

CIRC TRIAL

# The Largest Prospective Randomized Trial of Mechanical Chest Compression in OHCA



The Circulation Improving Resuscitation Care (CIRC) trial is the largest prospective randomized trial to date for mechanical chest compressions in out-of-hospital cardiac arrest (OHCA). The goal was to demonstrate that the AutoPulse® Non-invasive Cardiac Support Pump is a safe and effective component of a system of care focusing on high-quality chest compressions.

Between March of 2009 and January of 2011, 4,231 patients were randomized at five sites in the United States, Austria, and the Netherlands. Approximately half of the patients received very high quality CPR alone, while the other half were treated with the AutoPulse. The primary endpoint was survival to hospital discharge.

## Focus on CPR quality

The investigators focused heavily on training, measuring, and monitoring the quality of CPR in both arms of the study. This focus was to reduce any bias from poorly performed manual CPR that would favor the AutoPulse and address questions left open from earlier trials, care was taken to ensure that the manual CPR in the control arm was performed with uniform competence.

Number of personnel trained	>5000 EMTs/Paramedics, >100 trainers
Total man-hours invested in training	>20,000 man hours in initial training
% of cases monitored for CPR quality	98%
Mean CPR fraction achieved post training	>80%

The CPR fraction achieved was among the highest ever reported in a large multi-center trial. The mean CPR fraction for AutoPulse CPR during the first 20 minutes was over 80%. Similarly, the survival rates were also among the highest ever achieved in a trial of OHCA.

## The AutoPulse delivers highest quality CPR

Compared to high quality manual CPR, AutoPulse CPR resulted in statistically equivalent survival to hospital discharge and no difference in neurologic status at discharge in adults with out-of-hospital cardiac arrest of presumed cardiac etiology.

There are times when delivering high quality manual CPR isn't practical or even possible; the results of the CIRC trial confirm the important role the AutoPulse system can play in improving resuscitation outcomes.

**For more information, please contact us  
at 800-804-4356 or [www.zoll.com](http://www.zoll.com)**

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