Access to Clinical Preventive Services

Out-of-Hospital Cardiac Arrest survival

Each year, about 356,000 persons in the United States experience an out-of-hospital cardiac arrest (OHCA) or sudden death. OHCA’s has a mortality rate of approximately 90%. In Oregon, an estimated 2,200 individuals experienced OHCA every year. There is a large regional variation in survival to hospital discharge (range, 3.4%-22%) in US counties. To reduce that variation many Oregon EMS agencies who are committed to improving survival rates in their counties use the Cardiac Arrest Registry to Enhance Survival (CARES). CARES is a tool for quality improvement that gives EMS agencies information on performance measures, such as bystander CPR, and outcomes, such as Utstein Survival.

Utstein Survival is a nationally comparable measure of survival from OHCA¹ and is a proxy indicator for the quality of the EMS system. In 2017 the Oregon Utstein Survival was 36% (Figure 1). The national rate was 28%.

¹ Defined as survival to hospital discharge and includes only bystander witnessed cardiac arrests with an initial shockable cardiac rhythm.

Notes: Does not include arrests with non-cardiac cause
Source: CDC Cardiac Arrest Registry to Enhance Survival (CARES)
Early initiation of CPR and defibrillation by bystanders improve OHCA survival rates with good neurological outcomes. The rate of bystander initiated CPR in Oregon was 57% in 2017, compared to 33% nationwide (Figure 2). Bystander CPR rates are improved in communities with strong dispatch assisted telephone CPR programs.

![Graph showing survival rates](image)

Future efforts should focus on improving the Oregon Utstein Survival to 60% by increasing rates of bystander CPR and promoting the use of early defibrillation by lay and professional rescuers including law enforcement personnel.

**Additional Resources:** CARES Summary Report 2017

**About the Data:** Data source is the Cardiac Arrest Registry to Enhance Survival (CARES). In 2004, the Center for Disease Control and Prevention (CDC) collaborated with Emory University to develop CARES, an OHCA surveillance registry to help communities increase survival rates. In 2017 76,215 cases were entered into the registry. The registry captures out-of-hospital cardiac arrest where resuscitation is attempted by a 911 responder (CPR and/or defibrillation). It contains demographic, therapeutic, and outcome measures for OHCA. CARES data are used to help communities benchmark and improve their performance for OHCA care. State-level data includes only participating agencies in each state.

**For More Information Contact:** David Lehrfeld MD, david.p.lehrfeld@state.or.us

**Date Updated:** November 6, 2018

Oregon State Health Profile