By Anne Gallagher

When Every Second Counts

CODE CRIMSON TEAM CUTS HEART ATTACK TREATMENT TIME IN HALF

It was Timothy Gullatta's lucky day. Well, maybe he wasn't so lucky to suffer a heart attack. But the subsequent events seemed driven by good fortune.

As luck would have it, he went into work early that day. Luckier still, his office had installed an automated external defibrillator (AED) two days earlier. And luckiest of all, he was transported to Hillcrest Hospital, which had just created a new heart attack response team.

Was it really luck? Or was it preparedness? At Hillcrest, much planning went into developing the hospital's new Code Crimson team, which has dramatically reduced the time it takes to treat patients like Gullatta with confirmed ST Segment Elevation Myocardial Infarction (STEMI), or what people refer to as a heart attack.

"We've achieved such great success with Code Crimson that Hillcrest now ranks in the top 10 percent of hospitals nationally, in the treatment of acute heart attacks," says Vladimir Vekstein, M.D., a cardiologist on staff at Hillcrest and medical director of Hillcrest's cardiac catheterization lab. "It's extremely rewarding to be able to intervene earlier because it means our patients have better outcomes."

Gullatta, a 49-year-old Parma resident, suffered a 100 percent blockage of an artery while at work in Highland Heights. When he passed out, co-workers, who had been trained in AED use, rushed to his aid. A Highland Heights EMS squad consisting of paramedics Bill Bernhard, David Saltenis, Jeremy Smelcer and David Soriano arrived on scene shortly thereafter.

The paramedics skillfully followed medical protocols and transmitted electrocardiogram (EKG) readings to Hillcrest Hospital's emergency department (ED) staff, which relies on EMS providers to take the first step in initiating treatment, which is especially critical in heart attack cases. When the squad arrived at the hospital with Gullatta, the Code Crimson team was ready and waiting.

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Saving Heart Muscle

According to Michael Hanna, M.D., chief of the division of cardiology, "The faster we treat patients, the more heart muscle we can save and the better the outcome for patients. We find it extremely satisfying to be able to deliver high-quality care that saves lives and improves our patients' outlooks."

Before Code Crimson was put into practice, it typically took 140 minutes from a patient's arrival in the emergency department to the point of balloon inflation (which opens up the blocked artery). Since the new program was instituted in June 2006, the door-to-balloon time, as it is called, has averaged 76 minutes. The fastest time yet is 45 minutes.

When a STEMI, or heart attack, is confirmed, the Code Crimson team readies a patient for balloon inflation of the blocked artery in a matter of minutes. Once the artery

Code Words ▼

For further information on the Code Crimson program, call Dan Sutton at (440) 312-6457.

is opened, the patient is typically out of immediate danger. The team is a multidisciplinary group that includes interventional cardiologists (who treat heart disease with catheters), other physicians, nursing staff, respiratory therapists, cardiac catheterization laboratory (cath lab) staff and pharmacists.

"Since this is an 'on-call' team, an interventional cardiologist is available 24 hours a day," Dr. Hanna explains. "When a Code Crimson is called, everyone on the team is contacted simultaneously and rushes to the scene. We're trying to equip all of our EMS squads with EKGs, so that they can transmit readings to us and we can assemble the team before the patient even arrives."

Reducing Response Times

Before Code Crimson was implemented, the ED staff called the patient's family physician, who recommended a particular interventional cardiologist. Sometimes it took a while to reach these professionals.

"Now we make just one call to an interventional cardiologist who has agreed to be available 24 hours a day," Dr. Hanna says. "We have an entire on-call team, and we contact them first, no matter who a patient's particular doctor is.

"Although we've dramatically reduced our door-to-balloon times, we continue to refine the program by looking at every step in the process," he adds. "By saving just a few minutes in each step, we can preserve more precious heart muscle for our patients. Toward this end, we keep tracking results and holding weekly meetings to review our data and see where we can make further improvements.

"The creation of Code Crimson was a substantial effort that's been well worth it," Dr. Hanna adds. "The personal reward for us is the satisfaction of knowing we're saving lives and improving our patients' outlooks."

For Timothy Gullatta, Code Crimson truly was a lifesaver. "I'm real lucky to be here," he says. "I was sure I was checking out that day. I want to shake the hands of everyone who helped me. They gave me another chance at life that I shouldn't have. Everyone at the hospital was very nice, and the nursing was fantastic."

Hillcrest's ED director, Brian Kirkland, D.O., is also thrilled with Code Crimson's achievements. "It's amazing what you can accomplish when you roll up your sleeves and work together. Everyone at the hospital has been more than willing to come together and cooperate because the outcomes are so outstanding for our patients. It's very touching for all of us." ■

Timothy Gullatta (foreground) happily revisits Hillcrest Hospital's cardiac catheterization laboratory, which was instrumental in saving his life following a heart attack. Greeting him in the lab are cardiologist Vladimir Vekstein, M.D. (center), and Brian Kirkland, D.O., director of Hillcrest's emergency department, which played a major role in preventing further damage to Gullatta's heart.

PHOTOGRAPH BY TOM MERCE