Association of Medicare Program Type with Healthcare Utilization Among People Experiencing Homelessness

INTRODUCTION

After a period of steady decline, the number of people experiencing homelessness in the U.S.A. is on the rise again and has unfortunately accelerated during the COVID-19 pandemic. The health impacts of this shift are significant. Unhoused patients have a high burden of chronic disease and co-occurring behavioral and social complexity, and experience poor health outcomes and high rates of preventable healthcare spending.

Current approaches to financing care for this population, including fee-for-service Medicare and Medicaid, do not incentivize the level of coordination that unhoused patients need. Medicare Advantage (MA) plans, which provide capitated payments to organizations willing to assume full risk for the care of their members, have shown promise in reducing the acute care utilization of some populations with complex medical and social needs. However, the impact of MA on the utilization of individuals experiencing homelessness is unknown. In this study, we compared primary care, specialist, inpatient, and emergency department (ED) utilization between unhoused members enrolled in MA vs. traditional fee-for-service Medicare.

METHODS

To understand the impact of Medicare program type on utilization among individuals experiencing homelessness, we compared unhoused members enrolled in SCAN Health Plan, a MA health plan in California, with all unhoused members in California in the Medicare FFS 5% sample between January 1, 2019, and December 31, 2019. Housing status was ascertained using the ICD-10 diagnosis code for homelessness (Z590), defined as “persons lacking permanent or reliable shelter.” Members receiving hospice care were not included in this study. Descriptive analyses were used to characterize the groups, and the number of CMS Hierarchical Condition Categories (HCCs) was used as a proxy for health status. For each setting, the average number of visits per patient per year was compared between MA and traditional Medicare. The groups were case-mix adjusted for gender, age, Medicare entitlement reason (age, disability, or end-stage renal disease), and dual status using direct standardization.

For all comparisons, two-tailed t tests and chi-squared tests were used as appropriate. Statistical significance was defined as p < 0.05. All statistical analyses were performed using SAS. This study was determined not to be human subjects research and not reviewed by the SCAN Institutional Review Board.

RESULTS

Among individuals experiencing homelessness, 336 were enrolled in MA and 820 in traditional fee-for-service Medicare. Both groups were predominantly male and White, and had diagnoses in 2 or more HCCs (Table 1). On average, unhoused members in MA had higher total utilization (14.31 vs 11.06; p < 0.01) than those in traditional Medicare. However, they had more primary care visits (4.55 vs 2.58; p < 0.01), more ambulatory specialty visits (4.84 vs 2.47; p < 0.01), and fewer ED visits (3.23 vs 4.22; p = 0.01). They also had fewer inpatient visits (1.68 vs 1.79; p = 0.58), though this difference was not statistically significant (Table 2).

DISCUSSION

We found that enrollment in MA was associated with greater total utilization, but lower ED utilization and higher ambulatory utilization. This is evidence that MA may have more appropriate incentives and infrastructure to increase access to preventive, office-based care and reduce avoidable hospitalizations in a population that suffers from highly fragmented care. Since individuals experiencing
homelessness are known to have difficulty accessing ambulatory care, the increase in ambulatory (both primary and specialty) utilization may reflect the value of non-medical supplemental benefits in MA that address social needs. While this increase in ambulatory utilization may be more costly in the short run, it may actually improve patient outcomes and curtail costs in the long run.

Limitations include that this study was not a randomized controlled trial and there may be unmeasured confounders that influence which patients enroll in MA vs. traditional Medicare. For example, there is a greater proportion of younger members in the traditional Medicare group and these members likely qualified for Medicare because of a disability. Though we did adjust for age and entitlement reason in our analysis, it is possible that selection bias still produced differences in health status and utilization between the two groups. The MA population was also limited to a single health plan, so future work should confirm these patterns are consistent in a nationally representative sample and also whether differences in utilization are associated with changes in the total cost of care. Finally, our results are limited to data collected in 2019 and may not account for year-by-year changes in insurance eligibility and benefits.

The growing number of people experiencing homelessness, especially among older adults, has spurred recent calls to action at the state and federal levels. MA plans tailored to the unique needs of unhoused individuals, such as a Special Needs Plan for unhoused patients, may offer a promising solution to drive better outcomes and lower cost utilization among this vulnerable population.

### Table 1 Demographic Characteristics of Unhoused Members Enrolled in Medicare Advantage (SCAN Health Plan) and Traditional Fee-for-Service Medicare Between January 1, 2019, and December 31, 2019

|                          | Total N = 1156 | Medicare Advantage group N = 336 | Traditional fee-for-service Medicare group N = 820 | p value |
|--------------------------|---------------|---------------------------------|---------------------------------------------------|---------|
| Gender                   |               |                                 |                                                   |         |
| Male                     | 771 (66.7)    | 216 (64.3)                      | 555 (67.7)                                        | 0.27    |
| Age                      |               |                                 |                                                   |         |
| 85+                      | 16 (1.4)      | 9 (2.7)                         | 7 (0.9)                                           | < 0.01  |
| 80–84                    | 34 (2.9)      | 19 (5.7)                        | 15 (1.8)                                          |         |
| 75–79                    | 68 (5.9)      | 37 (11.0)                       | 31 (3.8)                                          |         |
| 70–74                    | 149 (12.9)    | 72 (21.4)                       | 77 (9.4)                                          |         |
| 65–69                    | 303 (26.2)    | 89 (26.5)                       | 214 (26.1)                                        |         |
| 55–64                    | 237 (20.5)    | 48 (14.3)                       | 189 (23.0)                                        |         |
| 45–54                    | 170 (14.7)    | 39 (11.6)                       | 131 (16.0)                                        |         |
| ≤ 44                     | 179 (15.5)    | 23 (6.8)                        | 156 (19.0)                                        |         |
| Race/ethnicity           |               |                                 |                                                   | < 0.01  |
| White                    | 746 (64.5)    | 211 (62.8)                      | 535 (65.2)                                        |         |
| Black                    | 218 (18.9)    | 56 (16.7)                       | 162 (19.8)                                        |         |
| Hispanic                 | 105 (9.1)     | 33 (9.8)                        | 72 (8.8)                                          |         |
| Asian                    | 33 (2.9)      | 7 (2.1)                         | 26 (3.2)                                          |         |
| Other                    | 54 (4.7)      | 29 (8.6)                        | 25 (3.0)                                          |         |
| HCC*                     |               |                                 |                                                   | 0.02    |
| ≥ 2                      | 672 (61.0)    | 183 (65.1)                      | 489 (59.6)                                        |         |
| 1                        | 179 (16.3)    | 51 (18.1)                       | 128 (15.6)                                        |         |
| 0                        | 250 (22.7)    | 47 (16.7)                       | 203 (24.8)                                        |         |
| Dual eligibility         |               |                                 |                                                   | < 0.01  |
| Dual                     | 860 (74.4)    | 213 (63.4)                      | 647 (78.9)                                        |         |
| Non-dual                 | 296 (25.6)    | 123 (36.6)                      | 173 (21.1)                                        |         |
| ESRD                     |               |                                 |                                                   | < 0.01  |
| No                       | 1119 (96.8)   | 312 (92.9)                      | 807 (98.4)                                        |         |
| Yes                      | 37 (3.2)      | 24 (7.1)                        | 13 (1.6)                                          |         |

*The number of Hierarchical Condition Categories (HCCs) was used as a proxy for health status. For the Medicare Advantage group, the number of HCCs was determined using 2018 data and data was only available for 281 members who were enrolled in SCAN in 2018 of the 336 unhoused members in 2019.

### Table 2 Average Number of PCP, Specialist, Inpatient, and ED Visits per Member per Year for Unhoused Members Enrolled in Medicare Advantage (SCAN Health Plan) and Traditional Fee-for-Service Medicare Between January 1, 2019, and December 31, 2019

| Average annual utilization per member | Total N = 1156 | Medicare Advantage group N = 336 | Traditional fee-for-service Medicare group N = 820 | p value |
|--------------------------------------|---------------|---------------------------------|---------------------------------------------------|---------|
| Total visits                         | 12.00         | 14.31                           | 11.06                                              | < 0.01  |
| PCP visits                           | 3.15          | 4.55                            | 2.58                                               | < 0.01  |
| Specialist visits                    | 3.16          | 4.84                            | 2.47                                               | < 0.01  |
| Inpatient visits                     | 1.76          | 1.68                            | 1.79                                               | 0.58    |
| ED visits                            | 3.94          | 3.23                            | 4.22                                               | 0.01    |
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Declarations:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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