Population Characteristics and Preventable Hospitalizations in Harris County: 2004
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Introduction
Access to health care is a serious problem in Harris County where the reported uninsurance rate is over 30%. The Agency for Healthcare Research and Quality (AHRQ) suggests using preventable hospitalizations as indicators of access to care to help examine the access to primary care problem.

The literature suggests that individual characteristics, including older age, being an African American / Hispanic, lower level of education, lower income, self-rated poor health are associated with higher rates of preventable hospitalizations.

What are Preventable Hospitalizations?
Preventable hospitalizations are ambulatory-care sensitive conditions for which appropriate and timely outpatient care can potentially prevent the need for hospitalization. They are sometimes referred to as avoidable hospitalizations, or ambulatory-care sensitive hospitalizations. Preventable hospitalizations are defined differently in the literature based on different choices of ICD-9-CM diagnosis codes. Prevention Quality Indicators (PQIs) are used in this project.

What are PQIs?
Prevention Quality Indicators, defined by AHRQ (version 3.1), include a set of 14 indicators which are used with hospital discharge data to identify ambulatory care sensitive conditions that can be treated effectively on an outpatient basis. Each indicator is technically defined, based on ICD-9-CM codes.

Objective
The objective of this study is to describe the characteristics of the population hospitalized for preventable admissions in Harris County at 2004.

Data Collection and Analysis
The data are collected from two datasets—Census 2000 and the Texas Hospital Inpatient Discharge Public Use Data File 2004. The calculation of preventable hospitalizations is based on the Guide to Prevention Quality Indicators (version 3.1) and the data are analyzed with SAS (version 9.1).

Results
There were 43,427 preventable hospitalizations in Harris County in 2004. Female contribute to over 60% of all preventable hospital admissions after the exclusion of low birth weight neonates. Noon-elderly adults accounted for about 46% of all preventable hospitalizations. However, the non-elderly population accounted for 90% of preventable admissions for both diabetes short-term and perforated appendix.

The uninsured accounted for only 13% of all preventable hospitalizations. Among these preventable hospitalizations for the uninsured, 30% of them are Hispanic.

Whites contributed more than 50% of all preventable hospitalizations, followed by blacks (27%). About 17% of admissions are categorized as other races and missing. Twenty-one % of Medicare Part A admissions were preventable and 10% of the uninsured admissions were preventable. The uninsured admission is defined as primary payment source or as self-pay or indigent care.

Discussion
Contrary to literature suggesting that the elderly account for more preventable hospital admissions, we found that the non-elderly accounted for 90% of diabetes short-term complications and perforated appendix admissions. In addition we found that the uninsured accounted for more than 35% of preventable admissions for both diabetes short-term complications and perforated appendix admissions. It seems that non-elder adults and insurance status may be associated with higher rates of preventable hospitalization. This will be analyzed in the multivariate model.

In addition, the Hispanic population accounted for 17% of all preventable hospital admissions and more than 35% of preventable admissions for perforated appendix and low birth weight neonates. We would like to examine whether the Hispanic population is associated with higher rates of admission for these two preventable conditions.

Selected References