OBJECTIVES:
To study the relationship between K/DOQI's Clinical Practice Guidelines for Bone Metabolism and Disease in Chronic Kidney Disease and outcomes, specifically, the utilization of healthcare service for both inpatient and outpatient visits and mortality.

RESEARCH PLAN:
The project will use three unique sources of data from the Veterans Health Administration (VA): (1) VA national administrative data (which include ICD-9-CM diagnosis codes and CPT codes), (2) pharmacy data from the VA National Pharmacy Benefits Management Program (PBM), and (3) the BIRLS file (death records data base). We will select patients from the procedure files (both outpatient and inpatient data) with a CPT code of dialysis (renal or peritoneal), from fiscal year 2002 to fiscal year 2003. We will establish a 6 month baseline period for each patient with CPT code of dialysis. We will then link those patients with the PBM pharmacy database to extract lab values. In this baseline period we will calculate the average value of Ca x P value and accordingly divide the sample into two groups those =<55 and those above. We will then link patients in the lab groups above to the demographic and diagnostic file to profile the following variables e.g. age, sex, etc. and comorbid conditions. We will follow the patients for a maximum 1.5 year period depending on the length of time available at follow up post the initial baseline period. From the inpatient file the study will then calculate the number of hospitalizations (each separate hospitalization counted as one), number of hospitalization days (length of stay), number of days to first hospitalization (any hospitalization and cardiac related hospitalizations), number of days to re-hospitalization. From the outpatient file we will calculate number of outpatient visits associated with each group. From the BIRLS file we will calculate mortality rates adjusting for preexisting comorbid conditions and length and pattern of therapy.

METHODOLOGY: Association between those baseline groups and the hazard ratio of mortality in the next 18 months will be calculated using Cox Proportional Hazards regression model with adjustment for age, gender, ethnicity, diabetes, albumin, hemoglobin. We expect that patients achieving the Ca x P target will have a lower mortality risk and lower utilization of health services for complication. The following outcomes will be evaluated between patients with =<55 mgt/dl.2 and those with > 55 mgt/dl.2 where outcomes include, differences in mortality, total hospitalization days (length of stay), number of hospitalizations, number of outpatient visits.

CLINICAL RELEVANCE:
Identifying optimal management practices as related to phosphorus and calcium balance in patients with ESRD.