Home-Based Medical Care Utilization in Medicare Advantage and Traditional Medicare among Enrollees with ADRD

Disclosures
This research has been supported by a grant from the National Institute on Aging (1R56AG089009). The authors have no conflicts of interest.

Background
Alzheimer's disease and related dementias (ADRD) increase the risk of homeboundedness and the need for home-based medical care (HBMC), provided as physician or advanced practice provider house calls in private residences and assisted living facilities. While prior studies in Traditional Medicare (TM) have reported limited HBMC provider availability and variable access, less is known about access patterns in Medicare Advantage (MA). Additionally, differences in telemedicine adoption between TM and MA as an alternative to in-person care remain unclear.

Objective
To compare the utilization of HBMC, telemedicine, and office visits among TM and MA enrollees with ADRD, using national Medicare claims and survey data.

Methods
We conducted a cohort analysis using 2021–2022 Medicare claims/encounter data ("Medicare data") for a nationally representative sample of continuously enrolled MA (N=954,141) and TM (N=940,575) beneficiaries. Enrollee characteristics were measured in 2021; outcomes were assessed in 2022. Given concerns regarding use of health risk assessments to "upcode" patient risk profile, we excluded chart field records, annual wellness and initial preventive physical exams, and single annual HBMC private residence visits. Individuals with ADRD and comorbidities were identified via 2021 diagnosis codes, and frailty was measured using the Kim claims-based measure. Outpatient visit types (HBMC, telemedicine, office) were identified by procedure codes, and our main outcomes were the annual number of visits by mode. To examine differences on the extensive and intensive margins, we defined HBMC users as those with ≥2 HBMC visits/year and measured the proportion (incidence) of HBMC users (extensive margin) and the number of HBMC visits among HBMC users (intensive margin). Adjusted differences (incidence rate ratios) between TM and MA were estimated using Poisson regression models with hospital referral region fixed effects and inverse propensity of MA enrollment weights to account for selection into plan type by observed individual characteristics. We separately examined the MA vs. TM differences in HBMC visits delivered at private residences and assisted living facilities. As Medicare data alone often fail to identify dementia and functional limitations accurately, we used Health and Retirement Study-Medicare linked data ("HRS-Medicare data") for 2018-2019 to assess sensitivity of the findings in HBMC use. Dementia was identified using the Langa-Weir algorithm based on cognitive assessments. Patient demographics, comorbidities, and functional limitations were obtained from survey responses.

Population Studied
Adults aged 66 or older with ADRD included 115,431 individuals in Medicare data (MA=54,278 and TM =61,153) and 687 individuals in HRS-Medicare (MA=295 and TM=385).

Results
In Medicare data, mean annual outpatient visits were similar for TM and MA (MA=7.8; TM=7.9). However, TM enrollees had more HBMC visits (MA=1.3; TM=1.9) and fewer telemedicine visits (MA=0.9; TM=0.7). Adjusted analyses showed the number of HBMC visits was 32% higher (IRR 1.32; 95% CI, 1.22-1.42) in TM compared to MA. In contrast, office visits were 5% lower (IRR=0.95; 95% CI, 0.93-0.98) and telemedicine visits 7% lower (IR= 0.93; 95% CI, 0.87-1.00) in TM relative to MA. The combined number of HBMC and telemedicine visits were 18% higher in TM (IRR=1.18; 95% CI, 1.11-1.24). The differences in HBMC visits were observed for visits at private residences (IRR=1.33; 95% CI, 1.15-1.53) and assisted living facilities (IRR=1.31; 95% CI, 1.20-1.43). Among enrollees with ADRD, the proportion of HBMC users was higher in TM (20.3%) than MA (15.4%), with an adjusted rate 22.0% higher in TM (IRR=1.22; 95% CI, 1.16-1.29). Among HBMC users, the number of HBMC visits was also larger among TM enrollees (TM=9.2; MA=8.3; adjusted rate 6.9% higher [IRR1.07; 95% CI, 1.01-1.15]). These trends were consistent across subgroups defined by frailty, age, sex, race/ethnicity, and dual Medicaid eligibility. Analyses using HRS-Medicare data from 2018–2019 qualitatively corroborate the observed patterns; however, the absolute levels of HBMC use and user incidence differ. The number of HBMC visits (MA=0.8, TM=1.4) and incidence of HBMC users (MA=12.2%, TM=16.9%) were higher in TM compared to MA.

Conclusions
Enrollees with ADRD in TM have a higher incidence of HBMC users and intensity of HBMC use compared to those in MA.

Implications
Further research is needed to determine whether lower HBMC use in MA reflects a difference in need or limited access.