1. Title:
Methodologic differences between Community and Cohort Surveillance in the ARIC Study

2. Writing group:
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3. Rationale:
a) Most definite MI or fatal CHD events among ARIC cohort participants are diagnosed both from the Community Surveillance data and from the Cohort Surveillance data. The diagnostic algorithms are conceptually the same, but the cohort database contains more information (e.g. interview, serial change, etc.) and every cohort case is reviewed by a committee of physicians, who are permitted to make a non-algorithm preferred diagnosis, whereas the large majority of Community Surveillance non-fatal cases are diagnosed by computer algorithm alone. The ARIC Study presents an opportunity to compare diagnoses from a community based approach to an approach using much more complete information and additional physician discretion.

b) The ARIC cohort screens more broadly for potential MI or fatal CHD, in terms of ICD codes and in terms of out-of-catchment area hospitals and out-of-state deaths. This presents an opportunity to estimate the number of events missed by community Surveillance.

c) The ARIC cohort with its more complete information is able to much better judge which CHD events are new occurrences. Thus ARIC offers an opportunity to use cohort data to estimate proportion of events which are incident events, and therefore to estimate incidence rates in Community Surveillance. Cost comparisons of the two schemes are also possible.

4. Main hypothesis or parameters to estimate:
a) Hypothesis: There is no difference, on average, between Cohort and Community Surveillance diagnosis of definite MI or definite fatal CHD.

b) Hypothesis: There is no difference between Cohort and Community Surveillance in determining previous MI.

c) Estimate the number of MIs and definite fatal CHD events missed by Community Surveillance.
Hypothesis: The proportions of Cohort events outside the Surveillance catchment area differ by location, race, and sex.

d) Estimate incidence in Community Surveillance data using cohort proportion of events which are first events and Community attack rates. Compare incidence based on Surveillance data alone (history of MI in chart) with Cohort data.
e) Hypothesis: Reabstraction of Cohort hospital records does not change the proportion classified as definite MI compared to single abstraction, as is done in community surveillance.

f) Hypothesis: Cohort ECG diagnosis does not differ from Surveillance ECG diagnosis.

g) Hypothesis: Review committee (MMCC) diagnosis does not differ from algorithm diagnosis.

5. Data:
1987-89 Community and Cohort Surveillance Data

6. Timetable:
1989 Community Surveillance data will be closed in October 1993, and at that time comparison can begin on Cohort vs. Community Surveillance ECG diagnosis, part of 4(a) above. The rest of the analysis has to wait until closure of 1987-89 Cohort Surveillance data, scheduled for December, 1993.