Manuscript #603S

1. Full Title: An Electrocardiographic Study of Cardiac Morphology, Arrhythmias, and Myocardial Infarction in Sleep-Disordered Breathing (SDB)
   Abbreviated Title (length 26): ECG and SDB

2. Writing Group (list individual with lead responsibility first):
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3. Timeline:
   a) Review of ECG variables at the different parent studies: 6/98-8/98
   b) Data Management: 8/98
   c) Data Analysis: 9/98-1/99

4. Rationale:
   Primary: To determine the prevalence of electrocardiographic (ECG) left ventricular hypertrophy (LVH), right ventricular hypertrophy (RVH), conduction disturbances, arrhythmias, and evidence of myocardial infarction (MI) in subjects with and without SDB and to determine if this relation is independent of age, BMI, and HTN.

5. Main Hypothesis:
   a) The prevalence of ECG LVH, RVH, arrhythmias, conduction abnormalities, and evidence of MI will be related to the presence and severity of SDB.
   b) There will be an increased prevalence of ECG evidence of MI in patients with sleep apnea compared to controls adjusted for known coronary risk factors. c) The association between sleep apnea and RVH and LVH is in part explained by confounding and modification by clinical factors associated with sleep apnea including hypertension and obesity in subjects with sleep apnea.

6. Data (variables, time window, source, inclusions/exclusions):
   a) Study Design: cross-sectional analysis to examine the relation between SDB and prevalence of ECG criteria for LVH, RVH, cardiac arrhythmias (atrial fib/atrial flutter, premature atrial contractions, premature ventricular contractions), conduction disturbance, and
evidence of MI.
b) Population: Eligible subjects will be SHHS participants who had a 12-lead electrocardiogram.
   Cohort of 6600 subjects will be classified into categories by snoring and RDI status.
   Exclusions include electrocardiograms that preclude interpretation due to poor technical quality. For the analyses