

**Title:**

E-PEDCARE: first results of an international prospective registry of pediatric Out-of-Hospital and Emergency Department Cardiac Arrest.

**Abstract:** (Your abstract must use Normal style and must fit into the box. Do not enter author details)

**PURPOSE OF THE STUDY.** Knowing the characteristics and outcomes of pediatric Out-of-Hospital and Emergency Department Cardiac Arrest (CA).

**MATERIALS AND METHODS.** Prospective multicenter study (61 hospitals, 4 countries) of Out-of-Hospital CA (OHCA) and Emergency Department CA (EDCA). We used Utstein Style, focussing on epidemiology and variables associated with survival and neurological outcomes. We describe the preliminary results from 1<sup>st</sup> Jun 2014 to 15th May 2015.

**RESULTS.** We have analysed 46 CA, 13% (6/46) EDCA. The median age was 6 years (interquartile range 1.7-10.9), 50% male. The CA happened at home (39.1%), street (15.2%), school (4.3%), sports ground (2.2%) and other places (39.1%). Etiology: presumed cardiac (21.7%), trauma (17.4%), respiratory (17.4%), drowning/submersion (15.2%), other non-cardiac (15.2%) and unknown (13%). There was a bystander in 43.5%. However, "phone resuscitation" was started in only 17.4%. The most frequent initial rhythm was asystole (56.5% CA), followed by bradycardia (19.6%), ventricular fibrillation (VF, 8.7%), pulseless electrical activity (4.3%), pulseless ventricular tachycardia (2.2%) and unknown rhythm (8.7%). The most frequent known rhythm before return of spontaneous circulation (ROSC) was asystole (7/46, 15.2%) followed by VF (6/46, 13.0%).

- Outcomes in 40 children with OHCA: ROSC in 29/40 (72.5%) and sustained ROSC in 24/40 (60%). Three children are still inpatients. Twelve have been discharged: 9/40 (22.5%) with paediatric overall performance category (POPC) 1, one with POPC 2, two with POPC 3.
- Outcomes in 6 patients with EDCA: ROSC in 5 and sustained ROSC in 3, one of whom is still inpatient. Two children survived to discharge, one with POPC 3 and one with POPC 1.

**CONCLUSIONS.** Our preliminary results of the E-PEDCARE registry demonstrate higher OHCA and EDCA survival (with acceptable to good neurological outcome) than previously reported. Continuous efforts are needed in order to know which variables are associated with better outcomes of CA in children.