mediastinal injury, anterior chest tubes were placed in both pleural spaces. These were connected to sealed underwater drainage.

Neurological examination revealed the President's pupils to be widely dilated and fixed to light. His eyes were divergent, being deviated outward; a skew deviation from the horizontal was present. No deep tendon reflexes or spontaneous movements were found.

When Dr. Clark noted that there was no carotid pulse, he began closed chest massage. A pulse was obtained at the carotid and femoral levels.

Dr. Perry then took over the cardiac massage so that Dr. Clark could evaluate the head wound.

There was a large wound beginning in the right occiput extending into the parietal region. Much of the right posterior skull, at brief examination, appeared gone. The previously described extruding brain was present. Profuse bleeding had occurred and 1500 cc. of blood was estimated to be on the drapes and floor of the emergency operating room. Both cerebral and cerebellar tissue were extruding from the wound.

By this time an electrocardiograph was hooked up. There was brief electrical activity of the heart which soon stopped.

The President was pronounced dead at 1:00 p.m. by Dr. Clark.

M. T. Jenkins.—Dr. Jenkins is professor and chairman of the Department of Anesthesiology at Southwestern Medical School. He is 46, a graduate of the University of Texas Medical Branch in Galveston, and was certified by the American Board of Anesthesiology in 1952. During World War II he served in the Navy as a lieutenant commander.

When Dr. Jenkins was notified that the President was being brought to the emergency room at Parkland, he dispatched Drs. Giesecke and Hunt with an anesthesia machine and resuscitative equipment to the major surgical emergency room area. He ran downstairs to find upon his arrival in the emergency operating room that Dr. Carrico had begun resuscitative efforts by introducing an orotracheal tube, connecting it for controlled ventilation to a Bennett intermittent positive pressure breathing apparatus. Drs. Baxter, Perry, and McClelland arrived at the same time and began a tracheostomy and started the insertion of a right chest tube, since there was also obvious tracheal and chest damage. Drs. Peters and Clark arrived simultaneously and immediately thereafter assisted respectively with the insertion of the right chest tube and with manual closed chest cardiac compression to assure circulation. Dr. Jenkins believes it evidence of the clear thinking of the resuscitative team that the patient received 300 mg. hydrocortisone intravenously in the first few minutes.

For better control of artificial ventilation, Dr. Jenkins exchanged the intermittent positive pressure breathing apparatus for an anesthesia machine and continued artificial ventilation. Dr. Gene Akin, a resident in anesthesiology, and Dr. Giesecke connected a cardioscope to determine cardiac activity.

During the progress of these activities, the emergency room cart was elevated at the feet in order to provide a Trendelenburg position, a venous cutdown was performed on the right saphenous vein, and additional fluids were begun in a vein in the left forearm while blood was ordered from the blood bank. All of these activities were completed by approximately 12:50 at which time external cardiac massage was still being carried out effectively by Dr. Clark as judged

by a palpable peripheral pulse. Despite these measures there was only brief electrocardiographic evidence of cardiac activity.

These described resuscitative activities were indicated as of first importance, and after they were carried out, attention was turned to other evidences of injury. There was a great laceration on the right side of the head (temporal and occipital), causing a great defect in the skull plate so that there was herniation and laceration of great areas of the brain, even to the extent that part of the right cerebellum had protruded from the wound. There were also fragmented sections of brain on the drapes of the emergency room cart. With the institution of adequate cardiac compression, there was a great flow of blood from the cranial cavity, indicating that there was much vascular damage as well as brain tissue damage. President Kennedy was pronounced dead at 1 p.m.

It is Dr. Jenkins' personal feeling that all methods of resuscitation were instituted expeditiously and efficiently. However, he says, the cranial and intracranial damage was of such magnitude as to cause irreversible damage.

John Connally

The health of the Governor of Texas has been news on at least two occasions before his serious injury on Nov. 22. As Secretary of the Navy, while on a visit to Austin, John Connally was accidentally stabbed in the eye by a bayonet as he reviewed ROTC troops; and shortly after his inauguration as Governor, he underwent surgery for hernia.

When he arrived with the President at Parkland's emergency entrance, the Governor had been wounded by a bullet that had pierced his chest, arm, and thigh. In a recent interview with editors of the *Journal*, he recalled raising himself up in the back seat of the limousine but was unable to raise himself onto the stretcher. Mrs. Connally, the Governor's wife, also present at the interview, explained that her husband, still conscious, was then aided in getting onto the stretcher. He was then taken into Trauma Room 2, across the hall from Trauma Room 1 where the President had been carried.

Soon afterwards he was taken to an operating room. Later, four Parkland physicians described the treatment given the Governor.

Text of Note to Hospital From Governor

November 30, 1963

TO THE STAFF AND PERSONNEL
OF PARKLAND HOSPITAL:

Words cannot adequately express my personal appreciation for the care, treatment and supreme thoughtfulness my family and I have received from all of you.

These have been trying days for everyone connected with this great hospital, but you have risen to the occasion with a dedication to duty which merits the highest confidence and praise. Parkland has proved again that it is one of the finest institutions of its kind in the world.

I will probably not have the opportunity to thank each of you individually, so I hope you will accept this message as an expression of my heartfelt gratitude. I speak also for Mrs. Connally, the children, other members of my family, my staff and the officers of the Department of Public Safety who have received so many courtesies from Parkland employees. We will always remember your help and consideration.

Sincerely,
(Signed)
JOHN CONNALLY

Robert R. Shaw.—Dr. Shaw, professor of thoracic surgery at Southwestern Medical School, returned to Dallas last summer after spending a year and a half in Kabul, Afghanistan, as head of the Medico team there. A graduate of the University of Michigan Medical School at Ann Arbor, he is 58. He was certified by The Board of Thoracic Surgery in 1948, and has practiced in Dallas since 1938.

Dr. Shaw performed a thoracotomy, removed rib fragments, and debrided the chest wound. Diagnosis of the chest condition was gunshot wound of the chest with comminuted fracture of the fifth rib, laceration of the middle lobe, and hematoma of the lower lobe of the right lung.

The Governor was brought to the operating room from the emergency operating room where a sucking wound of the right chest had been partially controlled by an occlusive dressing supported by manual pressure. A tube had been placed through the second interspace of the right chest in the mid-clavicular line and connected to a water-seal bottle to evacuate the hemopneumothorax. An intravenous infusion of lactated Ringer's solution had already been started. As soon as the patient was positioned on the operating table the anesthesia was induced by Dr. Giesecke and an endotracheal tube was put in place.

As soon as it was possible to control respiration with positive pressure, the occlu-