

Cardiology

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News from Lourdes Health System



Today



Transmitted Prehospital ECG: Headstart on Emergencies



Cardiac events challenge any system of medical care to provide treatment as quickly as possible. This goal is delayed for emergency-transport patients by the time needed for evaluation upon arrival and for preparation of necessary interventions. To speed the process, emergency and cardiac services at Our Lady of Lourdes Medical Center can now review an emergency patient's ECG, and take needed steps, before the patient arrives at the Lourdes ER.

Emergency medical transport teams equipped with the LIFENET system can transmit the ECG from the patient pick-up location or from the ambulance. Specialists at Lourdes will confirm its interpretation and fully prepare the ER or alert the cardiology team to ready the interventional laboratory to receive the patient. As a result, angioplasty or other treatment procedures happen more quickly at the hospital—saving lives and heart function.

"Activating the cath lab in advance markedly decreases the amount of time it takes to get a coronary artery open," said Audrey H. Sernyak, MD, FACC, a member of Lourdes Cardiology Services and the lead physician for the launch of the LIFENET system at the hospital. "With one of our first LIFENET patients, for example, it took us only 17 minutes to open the artery from the time of arrival at Our Lady of Lourdes Medical Center."

Specialists Confirm Status and Prepare

The new state-of-the-science, Web-based system—meant to ensure the right care for heart patients the moment they arrive at the

medical center—means that personnel from emergency transport, emergency medicine and cardiac services are working as one team as soon as the EMT gets to the patient. The result is quicker treatment, including quicker catheterization of patients experiencing heart attacks and shorter door-to-balloon time for MI's requiring angioplasty.

Time is muscle: Having ECG data on inbound emergency-transport patients ultimately saves heart function.

When the ER can notify the cardiac catheterization laboratory of an incoming MI patient and confirm interpretation of a 12-lead ECG on an inbound patient, the lab can expedite interventions. The system takes advantage of the widely regarded LIFEPAC unit manufactured by Physio-Control, Inc. This portable monitor-defibrillator provides a comprehensive set of data for managing emergency care—now with connectivity to the medical center.

Team Relieves Coronary Blockage Faster

The ability to transmit on-location vital signs integrates emergency medical services with medical center care. Emergency medical technicians can consult with specialists on the patient's immediate care. The medical center team is particularly vigilant for patients en route with STEMI (ST-elevated myocardial infarction), as this common form of MI signals the need for rapid angioplasty.

Cardiac interventionalists refer to prehospital ECG systems as "game changing" for the heart attack patient. In research, EMT evaluation of patients in the field with 12-lead ECG reduced door-to-balloon time by an average of 30 minutes. When emergency medical services transmit that prehospital ECG to the waiting team, the arrival-to-catheterization time is shortened again.

AHA and ACC guidelines set a target for angioplastic treatment of 90 minutes or less for door-to-balloon time. "At Lourdes, we had already beat that guideline, with average door to treatment time of about an hour," noted Dr. Sernyak. "With the prehospital ECG system, we are decreasing that time even further." ✦

For more information, visit www.lourdesnet.org or call 1-888-LOURDES (1-888-568-7337).

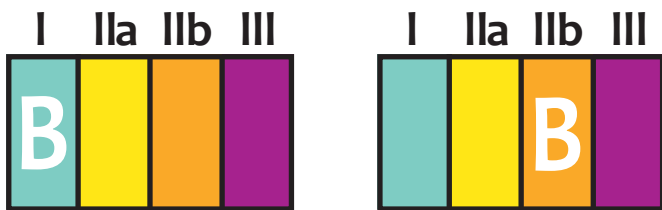


Presentation summaries from the *Cardiology for the Primary Care Physician* symposium sponsored by Lourdes Cardiology Services

Testing the “Healthy” Patient

A large percentage of Americans have risk factors for coronary heart disease (CHD), and many patients underreport symptoms suggestive of this disease. These truths underlie the statistic that half of all cardiovascular sudden deaths are not preceded by cardiac symptoms or diagnoses that might have provided warning.

“The clinician’s quandary with apparently healthy patients with no symptoms is whether to pursue additional testing or protective steps,” said Lourdes cardiologist Geoffrey Zarrella, DO, FACC, in highlighting the ACC/AHA guidelines for cardiovascular risk assessment in asymptomatic adults. “Guidelines for this are fine, but physicians must use their own judgment to some extent. It’s important to start with an accepted global risk-factor assessment tool, then use additional modalities to refine an individual’s risk.”



Examples of ACC/AHA icons for “classification of recommendations and levels of evidence” for testing used in guidelines.

Family history is an important, yet often neglected, tool. Family history of CHD is pertinent whether a primary relative was affected early in life or at a more advanced age. Fasting blood lipids are an adequate starter test for the patient without multiple risk factors, although physicians should consider assessing high-sensitivity cardio C-reactive protein. Individuals with normal/ average LDL-C values and subtle elevation of hs cardio-CRP above 2, when treated with statin drugs, have shown a significant reduction in adverse cardiac events versus treatment with placebo.

Additionally, Dr. Zarella noted:

- Microalbumin is a powerful, inexpensive marker for cardiovascular risk.

- Measurement of hemoglobin A1C is reasonable for CV risk assessment in asymptomatic adults without diabetes.
- Echocardiography to detect LV hypertrophy may be considered in asymptomatic adults with hypertension.

Other tests for patients with intermediate risk are ankle-brachial index, exercise electrocardiography, Lp-PLA2 (a marker for higher-risk plaque) and coronary artery calcium scanning.

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Lourdes CHF Center Reduces Hospitalizations

Outpatient care is paramount in treating patients with congestive heart failure (CHF), and the Lourdes Cardiology Heart Failure Program has used close surveillance and adherence to standard-of-care guidelines to reduce hospitalizations by more than half in the 1,000-plus patients that it currently follows. In their presentation on this increasingly important topic, center staff members Robert Mohapatra, MD, MPH, FACC, and Joanne Luczak Marzo, MSN, APN-C, emphasized identifying stage and functional class for each patient, and managing CHF according to these classifications.

They reviewed the need to treat underlying coronary artery disease and they endorsed titrating drug therapy (including when treating to reduce remodeling after an MI). In addition, even a modest amount of pre-discharge education can provide significant benefits, especially amidst high levels of patient denial of CHF. Providers should identify established risk predictors for rehospitalization (including economic and social support) and should intervene as soon as the patient’s medical status changes. Finally, patients with refractory CHF may require advanced therapies such as pacing devices and ICD’s.

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