Quick Shock

The HeartStart Advantage

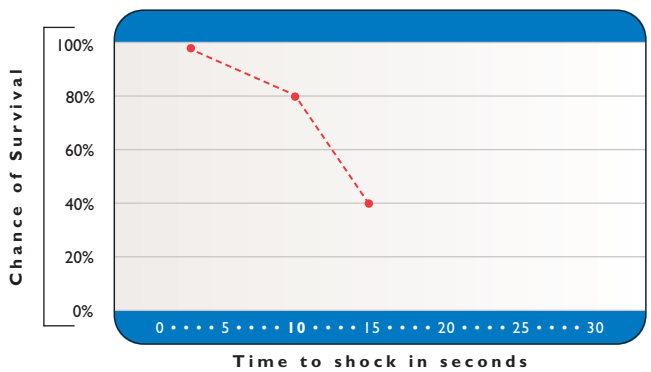
Quick Shock

With the Quick Shock feature, all Philips HeartStart automated external defibrillator (AED) can deliver a shock typically in less than 10 seconds after the end of a CPR pause.

CPR helps

Recent studies have revealed that CPR is even more beneficial than previously realized, particularly for longer down-time cardiac arrest patients.[1,2]

Survival is closely linked to the speed of shock delivery after CPR



Survival data: 7 minute ventricular fibrillation model from Yu et al. [3]

Quick Shock maximizes the benefits of CPR

The beneficial effect of CPR disappears very rapidly once it is stopped, so time to shock after CPR is very important.[3,4] Quick Shock helps by minimizing the interruption of CPR chest compressions, thereby increasing the chance that a shock will result in a successful return to spontaneous circulation.

Peer-reviewed research supports fast shock

Two independent articles published in *Circulation* support the design intent of Quick Shock. In one article, Dr. Yu et al. concluded, "Interruptions of precordial compression for rhythm analysis that exceed 15 seconds before each shock compromise the outcome of CPR and increase the severity of post-resuscitation myocardial dysfunction."[3] A second study by Dr. Eftestol et al. similarly concluded, "The interval between discontinuation of chest compressions and delivery of a shock should be kept as short as possible."[4] As American Heart Association Guidelines 2005 notes, "Reduction in the interval from compression to shock delivery by even a few seconds can increase the probability of shock success."[5] Simply put, getting a shock to the heart quickly after CPR can aid in the return of spontaneous circulation, potentially saving more lives.[3]

PHILIPS

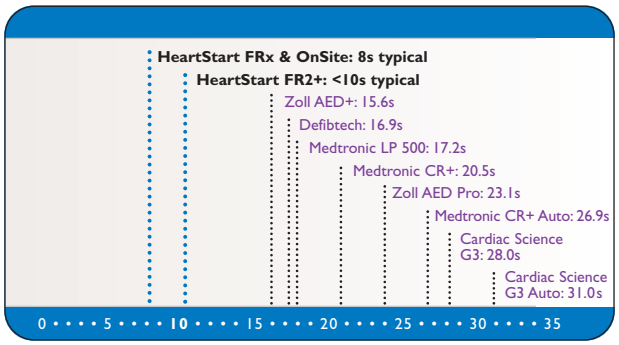
How does HeartStart's Quick Shock compare against other devices?

The Quick Shock feature – less than 10 seconds (typical) to deliver a shock following a CPR pause – makes HeartStart AEDs among the fastest with respect to this critical measure,[6] as shown in the graph below. The HeartStart FRx and OnSite are able to deliver a shock in 8 seconds (typical); the FR2+ is able to in 10 seconds (typical). Other technologies fall farther out on this curve, wasting the benefits of CPR.

Philips HeartStart Defibrillators – an excellent choice

Quick Shock is one of the innovative capabilities that set Philips HeartStart Defibrillators apart. HeartStart Defibrillators are backed by more peer-reviewed research than any other defibrillator[7] and have provided more than 10 billion hours of operational service to customers. Philips Medical Systems is a $8 billion organization with over 400,000 automated external defibrillators shipped.

Survival is closely linked to the speed of shock delivery after CPR



Time to shock in seconds[6]

Interruptions of precordial compression for rhythm analysis that exceed 15 seconds before each shock compromise the outcome of CPR and increase the severity of post-resuscitation myocardial dysfunction. [3]

References

1. Cobb LA, Fahrenbruch CE, Walsh TR, et al. Influence of Cardiopulmonary Resuscitation Prior to Defibrillation in Patients with Out-of-Hospital Ventricular Fibrillation. JAMA. 1999 Apr 7; 281(13):1182-8.
2. Wik L, Hansen TB, Fylling F, et al. Delaying Defibrillation to Give Basic Cardiopulmonary Resuscitation to Patients With Out-of-Hospital Ventricular Fibrillation: A Randomized Trial. JAMA. 2003 Mar 19; 289(11):1389-95.
3. Yu T, Weil MH, Tang W. Adverse Outcomes of Interrupted Precordial Compression During Automated Defibrillation. Circulation. 2002; 106:368-372.
4. Eftestol T, Sunde K, Steen PA. Effects of Interrupting Precordial Compressions in the Calculated Probability of Defibrillation Success During Out-of-Hospital Cardiac Arrest. Circulation. 2002;105:2270-2273.
5. American Heart Association. 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2005. 112:IV-36.
6. Data on file at Philips.
7. Philips researchers have published twenty-one peer reviewed medical journal manuscripts on the core technology of the Philips HeartStart Defibrillators.

Philips Healthcare is part of Royal Philips Electronics

www.philips.com/healthcare
healthcare@philips.com
fax: +31 40 27 64 887

Printed in The Netherlands
4522 962 16761/861 * OCT 2008

Philips Healthcare
Global Information Center
P.O. Box 1286
5602 BG Eindhoven
The Netherlands