



# Improving CPR quality – during and after an event

## Philips HeartStart MRx with Q-CPR™

As a dedicated medical professional, you want to be sure you're performing high quality CPR every time – regardless of the chaos and urgency surrounding a cardiac emergency. Philips HeartStart MRx Monitor/Defibrillator with Q-CPR gives you that assurance. It displays dynamic, real-time CPR feedback on the MRx monitor and on a small, lightweight display you place right on the patient's chest. You have immediate visual proof of compression and ventilation performance without taking your eyes off your patient. That same CPR data can also be captured and used during follow-up debriefings – a primary recommendation of American Heart Association/European Resuscitation Council 2010 Guidelines calling for an increased focus on continuous improvement.

### Key advantages

- **Optimized for AHA/ERC 2010 CPR Guidelines**
- Delivers instant audiovisual feedback of compression depth and rate, complete chest recoil, hands-off time and ventilation rate
- Stores data captured during actual cardiac events to help you fine-tune your technique

**PHILIPS**  
sense and simplicity

# Simple, reliable, and ready when you need it

The more you know and the sooner you know it, the better your chances for performing effective CPR. Q-CPR is a simple, compact tool that works with the HeartStart MRx to automatically measure CPR performance the moment you place it on your patient's chest and begin compressions.

View real time feedback from the Q-CPR meter display or directly on the HeartStart MRx monitor, so you can quickly adjust your performance based on what you see. Or choose to activate voice prompts and the HeartStart MRx with Q-CPR will coach you along the way.

## Easy from the start

Q-CPR is simple to set up and easy to use. It complements your ALS or BLS skills with objective performance data you can use to fine-tune your CPR technique – to help you enhance the quality of CPR performed and reduce treatment variability. With Q-CPR, you know that you're pressing hard enough, deep enough, and fast enough, and that ventilation is sufficient to avoid hyperventilation, improve CPR, and increase the chances of a successful resuscitation.

## One of a kind

The Q-CPR measurement and feedback tool uniquely provides corrective guidance on both the compression and ventilation components of CPR to help you reduce the likelihood of hyperventilation during resuscitation.

## Q-CPR at a glance

Ventilation rate	Philips exclusive
Ventilation feedback from bag valve mask (BVM) or intubation	Philips exclusive
Chest compression depth – too shallow	Yes
Chest compression rate high	Philips exclusive
Chest compression rate low	Yes
Complete chest recoil	Yes
“Hands-off” time	Yes
Compliant vs. non-compliant surface capability	Philips exclusive



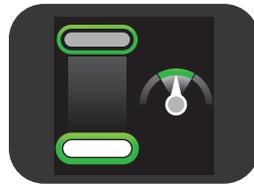
“The combination of real-time audiovisual feedback and post-event debriefing improved CPR quality and was associated with an increased rate of return of spontaneous circulation.”

*Dr. Dana P. Edelson, et al  
Archives of Internal Medicine, 2008*

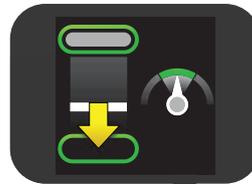
## See it, hear it, do it

Q-CPR gives you the opportunity to respond instantly to visual and audio feedback.

# Better quality CPR is in your hands and right before your eyes



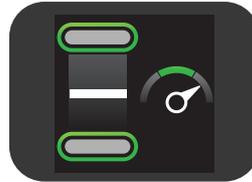
Good compressions



Compress deeper



Release pressure between compressions



Compress slower

## Improve survival rates

The Q-CPR meter helps ensure that every compression meets depth, rate, and complete release targets to help improve the patient's chance of survival and increase the opportunity for a complete neurological recovery.<sup>1</sup>



CPR timer and compression counter:

Real-time feedback directly on the monitor:

## Take control

Q-CPR offers protocol management and enhanced visual feedback in code view or AED mode on the HeartStart MRx display. You can turn voice prompts ON or OFF depending on your hospital's protocol.

Guidance on ventilation, only available with Q-CPR.

Delivering accurate compression depth on a compliant surface.

## A teaching tool, a learning experience

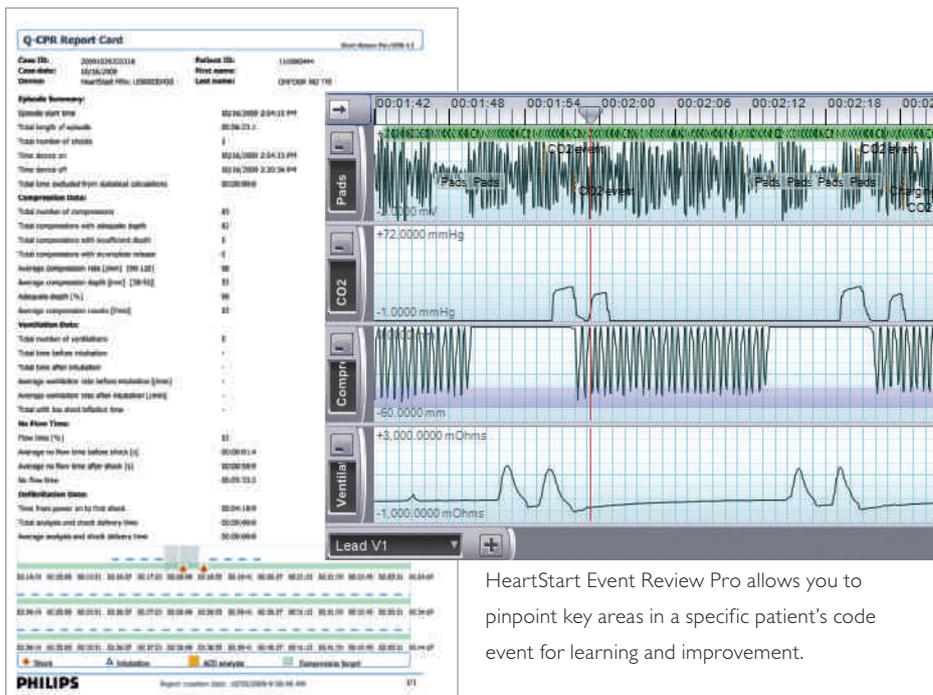
The Q-CPR measurement and feedback tool is the subject of numerous published studies.

In one independent study, the HeartStart MRx with Q-CPR was used to provide real-time measurement and feedback, and to capture CPR performance data during actual cardiac arrests. Medical professionals then participated in weekly debriefing sessions on CPR performance during those events. The study demonstrated a positive correlation between the use of Q-CPR with performance debriefing, resulting in an improvement in CPR quality and an increase in return of spontaneous circulation (ROSC).<sup>1</sup>

## CPR quality improvement begins here

When used in combination with Philips HeartStart Event Review Pro clinical software, Q-CPR is a comprehensive and flexible retrospective data review tool for debriefing, training, and continuous improvement. Event Review Pro captures and stores an entire code – including Q-CPR data for post-event review.

Help your Code Team reach its full potential for quality improvement and saving lives with Q-CPR and Event Review Pro. Because you can't improve what you don't measure.



Q-CPR report card.

HeartStart Event Review Pro allows you to pinpoint key areas in a specific patient's code event for learning and improvement.

## Q-CPR complies with AHA/ERC 2010 Guidelines

“Improving care requires assessment of performance. Only when performance is evaluated can participants in a system effectively intervene to improve care.”

*AHA 2010 Guidelines, CPR Overview, page S679*

Philips HeartStart MRx monitor/defibrillators incorporate the AHA/ERC 2010 Guidelines and we're committed to supporting the expert recommendations from these international thought leaders in resuscitation and emergency cardiac care.

The HeartStart MRx with next-generation Q-CPR, developed by Laerdal Medical Corporation, offers continuous advances in objective CPR measurement and feedback based on the latest research and input from professional responders like you. Our goal is simple: to help you improve your chances of successful resuscitation.

### References:

1. Ko PC, Chen WJ, Lin CH, et al. Evaluating the quality of pre-hospital cardiopulmonary resuscitation by reviewing automated external defibrillator records and survival for out-of-hospital witnessed arrests. *Resuscitation*. 2005;64:163-169.
2. Edelson DP, Litzinger B, Arora V, et al. Improving in-hospital cardiac arrest process and outcomes with performance debriefing. *Archives of Internal Medicine*. 2008;168(10):1063-1069

Q-CPR is a trademark of Laerdal Medical Corporation.

Please visit [www.philips.com/qcpr](http://www.philips.com/qcpr)



© 2011 Koninklijke Philips Electronics N.V.  
All rights are reserved.

Philips Healthcare reserves the right to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.

Philips Healthcare is part of Royal Philips Electronics

[www.philips.com/healthcare](http://www.philips.com/healthcare)  
[healthcare@philips.com](mailto:healthcare@philips.com)

Printed in The Netherlands  
4522 962 73641 \* JUL 2011