Rural Differences in Characteristics and Utilization Patterns of Medicaid Recipients
Karen Jones, PhD, MSPH, Kevin J. Bennett, PhD, Janice C. Probst, PhD

Background
- Medicaid offers significant health care access and coverage to millions of low-income and vulnerable Americans.
- Coverage for 72.3 million (M): 28.2 M children, 27.7 M non-elderly low-income adults including pregnant women, 10.6 M non-elderly disabled persons, and 5.8 M seniors in fiscal year 2017*.
- Rural populations vulnerable to disparities in health outcomes and health care access.
- Medicaid has a critical role in addressing disparities.

Methods
- Medicaid Analytic Extract (MAX) Personal Summary File for 2012; a 100% sample for Medicaid data from 35 states (AK, AL, AR, CT, DE, FL, GA, IA, IL, IN, KY, MD, MI, MN, MO, MS, MT, NC, NE, NJ, NV, NY, OH, OK, OR, PA, SC, SD, TN, TX, VA, VT, WA, WV, and WY).
- Demographics included age, gender, race/ethnicity, and eligibility type.
- Utilization variables included the number of inpatient hospital discharges and number of Medicaid covered days in long-term care (LTC) facilities.
- Rurality was defined using Rural Urban Commuting Area (RUCA) Codes: Urban (RUCA Codes 1 – 3), Micropolitan rural (Codes 4 – 6), Small rural (Codes 7 – 9), and Remote rural (Code 10).
- The study population (N=50,027,866) was limited to Medicaid recipients who remained alive for the entirety of 2012, had full data, eligible and enrolled during the year, or had non-negative values for discharges or expenditures.
- Distribution of Medicaid recipients by rurality, race/ethnicity, age group, and eligibility were calculated.
- The utilization patterns of Medicaid recipients were subset by rurality, and enrollment type.

Purpose
- The purpose of this analysis is to examine the characteristics of rural Medicaid recipients, and provide estimates of their overall health care utilization.

Results—Enrollee Characteristics
- More than 22% of the overall sample lived in rural areas, half of which were in Micropolitan rural areas.
- More than half of enrollees were children (51.8%), with 8.7% being age 65 or older.
- A higher proportion of rural enrollees were over the age of 65 (9.5% vs. 8.4%), and proportionately fewer were 18 or less (50.9% vs. 52.0%).
- As rurality increased, the proportion of enrollees over the age of 65 increased, to a high of 10.6% in isolated rural areas.
- The proportion that was female was high overall (57.4%), and slightly higher among rural residents.
- Among rural residents, 67.1% of the enrollees were white, compared to 38.5% among urban residents.
- As rurality increased, the proportion reported as White or American Indian / Alaska Native increased, while the proportion that was non-Hispanic Black or Hispanic decreased.
- Eligibility differed significantly, if only slightly, by rurality (Figure 1).

Results—Utilization
- The proportion with one or more inpatient stays was slightly higher among rural compared to urban enrollees (9.3% vs. 9.2%).
- This proportion was higher among fee-for-service (FFS) enrollees compared to managed care (MC) enrollees (Figure 2).
- The mean length of stay was lower among rural enrollees (3.8 days) than urban enrollees (4.8 days). Females had a consistently lower LOS than males.

Conclusions
- There are substantial differences in the demographic composition of Medicaid enrollees in rural areas, compared to urban ones. These differences are key to understand for both delivery considerations, but have policy making implications as well.
- More work needs to be done to understand the utilization differences further, such as lower length of stay among females, and long term care utilization among rural and non-white populations. These findings, if linked to outcomes of such care, could be utilized to determine the appropriateness of such care delivery.