

Introduction to Mechanical CPR



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Manual Conduct of CPR

- In pre-hospital environment
 - From site of collapse to elevator
 - In elevator
 - From elevator to ambulance
- In ambulances
 - The internal ambulance environment
- In hospitals
 - We think we are very good

Quality of Cardiopulmonary Resuscitation During Out-of-Hospital Cardiac Arrest

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Context Cardiopulmonary resuscitation (CPR) guidelines recommend target values for compressions, ventilations, and CPR-free intervals allowed for rhythm analysis and defibrillation. There is little information on adherence to these guidelines during advanced cardiac life support in the field.

Objective To measure the quality of out-of-hospital CPR performed by ambulance personnel, as measured by adherence to CPR guidelines.

Design and Setting Case series of 176 adult patients with out-of-hospital cardiac arrest treated by paramedics and nurse anesthetists in Stockholm, Sweden, London, England, and Akershus, Norway, between March 2002 and October 2003. The defi-

Quality of Cardiopulmonary Resuscitation During In-Hospital Cardiac Arrest

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Context The survival benefit of well-performed cardiopulmonary resuscitation (CPR) is well-documented, but little objective data exist regarding actual CPR quality during cardiac arrest. Recent studies have challenged the notion that CPR is uniformly performed according to established international guidelines.

Objectives To measure multiple parameters of in-hospital CPR quality and to determine compliance with published American Heart Association and international guidelines.

Design and Setting A prospective observational study of 67 patients who experienced in-hospital cardiac arrest at the University of Chicago Hospitals, Chicago, Ill, between December 11, 2002, and April 5, 2004. Using a monitor/defibrillator with

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**Buffalo Hospital first in Minnesota to use new automated CPR device
BUFFALO, Minn. 05/13/2008**

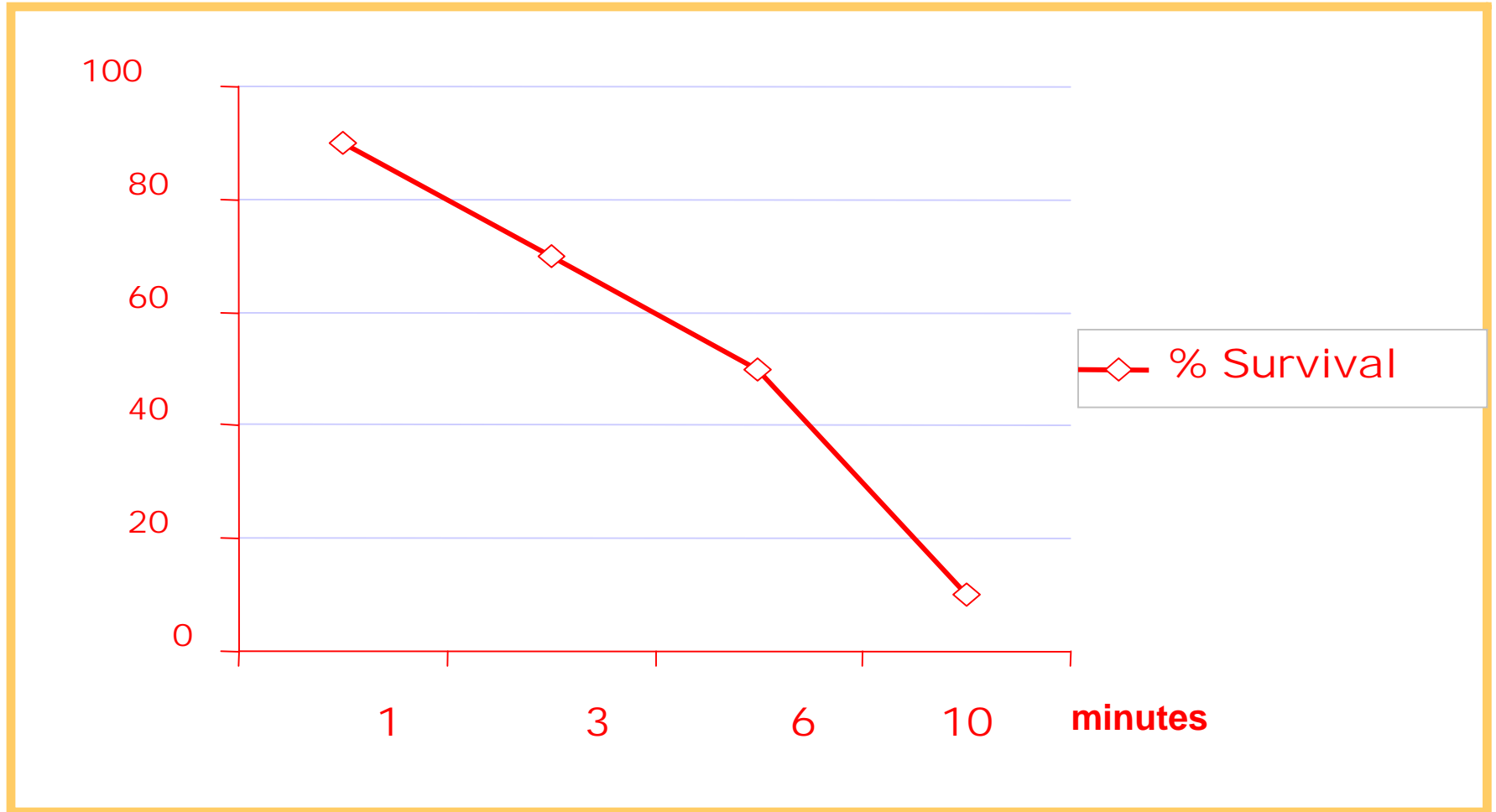
People who have sudden cardiac arrest at Buffalo Hospital have access to the latest innovation to improve their odds of survival. A [CPR](#) machine called LUCAS™ that does chest compression better than a human was recently purchased by the Buffalo Hospital Foundation



800 cardiac arrests per annum

- Survival to discharge: 2.0%
- Manual CPR
- Time from Home to hospital:
 - **ON-SCENE TIME: 10-15 MIN**
 - **HOME TO AMBULANCE: 10 MIN**
 - **AMBULANCE TO HOSPITAL: 10-15 MIN**
- Total Down-time: 30 to 40 minutes

The Race Against Time



Mechanical CPR Devices

- Introduction to Mechanical CPR
- The Thumper Dr Kenneth Heng
- The Autopulse A/Prof Marcus Ong
- The LUCAS Device .. Dr Keith Ho
- PANEL DISCUSSION