



Philips accelerates time to treatment for heart attack patients

Complete continuum of cardiac care shown at European Society of Cardiology congress

Every minute counts when a heart attack victim needs interventional treatment. A study published in the *Journal of the American College of Cardiology*¹ found that patients with a door-to-balloon time of more than 90 minutes had a higher mortality risk than patients who received interventional treatment within 90 minutes of their arrival at the hospital. Research published in the *New England Journal of Medicine*² has shown that the average door-to-balloon time of the majority of hospitals studied was longer than the 90-minute interval. "As soon as a heart attack occurs, the heart muscle starts to die. That's why reducing the time between heart attack and treatment has been proven to have a big impact on a patient's long-term recovery," says Joris van den Hurk, Vice President of Cardiology Care Cycles at Philips Medical Systems. "Philips is uniquely positioned to help healthcare providers get patients to the cath lab fast. Our technology solutions for cardiac care cover ambulance services, primary care centers as well as the cath lab."

In the ambulance, paramedics can connect ECG leads to a patient suffering from myocardial infarction, and then transmit the 12-Lead ECG data to clinicians in the emergency department, using the HeartStart MRx monitor/defibrillator. In the Ambient Experience cath lab, important patient information, including ECG traces, can appear on a mirror while clinicians prepare the procedure. After treatment, patients may be monitored on an MRx or IntelliVue patient monitor in the coronary care unit and quality care can continue with Philips telemetry monitoring in a step-down unit. At home, Philips Motiva helps discharged patients to remain healthy through a simple television-based interface, promoting healthy behavior, charting improvements and connecting remotely to their physicians.

Starting processes earlier

With the help of the Philips HeartStart MRx monitor/defibrillator, the door-to-balloon process can commence before



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the patient even arrives at the hospital. With the HeartStart MRx, a paramedic can quickly acquire and wirelessly transmit a suspected myocardial infarction patient's ECG data to the emergency department, the cath lab or an ECG management system. The HeartStart MRx allows all 12 leads to be displayed at once and is the only tool that displays a 12-lead ECG interpretation on screen. Clinicians at the hospital can use the ECG data to begin assessing what treatment the incoming patient will need and prepare for Percutaneous Coronary Intervention in the cath lab, or thrombolytic therapy. When the 12-Lead ECG shows ST segment elevation myocardial infarction, the patient could bypass the emergency department and go directly to the cath lab. "By allowing a hospital to begin organizing its resources before the patient arrives, the HeartStart MRx can help reduce the time to treatment significantly," says Margrit Lelieveld, Marketing and Sales Director EMEA at Philips Medical Systems. "Starting interventional procedures sooner not only improves patient outcomes but also has a positive effect on cost management."

Once a patient has reached the emergency department, the HeartStart MRx monitor/defibrillator also allows real-time patient data to be transferred wirelessly on the Philips IntelliVue Clinical Network. The HeartStart MRx also integrates seamlessly with the ECG management system TraceMasterVue, enabling critical patient information to be seen where needed, for example in the cath lab. In the Ambient Experience cath lab, clinicians also have easy access to important patient information, including ECG traces, before the patient arrives. Providing a comforting and calming atmosphere for patients, the Ambient Experience cath lab maximizes the interaction between patient and staff during interventional procedures. "Ambient experience is a prime example of Philips' patient-driven approach and shows

how we strive to simplify healthcare by using out-of-the-box thinking," says Margrit Lelieveld. "Making hospitals feel less like hospitals is part of our strategy for enhancing the clinical experience throughout the cardiac care cycle."

Timely diagnosis and treatment

At the European Society of Cardiology congress in Vienna, Philips showed how it supports cardiac surgeons in the prompt delivery of diagnosis and treatment by giving them easy access to scans from imaging equipment usually located in different parts of the hospital. Philips CT TrueView software brings high-quality CT data to the cath lab, providing clinicians with a more accurate view of the patient's anatomy, thereby reducing the time from initial diagnosis to treatment. Furthermore, Philips Step & Shoot Cardiac application to the Brilliance CT 64-channel scanner reduces radiation exposure for patients without compromising image quality.

The new Xper Information Management cath lab workflow solution speeds up and simplifies reporting, scheduling, inventory and data management for cardiovascular professionals. It also encompasses pre- and post-cath holding and administrative and systems management. "With this new solution, we can help clinicians improve their productivity by transforming data into accurate, useful information," says Joris van den Hurk. "From diagnosis to treatment and monitoring, Philips supports hospitals in optimizing the timely delivery of diagnosis and treatment, enhancing clinicians' capabilities through innovative technology" <

¹ McNamara R L, Wang Y, Herrin J, et al. "Effect of door-to-balloon time on mortality in patients with ST-segment elevation myocardial infarction", *Journal of the American College of Cardiology*, June 6, 2006.

² Bradley, Elizabeth H. "Strategies for Reducing the Door-to-Balloon Time in Acute Myocardial Function", *New England Journal of Medicine*, November 30, 2006.