ARIC Manuscript Proposal # 718

1.a. Full Title: A prospective study of health-associated changes in drinking: The Atherosclerosis Risk in Communities (ARIC) Study, 1987-95.

  b. Abbreviated Title (Length 26): Predicting Drinking Change

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

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3. Timeline: Complete draft by June

4. Rationale:

Numerous studies have indicated that consuming alcoholic beverages is associated with a beneficial effect for cardiovascular outcomes and with a modest protective effect for all-cause mortality. However, a number of investigators have indicated that the putative protective effect may be because drinkers move from drinking to nondrinking categories as they develop illnesses. In a period prevalence study of the ARIC cohort, a cross-sectional association between a decline in health and drinking cessation has been shown. However, while assuming that a decline in health is what caused the drinking cessation in the cross-sectional study is logical, the direction of the association has not been proven. Therefore, the co-authors would like to use a prospective design to determine whether antecedent health change predicts drinking cessation.

5. Main Hypothesis/Study Questions:
1. Does a health decline occurring at exam 2 predict a change in drinking at exam 3? Logistic regression analyses will be used to model the ethnic-specific association between outcomes (drinking cessation or decreased consumption) reported at exam 3 with exposures (health decline measured by perceived health or chronic disease status) reported at exam 2 and unchanged at exam 3. A decline in perceived health was defined as a change from good perceived health (excellent or good) at exam 1 to poor perceived health (fair or poor) at exam 2 and no improvement at exam 3. A chronic disease variable was defined using participant's

medical history as elicited at the recruitment home interview and at exams 2 and 3 by the question "Has a doctor ever said you had any of the following: high blood pressure, heart attack, stroke, diabetes, cancer, or chronic lung disease?" A chronic disease diagnosis variable was formed for each exam, coded as yes if the participant responded positively to questions about physician diagnosis of high blood pressure, heart attack, stroke, diabetes, cancer, or chronic lung disease?", and no if the participant said no to all of the diseases. A decline by chronic disease status was a change from absence of chronic disease at exam 1 to report of any chronic disease at exam 2 and unchanged chronic disease status at exam 3. The following sub-populations of drinkers will be evaluated to determine the effect that becoming aware of a chronic disease diagnosis, or of having a decline in perceived health had upon drinking: 1) those who reported no physician-diagnosed chronic disease at exam 1, and 2) those with good perceived health status at exam 1.

2. Does the baseline level of alcohol consumption influence or modify the association between health change and change in drinking behavior?

Restricting analyses to those who reported being drinkers at exams 1 and 2 (for analyses of drinking cessation at exam 3) and to those whose alcohol consumption had not decreased between exams 1 and 2 (for analyses of decreased consumption at exam 3) will assure that the exposure of health at exam 2 occurred prior to the outcome (change in drinking) being evaluated at exam 3. Restricting the populations to those with consistent health at exams 2 and 3 will assure that the exposure at exam 2 was the health status predicting the outcome at exam 3.

6. Data (variables, time window, source, inclusions/exclusions):

Visit 1: racegrp, center, drnk01, ethanl03, gender, hom09 (perceived health), hom10a, hom10c, hom10c, hom10e, hom10f, hom10g, tiab01 (hom variables from home interview)
Visit 2: drnk21, ethanl24, tiac01, hhxb05a, hhxb05c, hhxb05d, hhxb05e, hhxb05g
Visit 3: phxa40, phxa44a, phxa45a, phxa46a
AFU: afub6, afuc6, afud6