

Efforts to Save Lowenstein Typify Emergency Service

By LAWRENCE K. ALTMAN

For five and a half hours Friday night, a team of 30 doctors and other medical workers at St. Clare's Hospital gave Alard K. Lowenstein 29 pints of blood as they tried to close the wounds in his heart, lungs and stomach made by bullets fired while he was at his Rockefeller Center law office. Mr. Lowenstein's heart stopped five times during the operation, but each time the surgeons were able to start it again.

However, 30 minutes after the operation, while the 51-year-old former United States Representative was in a recovery room, his heart stopped again. This time it did not respond to medical treatment.

The battle to save Mr. Lowenstein's life was typical of efforts that many hospitals make. Dr. William F. Mitty Jr., the hospital's chief surgeon, who supervised the operation, said in an interview yesterday that Mr. Lowenstein's was "just one of dozens of gunshot wound cases treated each month."

Within the last year, he said, he has seen a dramatic shift from knifings to gunshots in the types of wound cases treated at the hospital, which is at 415 West 51st Street.

Alerts Are 'Red Codes'

St. Clare's Hospital, like other medical centers, has organized a well-drilled team that includes a wide variety of specialists who respond to emergency alerts called "red codes."

The efforts in Mr. Lowenstein's case, as in others, also involved community resources such as paramedical workers, ambulance services and blood banks.

The St. Clare's trauma team is typical of those at other hospitals in New York and elsewhere in the country that have been organized to treat injuries suffered in muggings, robberies, assaults and other crimes, as well as serious accidents. Hospitals such as St. Clare's keep one operating room free at all times ready to handle a trauma case.

At 4:25 P.M., when the red code was sounded for Mr. Lowenstein's arrival at St. Clare's, his surgeons were listening to a lecture on transplantation surgery at a weekly staff conference in a separate building.

'Unidentified White Male'

Three doctors who were in training as surgical residents ran to the emergency room, arriving there about three minutes after Mr. Lowenstein, who was known to them only as "unidentified white male."

He was bleeding badly and was unconscious. The doctors determined he was alive by testing the reflex responses of his eyes to light.

Shortly after Mr. Lowenstein's arrival at the hospital, Dr. Sammy Amir, a house staff doctor who worked in the emergency room, gave a thumbs-down sign to newsmen who had arrived to cover the event. However, the health team attend-

ing to the wounded man continued its well-coordinated efforts without breaking pace.

A doctor opened Mr. Lowenstein's mouth to put a breathing tube into his windpipe to prevent him from suffocating from his bleeding.

Tubes Are Connected

Other doctors used scalpels to open veins in his legs and in his right arm. His left arm had been broken by the shooting.

The doctors inserted tubes to help restore the lost blood and essential body fluids. Drugs to help maintain blood pressure and to stimulate the heart were added to the bottles of saline solution that flowed into Mr. Lowenstein's body.

His heart stopped, but the doctors gave an electric shock to start it again.

The body can survive for only a few minutes if there are not enough red cells to carry oxygen to the body's billions of cells. Time was crucial. Samples of his blood were measured for their content of oxygen and other gases.

Oxygen Is Measured

His hematocrit — a measure of the amount of oxygen-carrying red blood cells in his blood — was determined at one point to be eight, instead of the usual forties, that Dr. Mitty said was an indication of how much blood he had lost. That and other tests continued until his death.

Other blood samples were used for tests called type and cross-match that are needed to insure safe blood transfusions. The blood selected was as fresh as possible.

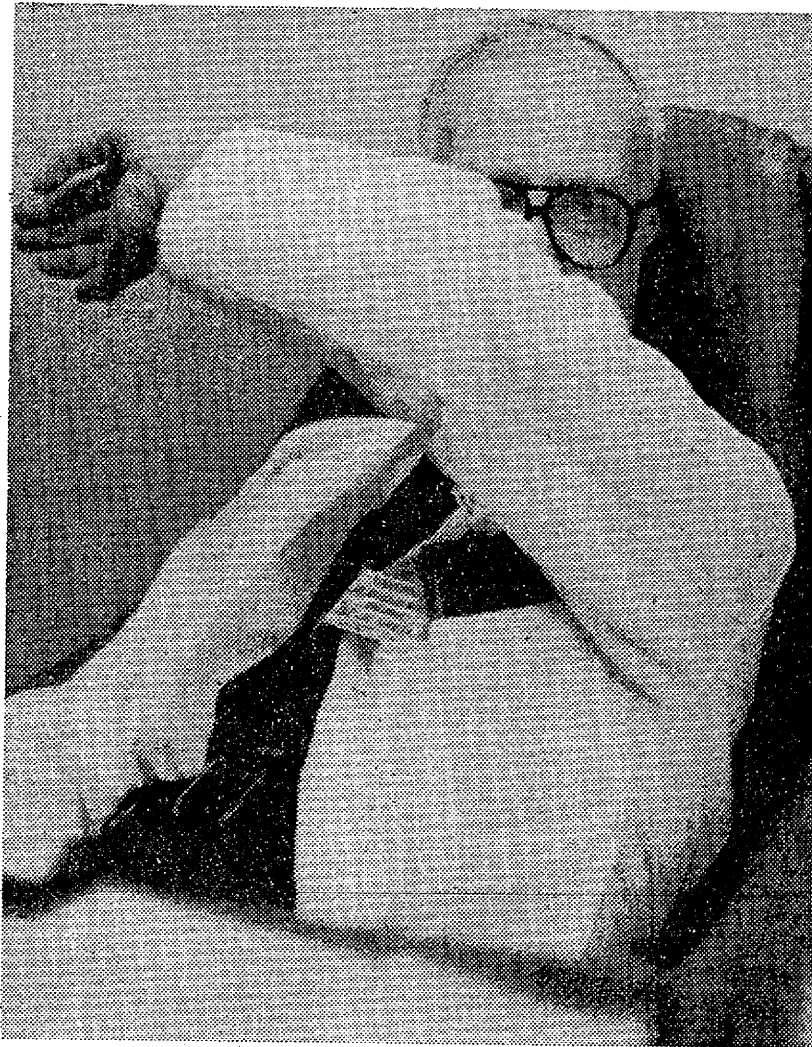
In the emergency room, a surgeon made an incision across the lower part of Mr. Lowenstein's chest to be able to examine the extent of the bullet wounds. There was profuse bleeding from the heart and lungs. The surgeon clamped a main artery leading from the heart to control the bleeding until Mr. Lowenstein could be moved to the operating room on the hospital's fifth floor.

The St. Clare's trauma team includes an engineer whose chief job in such emergencies is to summon and hold an elevator to save precious time. The door was open as Mr. Lowenstein was wheeled across the hall from the emergency room to the elevator.

Heart Massage Applied

Dr. Rosalyn Sterling, the chief surgical resident, had her hand on Mr. Lowenstein's heart, which had stopped again. She massaged it during the trip to the operating room. It was about 5 P.M.

Dr. Victor DeLuccia, the hospital's chief chest surgeon, was among the other doctors who joined the team. He noted two holes in the heart — one about two inches, the other about one inch in diameter. The holes were separated by about an



The New York Times / Lawrence K. Altman

Dr. William F. Mitty Jr., head of surgery at St. Clare's Hospital, tells how Alard K. Lowenstein tried to protect face from the shots fired by his assailant.

inch and were situated in the left ventricle, the heart's main pumping chamber.

The surgeons put in two patches made of dacron to close the holes and used only 10 sutures to avoid creating further heart damage. The surgery was tricky because the doctors had to turn the heart so they could sew on the back side of the organ. As they did, they could see from the electrocardiograph monitor that Mr. Lowenstein's heart beats slowed.

It was now 5:30, and the doctors were encouraged to proceed because the electrocardiogram showed no significant heart rhythm abnormalities.

Left Lung Removed

Next, the doctors removed Mr. Lowenstein's left lung, which had been mangled by the bullets.

"There was no hope of saving the lung," Dr. Mitty said.

Then they sewed up holes in the diaphragm, the muscular partition that separates the chest and the abdominal cavities and that plays a vital role in breathing.

Meanwhile, another team operated on Mr. Lowenstein's abdomen to make sure there was no bleeding from the liver or the spleen. However, they found that his stomach had been pierced by a bullet. Re-

pairing the stomach wounds was technically the most difficult part of the operation.

Then, Mr. Lowenstein began oozing blood from many areas of his body. The doctors diagnosed a condition called disseminated intravascular coagulation, a complication of the massive blood loss. They gave drugs, inserted gauze packs, put in more stitches, and used an electrical instrument to stop the bleeding.

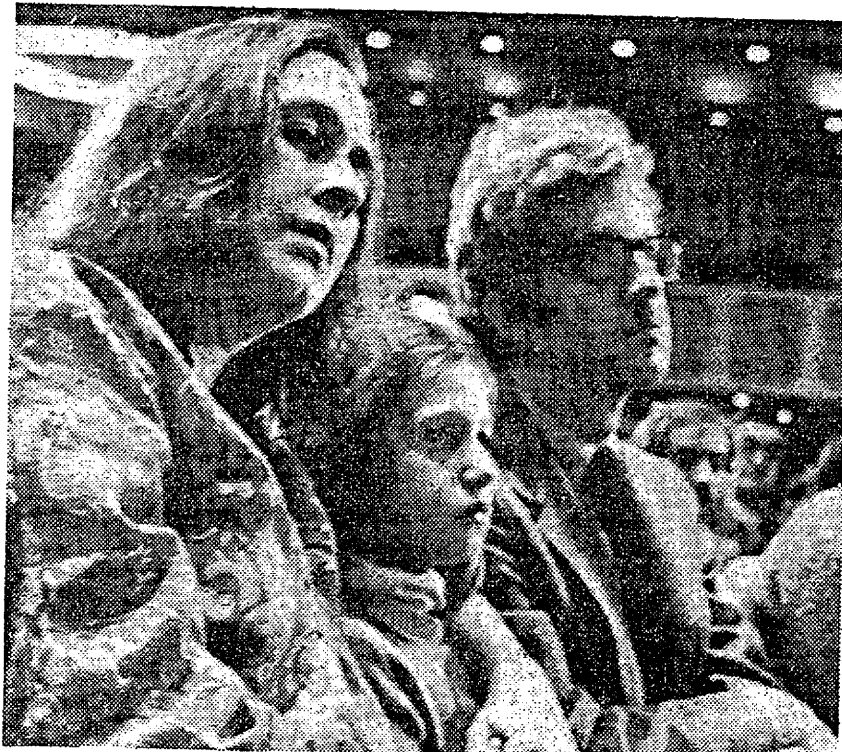
The steps worked for a while. An orthopedic surgeon put a splint on Mr. Lowenstein's broken left arm.

But when the oozing began again, Dr. Mitty said his hopes began to fade. He left the operating room to talk with the Lowenstein family and to take calls from doctors representing Senator Edward M. Kennedy and Governor Carey.

Meanwhile, it took other doctors about 90 minutes to close the incisions.

Yesterday morning, Dr. Mitty discussed Mr. Lowenstein's case with Dr. Elliot M. Gross, the Chief Medical Examiner, whose office, as a crucial part of the medical-legal investigation, does autopsies on victims of shootings. Mr. Lowenstein's autopsy was done yesterday.

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The New York Times / Edward Hausner

FAMILY MOURNS ALLARD LOWENSTEIN: Katherine Lowenstein with her aunt, Olivia Huntington, and stepfather, Nick Littlefield, heard Senator Edward M. Kennedy praise the slain former Congressman. Page 43.