1.a. Full Title: Prognosis of unrecognized (silent) myocardial infarction diagnosed by electrocardiogram in the ARIC Study.

b. Abbreviated Title (Length 26 characters): Prognosis of Silent MI

2. Writing Group:
Writing group members: E. Matthew Quin, Ervin Fox, Tom Mosley, Kenneth Butler, Alan Penman, Herman Taylor, Tandaw Samdarshi, Wayne Rosamond, Richard Crow

I, the first author, confirm that all the coauthors have given their approval for this manuscript proposal. EMQ

First author: E. Matthew Quin, M.D.
Address: Heart Station
University of Mississippi Medical Center
2500 North State Street
Jackson, MS 39216

Phone: (601) 984-2250     Fax: (601) 984-2631
E-mail: equin@medicine.umsmed.edu

Corresponding/senior author (if different from first author correspondence will be sent to both the first author & the corresponding author):
Ervin Fox, M.D.
Address: Heart Station
University of Mississippi Medical Center
2500 North State Street
Jackson, MS 39216

Phone: (601) 984-2250     Fax: (601) 984-2631
E-mail: efox@medicine.umsmed.edu

3. Timeline:
Complete Analysis          October 2007
Submit first draft to publications committee    December 2007
4. **Rationale:**

The prevalence of unrecognized (silent) myocardial infarction (MI) ranges from 25-44%.(1-5) The risk associated with silent MI in African Americans and how that risk compares to non-Hispanic whites is poorly described. The literature is well-established on risk factors for clinically evident MI and the long term prognosis in subjects suffering clinically evident MI. However, the population with unrecognized MI has been less well studied.

In a primarily European American cohort (Framingham), unrecognized MI was more common in women and older men; outcomes following unrecognized MI were similar to that of participants with recognized MI.(2) In Framingham, the prognosis associated with unrecognized MI was comparable to that seen in a small multi-ethnic cohort; the rates of mortality due to unrecognized MI for both studies were twice that of the control population. Additionally, the outcomes for those with recognized and unrecognized MI were similar in both the Framingham study and a study in a small multiethnic cohort.(4) Another study in a group of Japanese-American men aged 45 to 68 years old also found similar outcomes in those with recognized and unrecognized MI.(5) In the ARIC cohort, African-American participants had a slightly higher percentage of unrecognized MI than whites (23% vs. 19%), although how this relates to outcomes is not known.(6)

To our knowledge, there are no studies looking at the prognosis of silent MI in a large multi-ethnic cohort. We hypothesize that unrecognized MI will be associated with greater morbidity and mortality. Findings from this study will improve guidance for risk-guided therapy to prevent cardiovascular morbidity and mortality.
REFERENCES


5. **Main Hypothesis/Study Questions:**
What is the prevalence of unrecognized MI in the ARIC population?
What clinical factors are associated with unrecognized MI in the ARIC population?
What is the association between unrecognized MI and clinical outcomes (specifically definite MI, revascularization, cardiovascular mortality, and all-cause mortality) by race?
How does this differ from participants without any detectable coronary disease and from participants with recognized MI?

6. **Design and analysis (study design, inclusion/exclusion, outcome and other variables of interest with specific reference to the time of their collection, summary of data analysis, and any anticipated methodologic limitations or challenges if present).**

7.a. Will the data be used for non-CVD analysis in this manuscript?  ____ Yes  __x__ 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  __x__ 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://www.csee.unc.edu/ARIC/search.php](http://www.csee.unc.edu/ARIC/search.php)

   __x__ 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)?

Boland LL, Folsom AR, Sorlie PD, Taylor HA, Rosamond WD, Chambless LE, Cooper LS. Occurrence of unrecognized myocardial infarction in subjects aged 45 to 65 years (the ARIC Study). Am J Cardiol 2002;90:927-931.


11. a. Is this manuscript proposal associated with any ARIC ancillary studies or use any ancillary study data?   _____ Yes  ___x__ No

11.b. If yes, is the proposal

___  A. primarily the result of an ancillary study (list number* __________)

___  B. primarily based on ARIC data with ancillary data playing a minor role (usually control variables; list number(s)* __________  __________  __________)

*ancillary studies are listed by number at http://www.cscc.unc.edu/aric/forms/

12. 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.