

## **PUBLIC NOTIFICATION OF COMPLETION OF THE EROCA CLINICAL TRIAL**

**EROCA (Extracorporeal Cardiopulmonary Resuscitation for Refractory Out-of-Hospital Cardiac Arrest) HAS BEEN COMPLETED IN ANN ARBOR, ANN ARBOR TWP, SCIO TWP, and SALINE.**

### **ABOUT THE RESEARCH**

Sudden cardiac arrest is one of the most common causes of death in the US. On average in the US, only 8 out of 100 people with out-of-hospital cardiac arrest survive with good brain function. In Michigan, it is only 7 out of 100 people. The current standard practice for treatment for an out-of-hospital cardiac arrest is to perform cardiopulmonary resuscitation (CPR) and advanced cardiovascular life support at the scene until either the heart is restarted or resuscitation efforts are discontinued. CPR is an emergency life-saving procedure that is done when someone's heart has stopped and includes chest compressions and artificial ventilations.

An alternative strategy is expedited transport of patients to the emergency department with ongoing CPR so that advanced resuscitation strategies can be performed that cannot be offered outside the hospital. One such strategy is extracorporeal cardiopulmonary resuscitation (ECPR). ECPR requires placement of catheters (tubes) in large blood vessels and a machine to take over the work of the heart and lungs until the heart can be restarted.

The purpose of the EROCA Study was to examine the feasibility and potential benefit of expedited transport of out-of-hospital cardiac arrest patients with ongoing CPR to an ECPR-capable emergency department.

This study was performed at University of Michigan, Michigan Medicine in partnership with Huron Valley Ambulance (HVA), Ann Arbor Fire Department, Ann Arbor Township Fire, Scio Township Fire Department, and Saline Area Fire Department. Patients were included in this study using exception from informed consent (EFIC) under emergency circumstances if the patient is unconscious. A total of 15 patients met study eligibility and entered into the EROCA trial, between May, 2017 and March, 2020, when the study ended 67% were male with an average age of 62 years. Of the 15 patients, 87% were Caucasian, 7% were African-American, and 7% were of unknown race, and 100% were non-Hispanic.

### **STUDY RESULTS**

Of the 15 participants enrolled, 12 were in the expedited transport group and 3 were in the standard care group. In the expedited transport group, the average time from 911 call to ED arrival was 32.5 minutes with 42% meeting the 30 minute or less goal. Of the 12 transported, 5 were eligible and received ECPR. The average time from ED arrival to ECPR was 32.4 with 60% meeting the 30-minute goal. None of the 12 people in the expedited transport group survived, including 5 people in the expedited transport group who received extracorporeal cardiopulmonary resuscitation. There was 1 survivor among the 3 people in the standard group, in which current standard practice was followed by local emergency medical services (EMS).

The study results provided important insight into the feasibility of expedited transport to an ECPR-capable ED for OHCA patients that do not respond to standard therapy. The study also provided insight into the feasibility of initiating ECPR in the ED setting.

For additional information, please contact the study team at 734-615-4626 or see our website: <https://medicine.umich.edu/dept/emergency-medicine/eroca-study> for more information and email link.