

15-minute door-to-balloon time may be a record for a Chicago hospital

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When 45-year-old Bobbie Jeske arrived at Loyola's ER with a massive, life-threatening heart attack, it took Dr. Fred Leya just 15 minutes to perform an emergency balloon angioplasty.

The procedure opened up a major heart artery that was completely blocked, effectively stopping Jeske's heart attack in its tracks.

Fifteen minutes is one of the fastest -- if not the fastest -- "door-to-balloon" times for any Chicago-area hospital. And because of this fast response, a heart attack that could have been fatal wound up causing virtually no damage to Jeske's heart.

Hospitals around the country are striving to save [heart attack patients](#) by reducing their ER door-to-balloon times to 90 minutes or less. Loyola University Medical Center has helped lead the way by launching a Heart Attack [Rapid Response Team](#) (HARRT). Loyola is the first hospital in Illinois to have an interventional cardiologist and other members of the response team at the hospital 24 hours a day, seven days a week.

"Mrs. Jeske's case is a textbook example of how the HARRT program can save hearts and lives," said Leya, director of Loyola's Cardiac Catheterization Lab.

The case also illustrates the critical role of paramedics. Northlake Fire Protection District paramedics performed an EKG and called ahead to Loyola, putting the HARRT team on alert.

"Northlake EMS did a terrific job, and they deserve much of the credit for this great patient outcome," said Dr. Mark Cichon, medical director of Loyola's [Emergency Department](#).

On the morning of Aug. 11, Jeske went outside her Northlake home to fix a fence. After swinging a hammer twice, she felt a terrific pain in her left arm. Her throat was on fire and she broke out in a cold, clammy sweat. Jeske, who has four children, said her arm hurt as much as labor pain. She called her mother, who rushed over and called 911.

[Paramedics](#) Brenda Farlow and Brian Houdek did a 12-lead EKG, which indicated Jeske was having a heart attack. (Northlake is among the growing number of EMS districts that are equipping ambulances with sophisticated 12-lead EKG machines.) Following protocols, Farlow then gave Jeske aspirin, nitroglycerin and morphine, and called Loyola saying they were en route with a cardiac patient.

Farlow and Houdek rushed Jeske into the ambulance and turned on the flashing lights and sirens. They activated a strobe light that turned traffic lights green, enabling them to cover the 7½ mile trip to Loyola in 12 minutes, without exceeding speed limits.

The HARRT team was waiting at the ER door. Team members read the EKG readout, confirmed Jeske was having a heart attack and rushed her to the cardiac catheterization lab on the ambulance's wheeled stretcher. Jeske's right coronary artery was 100 percent blocked. Leya threaded a catheter (thin tube) from an artery in Jeske's groin up to her heart. When the catheter reached the blockage, Leya inflated a balloon at the tip of the catheter to open the artery. He then placed a stent (wire mesh tube) to keep the artery open.

The effect was dramatic. Within a few minutes, Jeske's pain subsided and her color returned. "They were fast, and they all knew what they

were doing," Jeske said.

During a heart attack, a blockage in an artery stops blood flow. Heart muscle begins to die due to a lack of blood and oxygen. An emergency angioplasty can reopen a blocked artery and restore blood flow. The procedure does the most good if done within one hour of the patient's arrival, known as the Golden Hour. After three hours, there may not be enough benefit to justify the risks of the procedure.

"Time is heart muscle," Leya said. "The sooner we can open the artery, the better."

A task force of the American College of Cardiology and American Heart Association recommends that a patient undergoing a [heart attack](#) receive a [balloon angioplasty](#) as soon as possible or at least within 90 minutes of arriving at the hospital. Speed "is of central importance," the task force said in a November 2008 statement.

Loyola's HARRT team, launched in 2009, far exceeds that standard, with a median door-to-balloon time of 46 minutes. One hundred percent of Loyola cases meet the 90-minute guideline and more than 85 percent are done in less than 60 minutes. "These results are a testament to the entire team at Loyola," said HARRT co-director Dr. John Lopez. "These are results that any hospital in the United States would love to replicate."

Jeske has made a full recovery and has returned to her school district jobs as a bus driver, custodian and supervisor in the lunchroom and after school.

Provided by Loyola University Health System

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