

## Improving Outcomes from Out of Hospital Cardiac Arrest: The Cardiac Arrest Individual Registry and Outcomes Programme (CAIRO)

### Background

A cardiac arrest occurs when the heart stops beating suddenly. It is one of the most extreme medical emergencies. 60,000 people suffer an out of hospital cardiac arrest (OHCA) in the UK each year, with resuscitation attempted in less than half, and less than 10% surviving to hospital discharge. The Cardiac Arrest Individual Registry and Outcomes (CAIRO) Programme includes a comprehensive patient registry: the CAIRO database. This registry will allow us to confidentially link data from different sources to track each cardiac arrest patient from their initial collapse through to hospital discharge and, with the patient's consent, subsequently in the community through follow-up assessments of progress.

### Aims and Objectives

- A.** To determine whether it is feasible to set up the CAIRO database in this patient population, by linking sources of routinely collected data.
- B.** To chart the patient pathway and estimate the completeness of the data obtained from routine data sources
- C.** Conditional on sufficient data being available to allow meaningful analysis;

Objective 1: To compare the survival to hospital discharge, ICU stay, complications and neurological outcomes in patients in whom the arterial oxygen concentration in the first 24 hours following cardiac arrest was or was not maintained between 60mmHg to 200mmHg.

Objective 2: To compare the survival to hospital discharge of patients who were or were not transported or transferred to a cardiac care centre within 12 hours of the cardiac arrest.

Objective 3: To compare the survival to 1-year of patients who underwent coronary angiography within 8 hours of the cardiac arrest or more than 8 hours after the cardiac arrest.

Objective 4: To compare the healthcare resource use to 1-year of patients who were or were not within 5 miles of the receiving heart attack centre when they had an OHCA.