

# Widespread CPR training saves lives

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A nationwide effort in Denmark to increase the number of people trained in CPR led to an increase in bystander CPR and ultimately contributed to increased cardiac arrest survival rates in that country, according to research presented today at the American College of Cardiology's 61st Annual Scientific Session. The Scientific Session, the premier cardiovascular medical meeting, brings cardiovascular professionals together to further advances in the field.

The study, which examined 29,000 cardiac arrest cases in Denmark, found that the proportion of cases in which a [bystander](#) performed CPR more than doubled between 2001 and 2010. The study also found patients who were treated with CPR or automated external defibrillators (AEDs) by bystanders while awaiting [emergency responders](#) were about four times more likely to have survived 30 days after the cardiac-related than those who did not receive such assistance.

"This study is important because it emphasizes that an increase in bystander [resuscitation](#) has a direct impact on survival of patients," said Mads Wissenberg, MD, Gentofte University Hospital in Copenhagen, Denmark and the study's lead investigator. "The study also demonstrates that increased availability of AEDs is likely to have an impact on survival."

During the last ten years, several organizations have launched widespread efforts to train members of the general public in [first aid](#), and in 2005 and 2006, Denmark began requiring elementary school students and people getting a driver's license to be trained in CPR. At the

same time, AEDs were installed in more public and private locations throughout the country. "Changing the habits of a whole population is difficult, and we were therefore surprised that the initiatives taken during the last decade seem to have made such an impact on bystander CPR and survival," Dr. Wissenberg said. He added that efforts to increase CPR training and AED availability in other countries, such as the United States, would likely result in similar improvements.

Despite the large increase in patients receiving CPR from bystanders, more than half of the patients did not receive bystander CPR. And although the use of AEDs was associated with increased 30-day survival, less than 2 percent of cases throughout the study period involved these devices. "There is still room for improvements in order to increase the survival following out-of-hospital cardiac arrest even further," said Dr. Wissenberg.

Cardiac arrest occurs when the heart stops beating; it can result from health conditions such as a heart attack or from accidents like drowning or electrocution. CPR is a technique used to restore breathing and blood circulation while waiting for medical help to arrive, and AEDs are machines that automatically diagnose cardiac arrest and issue electric therapy to restart a normal heart rhythm. Both interventions are designed for use by members of the public.

The researchers analyzed Danish national health records from 2001 to 2010 to track the outcomes of [cardiac arrest](#) cases. The proportion of people who received [bystander CPR](#) increased from 20 percent in 2001 to 44 percent in 2010.

Provided by American College of Cardiology

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