

ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #130

1. Title:

Population distribution of heart rate variability

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

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3. Timeline:

Submit Proposal to Publications Committee	11/05/91
Complete Data received from URC	01/20/92
Complete Analysis	05/20/92
Submit first draft to Publications Committee	08/20/92
Submit to Journal	10/20/92

4. Rationale:

It has long been recognized that the sympatho-vagal system plays an important role in short term cardiac regulation. Heart rate variability is considered as the only simple, noninvasive measurement of sympatho-vagal control on the heart. In previous studies, impaired heart rate variability (reduced vagal tone) was associated with increased risk of post MI mortality in acute MI patients, and also associated with increased risk of sudden death. In some clinical observations, coronary artery disease patients have lower heart rate variability. In animal studies and in clinically based studies, the heart rate variability was measured by analyzing heart rate data continuously, recorded for more than 30 minutes. Therefore, their applicability in population based epidemiological study is limited. In ARIC Visit 1, two minutes each of resting and standing heart rate information were recorded according to a standard protocol. This information allows us to explore the population distribution of heart rate variability. This would be the first study of this kind.

5. Main Hypothesis:

- 1) Two-minute heart rate variability is a valid and reliable quantitative measurement of heart rate variability.
- 2) Describe the heart rate variability in ARIC population by age, gender, and race.

6. Data (variable, source, inclusion/exclusion):

Visit 1 cohort data for all participants are to be used, as well as six-minute heart rate data from 300 participants from Visit 2. Variables include two-minute heart rate data each of supine and standing, and demographic variables.