

National Heart, Lung, and Blood
Institute
<http://www.nhlbi.nih.gov>

FOR IMMEDIATE RELEASE
January 26, 2012
11 a.m. EST

Contact:
NHLBI Communications Office
(301) 496-4236
NHLBI_news@nhlbi.nih.gov

NIH launches trials to evaluate CPR and drugs after sudden cardiac arrest

The National Institutes of Health has launched two multi-clinical trials to evaluate treatments for out-of-hospital cardiac arrest. One will compare continuous chest compressions (CCC) combined with pause-free rescue breathing to standard cardiopulmonary resuscitation (CPR), which includes a combination of chest compressions and pauses for rescue breathing. The other trial will compare treatment with the drug amiodarone, another drug called lidocaine, or neither medication (a salt-water placebo) in participants with shock-resistant ventricular fibrillation, a condition in which the heart beats chaotically instead of pumping blood.

The majority of the approximately 350,000 people who have cardiac arrest in the United States each year are assessed by emergency medical service (EMS) providers. During a cardiac arrest, the heart stops beating, and unless it is restarted within minutes, a person usually dies. Although immediate CPR can be lifesaving, more than 90 percent of people who experience a cardiac arrest outside of a hospital die before reaching a hospital or soon thereafter.

"Increasing survival rates for people who experience out-of-hospital cardiac arrest is a major public health goal," said Susan B. Shurin, M.D., acting director of the NIH's National Heart, Lung, and Blood Institute, which is the lead federal sponsor of the studies. "These new trials could provide critical insight about which resuscitation efforts are most effective for cardiac arrest."

The trials will serve a combined population of nearly 21 million people from diverse urban, suburban, and rural regions across the U.S. and Canada.

The CCC trial will compare survival and hospital discharge rates for two CPR approaches delivered by paramedics and fire fighters. Persons experiencing cardiac arrest will be randomly assigned to receive continuous chest compressions, or standard CPR by emergency responders. Standard CPR, the approach recommended by the American Heart Association (AHA) for use by emergency responders, includes chest compressions with short pauses for assisted breathing. This approach has been called into question by emerging data suggesting that stopping chest compressions to provide assisted breathing interrupts overall blood flow, thereby lowering survival.

Previous studies have shown that people who suffer cardiac arrest outside of the hospital and are treated by bystanders are more likely to survive when given compressions alone, according to Graham Nichol, M.D., M.P.H., principal investigator of the CCC trial and a professor of medicine and director of the Center for Prehospital Emergency Care and medical director of the Clinical Trials Center at the

- Portland Resuscitation Outcomes Consortium, Oregon Health and Science University (ALPS only)
- Pittsburgh Resuscitation Network, University of Pittsburgh (CCC only)
- Dallas-Fort Worth Center for Resuscitation Research, University of Texas Southwestern Medical Center
- Seattle-King County Center for Resuscitation Research, University of Washington
- Milwaukee Resuscitation Network, Medical College of Wisconsin
- University of Ottawa Collaborative Regional Coordinating Centre, Ottawa Hospital Research Institute, Canada
- University of British Columbia Collaborative Regional Coordinating Centre, St. Paul's Hospital, Canada
- Rescu, Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael's Hospital, University of Toronto, Canada

Both trials will be coordinated by the University of Washington in Seattle.

Find out more about the CCC trial at <http://clinicaltrials.gov/ct2/show/NCT01372748> and about ALPS at <http://clinicaltrials.gov/ct2/show/NCT01401647>

For additional information or to arrange an interview with an NHLBI spokesperson, please contact the