ARIC Manuscript Proposal #713

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1.a. Full Title:  Effect of troponin on the assessment of trends in coronary heart disease

b. Abbreviated Title (Length 26):  Troponins and CHD trends

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

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3. Timeline: Preliminary analysis completed.  A draft of final analysis and discussion to be complete Summer 2000.

4. Rationale:

   Assays for troponin T and troponin I, structural proteins that serve as markers for myocardial damage, were developed in the late 1980’s. The use of these analyses is increasing over time in some hospitals, and may eventually replace the use of other assays for myocardial necrosis. The ARIC diagnostic criteria for myocardial infarction have been revised to include these new cardiac markers. Changes in diagnostic criteria, to incorporate more specific measures of myocardial necrosis, may artificially increase or decrease time trends in CHD morbidity.

5. Main Objectives:

   (1) Describe the usage of troponin assays in the diagnosis of myocardial infarction, by center and time.
   (2) Compare MI events classified on the basis of troponin with those classified on the basis of CK and/or CK-MB.
   (3) Estimate the difference in attack/incidence rates to be expected by definitions with and without troponin.
   (4) Assess how trends in MI rates over time will be affected by this new diagnostic element.
   (5) Agreement between the two diagnostic algorithms depends on the troponin threshold (in terms of elevations above the upper limit of normal) chosen.
6. **Data (variables, time window, source, inclusions/exclusions):**

The availability of the various cardiac markers (CK, CK-MB, troponin) over time among hospitalization 1987-1997 in the ARIC communities will be described. Among those hospitalization with both CK and troponin levels (troponin only available for 1996 and beyond), the agreement between classification using the two measures will be described.