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Press Information

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New Studies Find the Value of Q-CPR Monitoring and Feedback Technology to Improve CPR Delivery by Trained Responders

Royal Philips Electronics (NYSE: PHG; AEX: PHI), in partnership with Laerdal, announced today that studies presented this past weekend at the American Heart Association's 2005 Scientific Sessions support the value of Q-CPR, the first technology to provide real-time cardiopulmonary resuscitation (CPR) monitoring and feedback for advanced life support (ALS) - trained responders. Q-CPR, developed by Laerdal and Philips and available only on the HeartStart MRx monitor/defibrillator, offers medical professionals corrective feedback on the rate and depth of chest compressions, as well as the frequency and quality of ventilations (breaths), encouraging them to adjust their technique, as needed, to improve CPR performance.

At the American Heart Association's Scientific Sessions in Dallas, investigators announced the results of the second phase of studies on the quality of CPR delivered by professional responders in and out of the hospital. Two papers published in the January 19, 2005 issue of the *Journal of the American Medical Association* (JAMA) reported poor adherence to international guidelines of CPR during both out-of-hospital and in-hospital cardiac arrest. The studies measured the level of accuracy of CPR delivery and discovered that, a high percentage of the time, chest compression rates were too slow, chest compression depth too shallow, and breath rates too high. The follow-up studies announced at AHA found that incorporating Q-CPR into their rescue protocol helped professional responders improve the quality of CPR they deliver.

Dr. Jo Kramer-Johansen of Ulleval University Hospital, Oslo, Norway, reported on 108 cardiac arrests in three ambulance services in Europe, where the automatic verbal and visual feedback features of Q-CPR improved the quality of CPR delivered by the paramedics and emergency medical technicians (EMTs). With the use of Q-CPR, the median percentage of chest compressions within CPR guidelines more than doubled from 24% to 53%. Additionally, there was a significant increase in the mean depth of compressions in those utilizing Q-CPR (34±9 mm to 38±6 mm), and a reduction in mean compression rate (121±18 to 109±12), which means that the performance was closer to current AHA guidelines for compression depth of 38 to 51mm and compression rate of 100 per minute.

"Improving CPR quality is the key factor for improving outcomes after cardiac arrest in the coming decade," said Professor Petter Steen, the principal investigator on the study. "While this investigation was not powered to study outcomes, the results strongly support the need for a larger study."

Dr. Ben Abella, from the University of Chicago, presented results showing that Q-CPR also improved multiple parameters of CPR quality for cardiac arrest patients treated in-hospital. A related study on how the quality of CPR affects the success rates of defibrillation, by his colleague Dr. Dana Edelson, reported that a modest increase in the depth of chest compressions doubled the chance of defibrillation success, which is associated with more patients leaving the hospital alive. Dr. Edelson's study garnered her the Resuscitation Science Symposium's (ReSS) Young Investigator of the Year award.

About Q-CPR
Quality CPR and early defibrillation are inextricably linked – the combination is essential to increase the survival rate for victims of sudden cardiac arrest (SCA). When breath rates or chest compression targets are not being met, Q-CPR provides visual and audio cues that encourage rescuers to adjust their technique. Laerdal, the worldwide leader in CPR solutions, developed Q-CPR technology with Philips over a five-year period to enable caregivers to go beyond having a "feel" for doing CPR, by allowing them to actually see and hear how they are doing, helping to improve the quality of CPR for their patients in real time.

In addition, Q-CPR enables collection of CPR data for post-event review and de-brief. This data management feature enables system-wide analysis of how well CPR is being performed and can help drive improvements in the quality of CPR in an emergency medical response (EMS) system or hospital. The Q-CPR device weighs less than a half a pound, adding virtually no weight to the HeartStart MRx, and is easy to use and apply to the patient.

About CPR and Defibrillation
CPR, or cardiopulmonary resuscitation, is a technique designed to temporarily circulate oxygenated blood through the body of a person whose heart has stopped or has an irregular rhythm. It involves determining if the person is without a pulse, assessing the airway, breathing for the person, and performing chest compressions to circulate blood to the body's vital organs. CPR "primes" the heart to receive a defibrillation shock by perfusing it with blood. It is critical for emergency medical responders to perform CPR quickly and effectively to maximize the victim's chances of survival. However, performing and sustaining the appropriate breaths and chest compressions is difficult, further complicated by such factors as a chaotic environment or fatigue.

SCA affects 340,000 people each year in the U.S. alone, and fewer than five percent survive, largely because defibrillators do not get to them in time or bystander CPR is not always performed. For each minute that passes before defibrillation therapy reaches a victim, the chance for survival decreases by about 7 to10 percent. After 10 minutes, few attempts at resuscitation are successful. Early CPR and defibrillation together with good post-resuscitation care can improve survival rates substantially.

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About Laerdal
Laerdal is headquartered in Stavanger, Norway and has various operations and over 1000 employees around the world. Over the last 50 years, Laerdal's Resusci(r) Anne and other CPR training manikins have helped train over 250 million people worldwide in cardiopulmonary resuscitation. In keeping with the company's mission of helping save lives, Laerdal manufactures and distributes medical education and acute care products for the healthcare and emergency response communities. The

recipient of numerous medical design awards, Laerdal is one of the foremost names in resuscitation, medical simulation, airway management, spinal immobilization, and basic and advanced life support products.

About Royal Philips Electronics

Royal Philips Electronics of the Netherlands (NYSE: PHG, AEX: PHI) is one of the world's biggest electronics companies and Europe's largest, with sales of EUR 30.3 billion in 2004. With activities in the three interlocking domains of healthcare, lifestyle and technology and 161,100 employees in more than 60 countries, it has market leadership positions in medical diagnostic imaging and patient monitoring, color television sets, electric shavers, lighting and silicon system solutions. News from Philips is located at www.philips.com/newscenter.