ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #351

1. Title: Population-based study of seizures in blacks and whites

2. Writing Group: Rich, Evans, Toole (Gordon?, others welcomed)

3. Timeline:
Analyses to begin once completed data sets (visits 1-3) distributed

4. Rationale:
The term, seizure, can be defined as an uncontrollable burst of electrical activity centered within the brain. Seizures can occur in many ways, including uncontrollable tonic and/or clonic jerks and/or a momentary loss of consciousness and/or altered mental state.

Publications containing estimates of prevalence and identification of risk factors associated with seizures and epilepsy in young subjects have been numerous. In general, the studies have been small in sample size, limited in follow-up of participants, and have ignored important components of the population. To date, few studies have been focused on non-Caucasians or on elderly populations.

The current manuscript proposal addresses these limitations by using a large, well-defined population (ARIC cohort) and the Stroke/TIA questionnaire (for precipitating events, "seizure" is queried). A small (~10 cases) number of purported seizure cases will be validated using review of medications. A series of analyses will be undertaken to estimate prevalence and risk factors for seizures at each ARIC visit.

5. Hypothesis #1:
The frequency of seizures (prevalence) among a population-based sample of African-Americans and Caucasians will differ by age, set, and ethnic group. Prevalence of seizures will increase over time (from Visit 1 - Visit 3).

   Hypothesis #2:
The distribution of seizure risk factors (head injury, CNS infections, stroke, IMT) will differ by ethnicity-gender group, and will be similar in effect to CVD risk factor distribution.

   Hypothesis #3:
The incidence of seizures over the ARIC visits 1-3 will differ between African-Americans and Caucasians.

6. Data (variables, time window, source, inclusions, exclusions):
Examination 1, 2, 3 risk factors (listed above), additional variables (age, sex, race, location, exam date, medication use, medical history), endpoints (seizures from stroke/TIA questionnaire at visits 1-3, CHD, CVD).