1. a. Full Title: Characteristics of Survivors/Non-survivors of CPR-cardioversion

b. Abbreviated Title (Length 26 characters): CPR Survivors/Non-survivors

2. Writing Group (list individual with lead responsibility first):

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   Writing group members: Herman A. Taylor Jr., Jun Pan, Mario Sims, Merle Myerson (not confirmed yet) Other interested ARIC investigators.

3. Timeline:
   Complete analysis Summer, 2004
   Submit first draft to publications committee Summer, 2005

4. Rationale:

Mortality resulting from cardiac arrest remains very high. Previous research has shown that of the cardiopulmonary resuscitation (CPR) attempts, less than 30% have been successful in the restoration of spontaneous circulation. Early mortality is often the result of hemodynamic instability, leading to multiple organ failure. According to a study in Paris, about 25% of the patients died of shock during the early phase, and their hemodynamic status differed markedly from that of the other patients. Animal models have shown that post-resuscitation myocardial dysfunction is characterized by impaired contractile function, decreased work capacity, and variable diastolic dysfunction that reverses several hours or days after resuscitation.

We plan to investigate the characteristics of the survivors and non-survivors of cardiac arrest using the ARIC data, which contains information about resuscitation attempts or CPR both inside hospital and out of hospital. Following admission to the hospital, the ARIC hospital abstraction data record the initial three days of complete enzyme profile, ECG profile, as well as most important hemodynamic variables. This information is useful in accessing issues of cardiac function for patients who survived an out-of-hospital CPR, or patients who had been administered cardiac message within a hospital unit, whether they survived or died. Along with rich information about the patients' demographic, and clinical information, ARIC data allows us to evaluate some of the short-term and long-term outcomes of the CPR subjects, as well as the characteristics of the survivors and non-survivors.
5. Main Hypothesis/Study Questions:

What are the characteristics of the survivors of CPR/cardiac arrest? What are in the profiles of cardiac enzymes, other cardiac functional indicators, and evolution of renal and hepatic functions over the initial three days after resuscitation? For the long-term survivors (after six months), what’s their cardiovascular health status after six months?

What are the characteristics for the non-survivors? How many die from original diseases and how many die from potential fatal complications? What are the clinical and demographic characteristics of them at the time of death?

Finally, do white and African American patients differ in the situations above?

6. Data (variables, time window, source, inclusions/exclusions):

CPR or cardiac arrest information is available in hospital abstraction form in cohort surveillance data. The relevant variables about cardiac arrest resuscitation include: HRAA13C (was CPR or cardioversion ever done), HRAA30C (place of CPR-cardioversion attempt), HRAA12 (emergency medical service unit transport).

Some of the outcome variables include: disposition of patient on discharge from hospital, in hospital complications, from the hospital abstraction from; time of death from the death certificate form. Potential fatal complications within hospital include atrial fibrillation, post resuscitation myocardial infarction, cardiac shock.

Demographic variables and cardiac risk factor variables: race, age, gender, diabetes status, hypertension status, medication usage, smoking status, atrial fibrillation, serum cholesterol level, social economic status, usage of diagnostic and treatment procedures, laboratory measurements during the hospitalization, etc.

7.a. Will the data be used for non-CVD analysis in this manuscript? ____ Yes  ____ No

b. If Yes, is the author aware that the file ICTDER02 must be used to exclude persons with a value RES_OTH = “CVD Research” for non-DNA analysis, and for DNA analysis RES_DNA = “CVD Research” would be used?  ____ Yes  ____ No

(This file ICTDER02 has been distributed to ARIC PIs, and contains the responses to consent updates related to stored sample use for research.)

8.a. Will the DNA data be used in this manuscript?  ____ Yes  ____ No

8.b. If yes, is the author aware that either DNA data distributed by the Coordinating Center must be used, or the file ICTDER02 must be used to exclude those with value RES_DNA = “No use/storage DNA”?  ____ Yes  ____ No

9. The lead author of this manuscript proposal has reviewed the list of existing ARIC Study manuscript proposals and has found no overlap between this proposal and
previously approved manuscript proposals either published or still in active status. ARIC Investigators have access to the publications lists under the Study Members Area of the web site at:  http://bios.unc.edu/units/cscc/ARIC/stdy/studymem.html

Yes     _______ No

10. What are the most related manuscript proposals in ARIC (authors are encouraged to contact lead authors of these proposals for comments on the new proposal or collaboration)?
There is no direct overlapped proposals to the authors’ knowledge.

11. Manuscript preparation is expected to be completed in one to three years. If a manuscript is not submitted for ARIC review at the end of the 3-years from the date of the approval, the manuscript proposal will expire.

Reference List


