

We Must Work Tirelessly to “Snatch Life from the Jaws of Death”

A Call to Establish a Global Resuscitation Alliance

In June 2015 at the Utstein Abbey near Stavanger, Norway, 36 Emergency Medical Services leaders, researchers, and experts from throughout the world convened to address the challenge of how to increase survival from out-of-hospital cardiac arrest. We have science and solutions but how do we achieve implementation of best practices? The answer: a Call to Establish a Global Resuscitation Alliance.

By Freddy K. Lippert, CEO EMS Copenhagen, Denmark; Sang Do Shin, Medical Director Seoul Metropolitan Fire Department, Seoul South Korea; Tore Laerdal, Director Laerdal Foundation, Norway; Mickey Eisenberg, Director Medical Quality Improvement, King County EMS, Seattle USA.

The history of Utstein

In 1990 at the historic Utstein Abbey near Stavanger, Norway, international researchers and Emergency Medical Service (EMS) program and medical directors gathered to solve a problem. There was either a lack of data or inconsistencies in data about cardiac arrest survival. Attempts to measure performance with various case definitions led to inconsistencies in calculating survival rates. In short, there was insufficient data and no common terminology.

The meeting resulted in a consensus recommendation on terminology and on how to report survival data. A paper was published in 1991 simultaneously in several leading scientific journals which became a landmark paper for research within resuscitation.

This process of defining the essential elements of a cardiac arrest registry came to be known variously as the Utstein method, the Utstein template, the Utstein style, or merely Utstein. All resuscitation scientists have adopted it, and the original Utstein article remains one of the most cited articles in resuscitation science.

Since the first Utstein meeting in 1990, 16 consensus papers have been issued and 25 meetings held on various topics relating to resuscitation and resuscitation research. The original paper was updated in 2004 and again in 2014 and continues to have a major impact on science and reporting data.

The Utstein meeting in 2015 on implementation

In 2015, twenty five years after the first Utstein meeting, 36 resuscitation leaders gathered at Utstein to solve another problem – how best to implement best practices and successful strategies in managing cardiac arrest and how to spread the lessons of best practices to EMS systems and communities.

Biography: Freddy K. Lippert, MD



Freddy K. Lippert, MD, Associate Professor, FERC, is CEO of the Emergency Medical Services in Copenhagen, Denmark. The EMS Copenhagen covers a population of 1.7 million, i.e. one third of the Danish population. The EMS Copenhagen includes the following: Emergency Medical Dispatch, ambulance services including physician manned mobile critical care units, psychiatric mobile unit, a medical hotline 24/7, responsibility and coordination of medical preparedness on behalf of all hospitals in the Capital Region.

Biography: Sang Do Shin, MD, MPH, PhD



Sang Do Shin, MD, MPH, PhD, is associate professor in the Department of Emergency Medicine at the Seoul National University College of Medicine in Seoul, Korea. He's also the director of the Laboratory of EMS at the Seoul National University Biomedical Research Institute.

The results of the meeting are a call for the establishment of a Global Resuscitation Alliance in order to expand internationally the reach and utility of the Resuscitation Academy concept developed in King County, Seattle beginning in 2008. Such a global effort will promote best practices and offer help with implementation to countless communities.

Biography: Tore Laerdal



Tore Laerdal is Executive Director of the Laerdal Foundation, chairman of Laerdal Medical, and managing director of Laerdal Global Health. In recent years he has focused on helping reduce maternal and newborn mortality in low resource settings. For this purpose Laerdal Global Health has partnered with USAID, NIH, Save the Children, the American Academy of Pediatrics and others in the Helping Babies Breathe alliance and the Survive & Thrive alliance.

Biography: Mickey Eisenberg, MD, PhD



Mickey Eisenberg, MD, PhD, is Director of Medical QI at the King County Emergency Medicine Services and Professor of Medicine at the University of Washington. He has studied cardiac arrest and developed innovative programs to treat this condition for 40 years. His book, 'Resuscitate! How your Community can Improve Survival from Sudden Cardiac Arrest – second edition' was published by University of Washington Press in 2013.

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The famous Utstein Abbey near Stavanger in Norway

This call to action declares the current situation to be unacceptable and states:

- We believe communities can and must do better.
- We believe, based upon current knowledge, that with adherence to and implementation of best practices communities can increase survival from cardiac arrest by 50%.
- We believe the establishment of a Global Resuscitation Alliance will help educate EMS leaders about best practices and provide tools to help improve survival in their communities.

Interventions that determine the outcome from cardiac arrest

Several critical interventions and their timely application determine the outcome from cardiac arrest. In cardiac arrest the likelihood of surviving declines by approximately 10% for every minute. Thus the intervals from collapse to application of key interventions largely determine the likelihood of survival. The main interventions include: rapid dispatch of EMS, telephone-assisted cardiopulmonary resuscitation (T-CPR), bystander CPR, provision of high performance CPR, and early defibrillation.

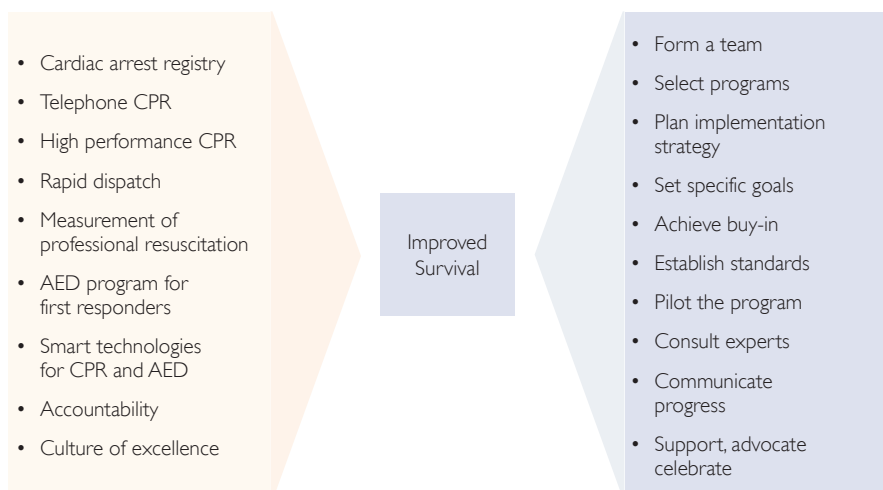


Figure 1. Programs and actions to implement best practices

Both rapid time of application and high quality of these interventions define best performing EMS systems.

Global Resuscitation Alliance

It is now time to turn our attention to programmatic improvement. Ideally best practices should become the standard of care; thereby leading to dramatic improvements in survival. Best practice is a dynamic concept since new therapies and programs begin to define new best practices. Therein lays the power of "measure and improve". Constant measuring enables determination of what needs improving, and demonstrates if improvement occurs - which can define new best practices.

The coming decades should become the era of using measurement to help define and implement best practices. It appears from the literature that it commonly takes 5-10 years before new knowledge and guidelines are generally implemented even after scientific consensus. That process must be speeded up! This requires better understanding of what factors stimulate and what factors hinder implementation of new knowledge and best practices.

The establishment of a Global Resuscitation Alliance is a concrete means to catalyze progress in survival. A Global Resuscitation Alliance can provide the tools and support for communities to put on local programs modeled after the Resuscitation Academy and thereby promote best practices locally.

The ongoing process, typified by the Utstein meeting on implementation, promises yet more advances in resuscitation and survival. To these individuals and to the hundreds of thousands of first responders, emergency medical technicians, paramedics, emergency tele-communicators, doctors, nurses and all

Ten Steps to Improve Cardiac Arrest Survival

1. Establish a cardiac arrest registry
2. Begin Telephone-CPR with ongoing training and QI
3. Begin high-performance EMS CPR with ongoing training and QI
4. Begin rapid dispatch
5. Measure professional resuscitation using the defibrillator recording (and voice if possible)
6. Begin an AED program for first responders, including police officers, guards, and other security personnel.
7. Use smart technologies to extend CPR and public access defibrillation programs to notify volunteer bystanders who can respond to nearby arrest to provide early CPR and defibrillation
8. Make CPR and AED training mandatory in schools and the community
9. Work toward accountability – submit annual reports to the community
10. Work toward a culture of excellence

Figure 2. Ten steps to improve Cardiac Arrest survival

who work so tirelessly to snatch life from the jaws of death, we dedicate this call to action.

EMS2016 to promote the Global Resuscitation Alliance

Prior to the European EMS2016 congress a second Utstein Meeting on implementation will be held in Copenhagen with experts and representatives from major international EMS systems and international organizations. The meeting will further bring the Global Resuscitation Alliance to reality and begin to provide tools for implementation.

Therefore: Join us for the 1st European Emergency Medical Services Congress to be held in Copenhagen 30th May to 1st June 2016 where the results from the Utstein meeting will be presented.

This short paper is based upon the full paper: **Improving Survival from Out-of-Hospital Cardiac Arrest: A Call to Establish a Global Resuscitation Alliance**. The full paper can be downloaded from the Resuscitation Academy homepage: www.resuscitationacademy.com

www.resuscitationacademy.com/wp-content/uploads/2016/03/A-Call-to-Establish-a-Global-Resuscitation-Alliance1.pdf

Citation: "It takes a system to save a life" from Resuscitation Academy

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