

ARIC Manuscript Proposal # 927

PC Reviewed: 03/27/03

Status: A

Priority: 1

SC Reviewed: 03/31/03

Status: A

Priority: 1

- 1.a. Full Title:** Heart Failure Incidence and Survival: 13 Year Follow up of the ARIC Cohort
b. Abbreviated Title (Length 26 characters): Heart Failure Incidence

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

Lead: Wayne Rosamond

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Writing group members: Aaron Folsom, Paul Sorlie, Woody Chambless, Patricia Chang

3. Timeline:

Analysis to start immediately, first draft by Aug 2003.

4. Rationale:

Nearly 5 million Americans have heart failure and nearly 500,000 persons are diagnosed with heart failure for the first time each year. During the last 10 years, the annual number of hospitalizations has increased from 550,000 to nearly 900,000 for heart failure as a primary or secondary diagnosis. Data from Framingham and others stress the strong association between hypertension and heart failure. However, these results need to be interpreted in the context of the changing patterns of antihypertensive medication use that have occurred in recent decades. More recent data indicate that ischemic heart disease is the most common cause of heart failure. The role of hypertension in the risk of heart failure may differ depending on the presence of heart disease.

Although Framingham found that female gender was associated with better survival after heart failure, data from the SOLVD registry found a greater risk in women than men at 1 year of follow up. Recent analysis of the UNC-Heart Failure database found a significant interaction between cause and the association of female gender with improved survival. They found no difference in survival when ischemic heart disease was the primary cause, whereas there was a highly significant difference in survival favoring women when heart failure was primarily the result of nonischemic causes.

5. Main Hypothesis/Study Questions:

1. What is the incidence (per person years) of heart failure in different race/gender groups in ARIC?
2. What is the association of major risk factors for heart failure in ARIC?
3. How do the major risk factors for post-MI heart failure compare to those associated with heart failure occurring in participants without a prior MI?

4. What is the one-year survival rate after heart failure in the different race/gender groups in ARIC?
5. Is the association of gender and survival consistent between post-MI and non-MI related heart failure.
6. This paper will also describe the methods used to identify heart failure cases in ARIC and serve as a baseline methods paper for future manuscripts.

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

Participants with prevalent heart failure at visit 1 will be excluded. Heart failure will be defined based on hospital discharge diagnosis during follow-up period. Data to be used include hospital discharge diagnosis from cohort eligibility (CEL) forms, self-report use of heart failure medication (Visit 1), measures from Visit 1 (ECG variables, hypertension, prevalent CHD, diabetes, hyperlipidemia, smoking, education, obesity, age)

- 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 ICTDER01 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
- b. If yes, is the author aware that either DNA data distributed by the Coordinating Center must be used, or the file ICTDER01 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.**
 Yes – no overlap

10. What are the most related manuscript proposals in ARIC?

A manuscript proposal to investigate the association of alcohol consumption and heart failure in the cohort has recently been submitted for approval. However, there are no significant overlap issues with the current proposal and that pending manuscript proposal.