

## ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #387

1. Title: Weight change and wall thickness change

2. Writing Group:

J. Stevens (lead), L.E. Chambless, Greg Evans, Pamela Schreiner, Robert Smith, Neal Thomas and other interested ARIC investigators.

3. Timeline:

Data for these analyses are available as part of ARIC visits 1, 2, and 3. We project that the analyses and writing will take place over the next year.

4. Rationale:

Several observational studies have produced inconsistent results regarding the association between weight loss or gain and risk of cardiovascular disease and/or mortality. Three recent studies used a similar approach to examine this issue, but found divergent results (Pamuk, 1993; Willett, 1995; Loconsky, 1995). All three studies used reported weight from the past and current weight to calculate weight change and followed participants forward in time to observe events. We are currently conducting a similar study using data from ARIC to study the association between weight change from age 25 to visit 1 and wall thickness at visit 1 (MS#315). The analyses for that paper are complete, and an abstract has been submitted to the November meeting of the American Heart Association.

The New Work Proposed here is an advancement beyond MS#315 and would determine the association between weight change between visits and change in wall thickness over the same time period. The use of wall thickness change, rather than wall thickness at only one time point will allow this analysis to more directly address the effect of weight change on wall thickness.

5. Main Questions to be Addressed:

- 1) What is that association between change in weight from visit 1 to visit 3 and IMT change between visit 1 and visit 3?
- 2) What is the impact of weight at visit 2 on the associations described in #1 above. It is our expectations that several different patterns of weight change will be observed, i.e. steady gainers, steady losers, gainers then losers, losers then gainers, weight stable. The impact of these different patterns of weight change on IMT change will be examined.
- 3) Does the association between weight change and IMT change vary among groups defined by:
  - gender
  - BMI
  - waist circumference
  - ethnicity

6. Data requirements:

Variables needed:

Exposure:

weight at visit 1  
height at visit 1  
weight at visit 2  
height at visit 2  
weight at visit 3  
height at visit 3

Outcome:

Wall thickness at visits 1, 2, and 3

Other:

center  
age  
gender  
ethnicity  
smoking  
wine intake  
beer and liquor use  
education  
income  
physical activity  
waist circumference  
waist to hip ratio  
blood pressure  
cholesterol  
kcal intake  
percent kcals from fat  
Keys score