OBJECTIVES: Studies indicate that certain medications are potentially problematic for the elderly, yet these medications are commonly prescribed in a variety of settings. The consequences associated with inappropriate prescribing include adverse effects of drugs (AEDs), therapeutic failure leading to morbidity, increased medication burden, increased use of health services, and death. Potentially inappropriate prescribing for the elderly (PIPE) has been estimated to affect one in five elderly Americans. However, studies suggest that this is a conservative estimate because inadequate diagnostic and pharmacy data hampered the ability of the investigators to more completely describe the phenomenon. Previous research has not been able to address appropriateness of medications that may be indicated in certain circumstances due to lack of diagnostic data. Moreover, studies have not been able to characterize patient exposure to potentially inappropriate medications, or examine patient characteristics, type of care received, or system factors associated with receiving them. Thus, previous research leaves important questions unanswered, and we are unsure of whether this issue affects older veterans receiving care in the Veterans Health Administration (VA).

In this study we examine potentially inappropriate prescribing in the elderly with criteria recently updated by the Agency for Healthcare Research and Quality using an expert geriatric panel consensus methodology. These criteria classify medications previously deemed generally inappropriate as: always avoid, rarely appropriate, and having some indications. The latter two categories include drugs for which the expert panel outlined specific appropriate indications. Thus, we will examine PIPE using diagnostic criteria. The proposed study will address three objectives.

Objective 1: Describe the prevalence and patterns of PIPE in VA ambulatory care using diagnostic criteria for appropriate use.

Objective 2: Identify patients at greatest risk for PIPE in VA ambulatory care. Objective 3: Describe variation of PIPE by facility and VISN and examine facility- and system-level (VISN) characteristics associated with this variation.

RESEARCH PLAN: This study will use information from existing VA outpatient (OPC), inpatient (PTF), and pharmacy (PBM) databases, and Pharmacy Benefits Management Strategic Health Group documents. As part of routine practice in the PBM, we will also obtain information from VISN formulary leaders to identify variation in restricting use of medications deemed potentially inappropriate or programs targeting prescribing to older veterans by VISN. METHODS: We have currently identified veterans who are at least 65 at the end of FY1 1999 and obtain their pharmacy data for FY2000 (N=1,501,060). We are currently in the process of operationalizing indications deemed appropriate by the AHQR panel. We will determine the prevalence of potentially inappropriate prescribing using traditional methods and then using diagnostic criteria. This will allow us to determine whether diagnostic information improves estimates of PIPE. In addition, we will determine if patient demographic characteristics, physical comorbidities, or psychiatric comorbidities are related to PIPE. Finally we will describe variation in PIPE by VISN and determine if differences are associated with variation in system programs designed to improve prescribing to the elderly. FINDINGS: We found 19.7% of the cohort received a potentially inappropriate medication. After adjusting for appropriate indications defined by an Agency for Healthcare Research and Quality expert panel, the prevalence was 17.5%. 29% of patients received a drug that exceeded geriatric dosing recommendations (dose-limited). Overall prevalence of diagnosis/dose-adjusted inappropriate prescribing was 20.5%. We also found that exposure to these drugs was prolonged. For example, elderly patients receiving benzodiazepines received, on average, 180 days of drug.