

## MP1-5

### **Out of hospital cardiac arrest and cardiopulmonary resuscitation in children with congenital heart defects**

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#### Background

Congenital heart defects are the most common birth defects and are an important cause of death in children. Some children with congenital heart defects are affected by cardiac arrest out of hospital, but little is known about the occurrence and consequences of such events. Early cardiopulmonary resuscitation may prevent death. In this nationwide cohort study, we describe the rate of out of hospital cardiac arrest and the rate and results of cardiopulmonary resuscitation in children 2-18 years old with congenital heart defects.

#### Methods

Data concerning all live births in Norway in 1994 – 2009 were retrieved from the Medical Birth Registry of Norway, the patient administrative systems at all hospitals in Norway, the Oslo University Hospital's Clinical Registry for Congenital Heart Defects and the Norwegian Cause of Death Registry. Survivors were followed through 2012, and supplementary information for the deceased children was retrieved from medical records at Norwegian hospitals. Cardiac arrests related to cardiac surgery were excluded.

#### Results

Among the 943 871 live births in Norway 1994-2009, 11 272 (1.2%) children had a congenital heart defect. We identified nine (0.1%) children 2–18 years old who experienced out of hospital cardiac arrest. Early cardiopulmonary resuscitation was initiated in all patients. Return of spontaneous circulation occurred in four children, but two of them died of anoxic brain damage within a few days. Two children survived without serious sequelae.

#### Conclusions

Out of hospital cardiac arrest was infrequent among children 2-18 years old with congenital heart defects. Cardiopulmonary resuscitation was initiated in all, but only 22 % survived.