1. Full Title: The Relationship Between Sleep Disturbance and the Chronic Disease Score
   Abbreviated Title (length 26): Sleep and Chronic Disease

2. Writing Group (list individual with lead responsibility first):
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3. Timeline:
   Start the analysis when questionnaire data is available. Use Sleep Study information that is available at that time.

4. Rationale:
   There are very few studies of health care utilization in individuals with sleep-disordered breathing (SDB) and/or other sleep disorders. There is some evidence that patients diagnosed with OSA have high medical costs in the years preceding their diagnosis. One study of 97 obese patients diagnosed with OSA demonstrated that cases utilized more than twice the number of inpatient hospital days and physician claims than age and sex matched controls in the two years prior to their diagnosis. Another telephone administered study of 4972 people, which examined the relationship between self-reported SDB and healthcare utilization found that subjects with breathing pauses during sleep were more likely to have consulted a doctor within the past 12 months than those without (81.06 vs. 60.8*). Thirty-one percent of subjects reporting breathing pauses had sought medical care six or more times in the past year compared with 12% of snorers who did not report breathing pauses.

   The Chronic Disease Score (CDS) is a predictor of health care utilization which could be calculated for SHHS participants using pharmacy data. The use of medications for 19
chronic conditions is ascertained and a weighted score is obtained. The CDS has been shown to be an excellent predictor of disability, health care utilization and mortality in older adults. By correlating CDS with sleep study and questionnaire data, we can explore the relationship between SDB, disrupted sleep and health care utilization in SHHS participants.

5. Main Hypothesis:
Increased CDS will be associated with increased severity of SDB and symptoms of sleep disruption.

6. Data (variables, time window, source, inclusions / exclusions):
Apnea Index, AHI, arousal index, % time spent below 90%, 02 saturation (%CT90), sleep symptom questionnaire responses, age, gender, weight, height, medication list**.

**The author provides a copy of this list; reference is: Clark Do, Von Korff M, et al. A chronic disease score with empirically derived weights. Medical Care 1995; 33:783-975.