CHAPTER 3

Examining home health care use among Medicare Advantage enrollees

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Chapter summary

The Commission regularly examines fee-for-service (FFS) Medicare beneficiaries' spending on, and use of, health care services paid for by Medicare's FFS prospective payment systems and fee schedules. Home health is the most frequently used post-acute care (PAC) setting among FFS beneficiaries. The benefit covers treatment for beneficiaries needing skilled care in their home. It can be used after an acute care hospitalization or skilled nursing facility (SNF) stay, or without a prior institutional stay.

Many published studies have examined home health care use among Medicare Advantage (MA) enrollees, frequently with the goal of contrasting use with FFS beneficiaries. However, these studies have relied on data that have limitations for drawing nationally representative conclusions. Home health care use by MA enrollees is reported in the home health MA encounter data submitted by plans and in the Outcome and Assessment Information Set (OASIS) submitted by home health agencies (HHAs). Although CMS requires that both data sources be reported for all Medicare beneficiaries receiving home health care, prior Commission work has found that both data sets are incomplete. Combining these data sources allows for a more complete view of nationwide home health care use among MA enrollees than either data

In this chapter

source alone: Among MA enrollees with a home health encounter record or an OASIS record in 2021, 88 percent had both types of data, 7 percent had only a home health encounter record, and 5 percent had only an OASIS record.

Incorporating beneficiary, plan, and provider characteristics into the combined data and using multivariable regressions, we estimated the probability of home health care use among FFS and MA beneficiaries in 2021 and, conditional on home health care use, visits per beneficiary. We found that the overall rate of home health use among MA enrollees was slightly lower than among FFS beneficiaries (8.3 percent vs. 8.6 percent) after adjusting for beneficiary characteristics. However, there were differences depending on whether beneficiaries had an acute care hospitalization during the year. For those with a hospitalization, the adjusted probability of home health care use was 3.2 percent higher among MA enrollees than FFS beneficiaries (41.7 percent vs. 40.4 percent), which could suggest that home health care is sometimes used in MA as a substitute for other types of post-acute care, such as costlier SNF stays. Among beneficiaries without a hospital stay, the probability of home health care use was 13.7 percent lower among MA enrollees than FFS beneficiaries (3.7 percent vs. 4.2 percent), which could be related to plans' implementation of prior authorization and home health cost sharing (which do not exist in FFS) or to HHAs' preferences for admitting FFS beneficiaries.

We also examined total visits received by home health care users and found that enrollment in MA was associated with 2.1 (11 percent) fewer visits per beneficiary per year compared with FFS (18.2 vs. 20.4 visits per user), on average, after controlling for beneficiary characteristics, including functional and clinical health status derived from OASIS data. This difference in the number of visits per beneficiary was similar regardless of whether beneficiaries had a prior acute care hospital stay.

We examined how use of home health care differed among MA enrollees by plan attributes. We found that enrollment in plans with home health cost sharing was associated with both lower rates of home health care use and a lower average number of visits per user compared with enrollment in plans without home health cost sharing. Enrollment in preferred provider organization plans (vs. HMO plans) was associated with more visits per user but no change in the probability of any home health care use. We did not find any differences in the probability of home health care use for those enrolled in provider-sponsored plans relative to other types of plans, but we did find that

beneficiaries enrolled in provider-sponsored plans tended to have fewer visits in the year compared with those not enrolled in such plans.

The HHAs that treated higher shares of MA enrollees in 2021 tended to be larger than those treating lower shares of MA enrollees. Overall, fewer HHAs treated MA enrollees (4,600 HHAs treated at least 20 MA enrollees, while 7,000 HHAs treated at least 20 FFS beneficiaries). After controlling for the HHA treating the beneficiary, we found that home health users in MA received 1.8 fewer visits than those in FFS (similar to our estimate that does not control for which HHA treated the patients). This finding indicates that, even within the same HHA, MA enrollees received fewer visits, on average, than FFS beneficiaries.

We emphasize that it is not possible to draw conclusions on the appropriateness of care based solely on observing differences in use (and most of the differences we observed are relatively modest). Home health care is one component of the broader PAC landscape, and its use is likely affected by the availability of other PAC providers, as well as other factors such as types of MA plans, their provider networks, the supplemental benefits they offer, and the prior hospitalization (if there is one). Thus, overall PAC use among MA enrollees may differ from that of FFS beneficiaries in important ways that may not be apparent when examining a single sector. In future work, we plan to incorporate analyses of MA enrollees' use of other PAC settings (including SNFs and inpatient rehabilitation facilities). ■

Medicare home health care consists of skilled nursing, physical therapy, occupational therapy, speech therapy, aide services, and medical social work provided to beneficiaries in their homes. To be eligible for Medicare's home health benefit, beneficiaries must need part-time (fewer than eight hours per day) or intermittent skilled care to treat their illnesses or injuries and must be unable to leave their homes without considerable effort. Most fee-for-service (FFS) Medicare beneficiaries receive home health care after an acute inpatient hospitalization or skilled nursing facility (SNF) stay, but home health care can also occur without a prior institutional stay. In 2023, about 2.7 million FFS Medicare beneficiaries received home care, and the program spent $15.7 billion on home health care services under the home health prospective payment system (PPS) (Medicare Payment Advisory Commission 2025).

Many published studies have examined home health care use among Medicare Advantage (MA) enrollees, frequently with the goal of contrasting use with FFS beneficiaries. However, these studies have relied on data that have limitations for drawing nationally representative conclusions. Home health care use by MA enrollees is reported in the home health MA encounter data submitted by plans and in the Outcome and Assessment Information Set (OASIS) submitted by home health agencies (HHAs). Although CMS requires that both data sources be reported for all Medicare beneficiaries receiving home health care, prior Commission work has found that both data sets are incomplete (Medicare Payment Advisory Commission 2024a).

In this chapter, we report the results of an analysis of home health utilization by MA enrollees using a data set that combines encounter and OASIS data. We examine how home health care use varies by beneficiary, plan, and provider characteristics. We apply multivariable regression analyses to explore how use of home health care differs by relevant MA plan characteristics and by MA versus FFS after adjustment for beneficiary demographics and functional clinical health status (when available). We also describe the HHAs that treat Medicare beneficiaries and examine how they differ by the share of their Medicare patients who are covered by MA. Where relevant, we include information we obtained from speaking with the leadership of a few large HHA chains.[1] During these discussions, we asked the HHA representatives about their experiences treating MA enrollees and working with MA plans.

This chapter examines only home health visits that are part of the home health benefit, as reported by plans and HHAs. MA enrollees may receive other services, depending on their MA plan, that are external to the Medicare home health care benefit but may be similar to aspects of the benefit (such as certain types of in-home health care that some plans offer as supplemental benefits). With the information available, it is not possible to draw conclusions on the appropriateness of the amount of care delivered. Further, home health care is just one component of the broader post-acute care (PAC) landscape and is affected by the availability and use of other types of PAC providers, such as skilled nursing facilities (SNFs). In future work, we plan to explore MA enrollees' use of other PAC providers such as SNFs and inpatient rehabilitation facilities (IRFs).

Background

Medicare beneficiaries enrolled in Part A and Part B may choose to receive benefits from private MA plans instead of traditional FFS Medicare. MA plans must cover Part A and Part B services but can also offer supplemental benefits to enrollees and may use alternative payment models and care-management techniques to manage service use and steer enrollees to preferred providers (MA plans may contract with a subset of providers, subject to certain network adequacy requirements). The Commission has long been interested in better understanding the services used by MA enrollees. Such information is critical to overseeing Medicare's payments to MA plans—which reached $494 billion in 2024—and to ensuring that Medicare beneficiaries enrolled in MA plans (now more than half of eligible beneficiaries) receive the full Medicare benefit (Medicare Payment Advisory Commission 2024b). Better understanding of service use by MA enrollees could help improve MA payment policy, facilitate comparison with FFS Medicare, and generate new policy ideas that could be applied across the entire Medicare program.

Several recent studies have examined MA enrollees' home health care use, mostly with the goal of

comparing use and outcomes with those of FFS beneficiaries. Most studies rely on home health assessment data collected on OASIS, which must be submitted by HHAs for all Medicare patients (see below for further information on OASIS collection) (Burke et al. 2024, Kim et al. 2025, Loomer et al. 2021, Skopec et al. 2020). However, while OASIS data can provide information on the use of home health care, these data do not contain information on home health visits provided during an episode of care. To assess home health visits, some studies use proprietary claims for a subset of MA enrollees using home health care. Prusynski et al. (2024) used data on home health services provided by a large nonprofit HHA, and Casebeer et al. (2022) reported on the home health services provided to beneficiaries enrolled in Humana plans, which covered about 20 percent of MA enrollees from January 2017 to June 2018. Other studies examined national survey data on home health use by MA and FFS beneficiaries (Achola et al. 2023, Videon and Rosati 2025). Videon and Rosati (2025) used the Medicare Current Beneficiary Survey (MCBS) to compare receipt of home-based visits by MA and FFS beneficiaries based on recall. (Although FFS beneficiaries' home visits were validated with FFS claims, the authors could not do the same for MA enrollees.)

The findings across these studies were mixed. Most studies found lower rates of home health care use among MA enrollees than FFS beneficiaries, though not all studies adjusted for characteristics of MA and FFS beneficiaries that could affect utilization. One study found the amount and types of visits to be similar between MA and FFS, though differences in outcomes were mixed. Ma et al. (2024) reviewed 30 studies on MA and FFS home health care from 1997 to 2022 and presented mixed findings on use, intensity of care, and outcomes, though the researchers noted that studies using more recent data tended to find lower use rates among MA enrollees.

These existing studies all have limitations. Studies using OASIS data as the source of home health care information take advantage of the requirement that HHAs submit assessment data directly to CMS for all their Medicare patients. However, our analyses show that about 7 percent of beneficiaries with any home health care records (home health encounter or OASIS) have only MA encounter data—that is, they were not found in the OASIS data (this discrepancy is discussed further below). Moreover, while OASIS is a rich source of clinical and functional data on the patient, OASIS contains no information on the number, length, or type of home health visits received by the patient during a stay. Claim-level information is needed to obtain such data on visits. Studies mentioned above that use proprietary claims of a provider or plan can report information on visits for a particular sample but do not provide the full, national picture. In addition, several of the studies referenced above focused solely on home health care following an acute inpatient discharge so as to include information from the prior hospitalization. However, this focus excludes the approximately 40 percent of home health stays that do not have a prior institutional stay.[2]

Notably, none of these studies use MA encounter data to determine home health care utilization among MA enrollees. Since 2012, MA plans have been required to submit to Medicare a record of each encounter that MA enrollees have with a health care provider, though the data were not available to researchers until more recently.[3] Complete and accurate encounter data would be the best vehicle for learning about the care provided to MA enrollees. As we reported in our June 2024 report to the Congress, there have been improvements in home health encounter data over time, and combining encounter and OASIS data provides a more complete view of nationwide home health care among MA enrollees than using either source alone (Medicare Payment Advisory Commission 2024a).

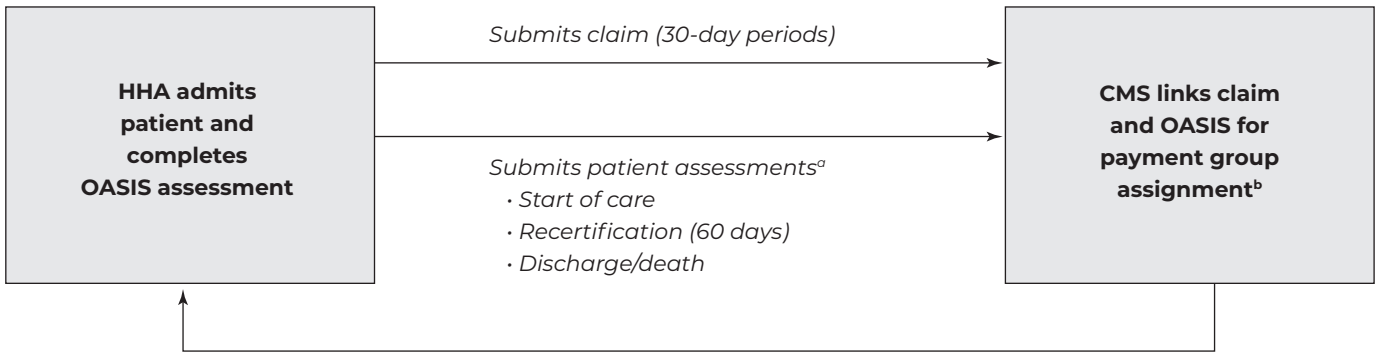
FFS and MA process home health data differently

Differences in how home health care data are processed and flow may affect how complete and standardized the data are between MA and FFS. The three main sources of data to examine home health use among MA and FFS beneficiaries are:

- **Home health claims data** for FFS beneficiaries contain adjudicated claims submitted by HHAs to CMS for payment. The data contain payments made under the home health PPS, the patient's PPS case-mix group, and diagnosis codes, revenue center codes, dates and number of visits, the type of visit (e.g., skilled nursing, physical therapy), and the length of the visit.

FIGURE 3-1

HHAs submit both claims and OASIS data directly to CMS for FFS Medicare beneficiaries



Note: HHA (home health agency), FFS (fee-for-service), OASIS (Outcome and Assessment Information Set).
[a] OASIS assessments are also required at other time points (such as returning after an inpatient hospitalization).
[b] CMS links the claim and the start-of-care assessment in determining payment.
[c] CMS levies a 2 percent public-reporting penalty on FFS claims depending on the HHA's percentage of incomplete quality episodes that is calculated based on being able to match start and end assessments for all Medicare patients, including MA enrollees.

Source: CMS claims processing manual (Centers for Medicare & Medicaid Services 2023) and the home health quality reporting requirements. See https://www.cms.gov/medicare/quality/home-health/home-health-quality-reporting-requirements.

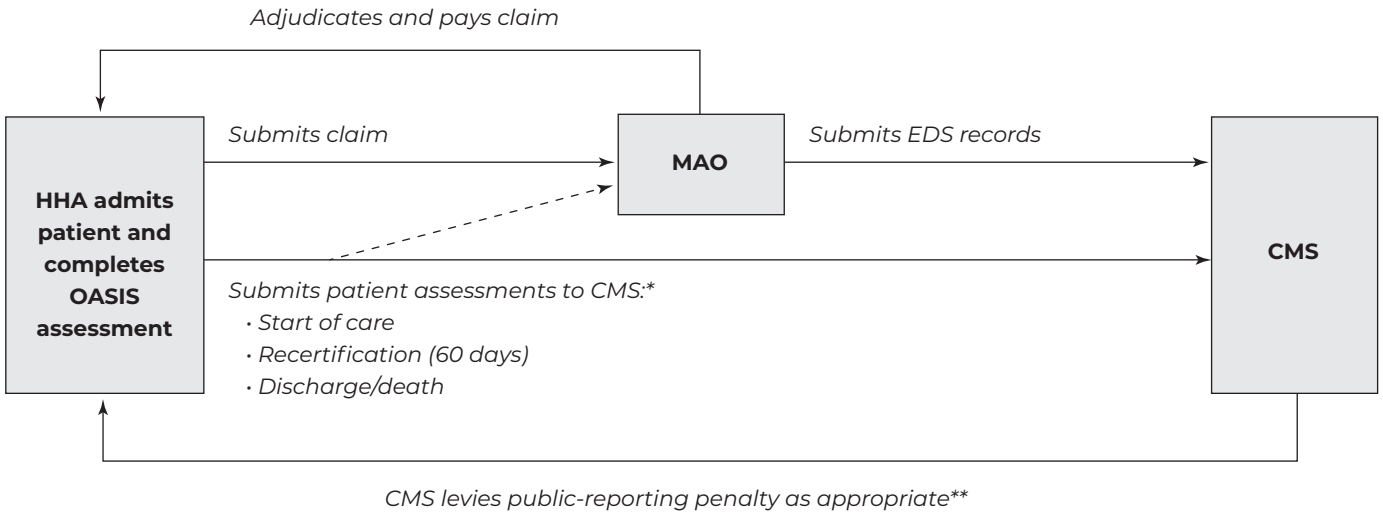
- **Home health encounter data** for MA enrollees include many of the same fields as the home health claims data, as required by CMS (Centers for Medicare & Medicaid Services 2022). MA plans should include what the patient's case-mix group would be under the home health PPS. Encounter data also contain diagnosis and revenue center codes and dates plus the number, type, and length of visits.
- **OASIS assessments** are required for all Medicare beneficiaries receiving skilled home health care from Medicare-certified HHAs.[4] The OASIS collects detailed demographic, clinical, and functional information on the patient. Certain items on OASIS are used to case-mix adjust payments in the home health PPS for FFS beneficiaries (and may also be used by some MA plans that set payment rates using the home health PPS). Clinicians need to complete OASIS upon start of care, every 60 days that the beneficiary remains a patient, and upon discharge or death. OASIS data are also required if the patient is transferred to the hospital and returned to the HHA.

As shown in Figure 3-1, under FFS Medicare, the HHA submits both claims and OASIS data directly to CMS, which processes the claim and ensures a corresponding matching OASIS submission (otherwise the claim is denied). Thus, some data auditing and cleaning is conducted during the payment adjudication process.

In contrast, under MA, HHA claim submission, adjudication, and payment occur between the HHA and Medicare Advantage organization (MAO) and do not involve CMS (Figure 3-2, p. 146). The process may differ across plans and by whether the HHA is within the MAO's network. Payment may or may not be based on the home health PPS used by FFS and instead can be made per visit or according to another agreed-upon payment mechanism. MAOs are required to submit home health encounter data to CMS and the

FIGURE 3-2

HHAs submit claims for MA enrollees to plans, and CMS is not involved in claims adjudication



Note: HHA (home health agency), MA (Medicare Advantage), OASIS (Outcome and Assessment Information Set), MAO (Medicare Advantage organization), EDS (encounter data set). The dotted line reflects the fact that whether HHAs submit any (and how much) OASIS information to MAOs varies by plan.
* OASIS assessments at other time points (such as returning after an inpatient hospitalization) are also required.
** CMS levies a 2 percent public-reporting penalty on FFS claims depending on the HHA's percentage of incomplete quality episodes (which is based on being able to match start and end assessments for all Medicare patients, including MA enrollees).

Source: CMS encounter data processing manuals (Centers for Medicare & Medicaid Services 2022) and home health quality-reporting requirements. See https://www.cms.gov/medicare/quality/home-health/home-health-quality-reporting-requirements.

encounter record; however, unlike in FFS Medicare, the HHA does not directly send any claim information to CMS.

For both FFS and MA patients, CMS requires HHAs to submit OASIS assessments of patients at multiple points throughout their care.[5] Through the Home Health Quality Reporting Program, CMS checks whether the start and end of care assessments have been submitted for a given home health stay, ensuring that a complete set exists to construct a quality episode for computing performance measures. HHAs that submit 90 percent or more of the required data are considered to have satisfied the requirement, while agencies below this threshold are subject to a 2 percentage point reduction of FFS payments. While this program incentivizes HHAs to submit complete OASIS data for MA patients, there are two limitations. First, if an HHA does not submit any assessments for an MA patient, CMS would not know that the HHA provided any home health services to the MA enrollee. Second, even under this program, CMS does not require that HHAs submit all of their assessments (the threshold is only 90 percent).

We expect that, because of these different processes, MA enrollees' home health encounter data and OASIS information may be less complete than information available under FFS Medicare. However, we have observed improvements in the data over time, with a higher degree of correspondence in instances of home health use between encounter data and OASIS data in recent years (Medicare Payment Advisory Commission 2024a). Thus, we contend that using these data can

TABLE 3–1

Most Medicare beneficiaries with any home health care records appeared in both types of home health data sources, 2021

	MA		FFS	
Home health data source	**Number**	**Percent**	**Number**	**Percent**
Any (encounter/claim *or* OASIS)	1,921,640	100%	2,304,700	100%
Matched (home health encounter/claim *and* OASIS)	1,689,000	87.9	2,265,500	98.3
Had only home health encounter/claim	140,600	7.3	2,800	<1
Had only OASIS	92,100	4.8	36,500	1.6

Note: MA (Medicare Advantage), FFS (fee-for-service), OASIS (Outcome and Assessment Information Set). "Any (encounter/claim or OASIS)" includes beneficiaries present in either the home health encounter data for MA enrollees (or claim for FFS beneficiaries) or OASIS data in the year. "Matched (home health encounter/claim and OASIS)" refers to beneficiaries found in both the encounter data and OASIS for MA enrollees or both the home health FFS claims and OASIS for FFS beneficiaries. "Had only home health encounter/claim" are beneficiaries found only in the home health encounter data for MA enrollees or found only in the home health claims for FFS beneficiaries. "Had only OASIS" are beneficiaries found only in the OASIS data and not in the home health encounter or claims data. The text box on pp. 148–149 provides more detail on matching methods. Counts are rounded to the tens, but percentages are calculated on unrounded numbers.

Source: MedPAC analysis of enrollment, home health encounter, claims, and OASIS data from CMS.

yield important insights on home health care use by MA enrollees, especially when the data sources are combined. To address concerns about data completeness, below, we define an analytic sample that includes counties with indications of higher data completeness.

Methods for estimating home health care use by MA enrollees

For this analysis, we combined home health encounter and OASIS data to identify MA enrollees who used home health care in 2021, the most recent year of encounter data available at the time of this analysis.[6] We assessed the characteristics of beneficiaries who appear in both data sources, only encounter data, or only OASIS data. We applied the same method to identify FFS beneficiaries who used home health care. We then used multivariable regressions to explore how use of home health care differs by relevant MA-plan characteristics and by MA versus FFS enrollment.

Combining home health encounter and OASIS data sources to identify home health care users

We defined the population of Medicare beneficiaries as those with 12 months of Part A and Part B coverage in 2021. We used the Medicare enrollment file to assign beneficiaries to MA or FFS and applied other cleaning steps described in the text box on pp. 148–149. As shown in Table 3-1, 1.9 million MA enrollees had a home health encounter record or an OASIS assessment. Of these sources, 87.9 percent matched by having both a home health encounter record and OASIS records, 7.3 percent had home health encounter records only, and 4.8 percent had OASIS records only (the text box on pp. 148–149 provides further detail on how these match rates were computed).[7] In contrast, 98.3 percent of the 2.3 million FFS beneficiaries with any home health record were found in both the FFS claims and OASIS data during the same year (the remaining 1.6 percent of FFS beneficiaries were identified as using home health care through OASIS only, while claims-only beneficiaries made up less than 1 percent). The lower match rate among MA enrollees was not surprising

Data inclusion and cleaning steps

To analyze Medicare Advantage (MA) and fee-for-service (FFS) home health care use, we started with 64 million Medicare beneficiaries enrolled in Medicare as of January 2021 (37 million FFS beneficiaries and 27 million MA enrollees) and made the following restrictions:

- kept only Medicare beneficiaries who had 12 months of Part A and Part B;
- among MA enrollees, kept only those enrolled in HMO or preferred provider organization MA plans (i.e., excluded cost plans, private FFS plans, medical savings account plans, and the Program of All-Inclusive Care for the Elderly plans, for which reporting is not required or would not be as complete) for all 12 months; and
- kept only beneficiaries for whom Medicare is the primary payer in all 12 months.

We excluded beneficiaries who died during the year or joined Medicare in the middle of the year. We also excluded beneficiaries who switched from MA to FFS (or vice versa) during the year (that is, we required beneficiaries in the sample to have 12 months of FFS or 12 months of MA). (Beneficiaries who died in the year or switched payers would be important to examine in future analysis.) After applying these restrictions, we retained 50 million Medicare beneficiaries (27 million FFS beneficiaries and 23 million MA enrollees). We then determined whether the beneficiaries had any records in the FFS home health claims, MA home health encounter records, or OASIS data. We applied the following cleaning steps to each of these data sources:

- **Home health FFS claims data:** We excluded claims for which the Medicare payment amount was zero (this excluded about 5 percent of beneficiaries with home health claims records in the year).[8]

(continued next page)

given differences in the processes for submitting data to CMS described above.

As mentioned above, many studies rely on OASIS data alone to examine utilization among MA home health users. Based on our findings, this method would exclude about 7 percent of MA enrollees with any home health care record. To better understand these beneficiaries, we compared their characteristics (and those of the OASIS-only beneficiaries) with matched MA enrollees with both types of data (Table 3-2, p. 150). Compared with the matched group, MA enrollees who had only home health encounter records were more likely to be Hispanic (20 percent vs. 10 percent), less likely to have a hospitalization in the year (56 percent vs. 61 percent), more likely to be located in an urban area (95 percent vs. 86 percent), and more likely to be enrolled in an HMO plan (76 percent vs. 59 percent). There were also some differences among the OASIS-only MA enrollees: Compared with the matched group, they were more likely to be dually eligible (41 percent vs. 34 percent) and less likely to have a hospital stay in the year (52 percent vs. 61 percent). Given that the bulk of MA enrollees had both types of home health care records, the matched group was very similar to MA enrollees with any type of home health record.

Table 3-3 (p. 151) shows the number and type of home health care visits received by the matched group and the encounter-only group during the year. Those with home health encounter data only received fewer visits on average (17 vs. 21) and were more likely to have received only one visit in the year (10 percent vs. 3 percent). They also tended to receive a higher share of

Data inclusion and cleaning steps (cont.)

- **Home health MA encounter data:** We removed voided or canceled claims and chart reviews and kept only final action claims (this excluded less than 1 percent of beneficiaries with home health encounter records in the year) (Centers for Medicare & Medicaid Services 2022).
- **Outcomes and Assessment Information Set (OASIS):** We necessarily excluded OASIS assessments missing the beneficiary identifier needed to link to other Medicare data sources. Of the 18 million OASIS records in 2021, about 1.2 million (6 percent) were missing this beneficiary identifier. Based on the OASIS payer source, 970,000 of these records were paid by Medicaid (85 percent of the records missing the beneficiary identifier), but about 180,000 (the remaining 15 percent) indicated MA as the payer. These records represented fewer unique beneficiaries since OASIS data are collected at various time points (about 85,000 of these records were for start or resumption of care). Some of these beneficiaries may have had a home health encounter record and thus still would be included in our rates of home health use. However, to the extent that some of these approximately 85,000 beneficiaries did not have a home health encounter record, we may be understating MA enrollees' rate of home health use.

We considered MA enrollees identified as having a record in both the home health encounter and OASIS data (or the claims and OASIS data for FFS beneficiaries) as "matched." To accommodate slight differences in the timing of the encounter or claims records and assessment data submission, we allowed for matches to occur in the month prior to or after 2021. That is, MA enrollees with home health encounter records during 2021 were counted as matches if they had any OASIS record any time between December 1, 2020, and January 31, 2022. Likewise, we counted beneficiaries with OASIS during 2021 as matches if they had a home health encounter record or claim any time between December 1, 2020, and January 31, 2022.[9] ■

home health aide visits (16 percent) than those in the matched group (6 percent).[10]

Match rates varied by the MA parent organization: Across the 185 parent organizations, the match rate ranged from 75 percent to 97 percent at the 10th to 90th percentiles. The rates of encounter data only and OASIS data only also varied across parent organizations. Last, we found that HHAs treating beneficiaries in the encounter data–only group varied in size and geographic location but were not notably different across these dimensions compared with HHAs treating MA enrollees in the matched group.

Taken together, these analyses show that while MA home health care users with only one type of home health data source appear to differ from those with both types of data, there is no reason why they should not be included in overall counts of home health care use. We will continue to monitor data match rates and the characteristics of MA enrollees found in only one data source.

Data completeness varied by county

Although the encounter-to-OASIS-data match rate of 88 percent among MA enrollees is high, the nontrivial size of the remaining 12 percent means that it is possible that some home health care is occurring that we do not observe in either data source. If home health care does occur that is not picked up in either data source, we would underestimate the home health use rate among MA enrollees. We found that the match rate varies across the country, from 73 percent to 98 percent at the 10th to 90th percentiles (Table 3-4, p. 152). Counties meeting an 85 percent match-rate

TABLE 3–2

MA home health care users with only encounter or OASIS records differed from those with both types of records, 2021

	Share of beneficiaries			
	Any home health (EDS or OASIS)	Matched (EDS and OASIS)	Only EDS	Only OASIS
Percent of total	100%	88%	7%	5%
Beneficiary characteristics				
Current eligibility status				
Aged	90	90	92	87
Disabled	10	9	8	13
Sex				
Female	62	62	61	58
Male	38	38	39	42
Age categories				
<45	1	1	1	2
45–64	10	10	8	12
65–79	49	49	48	50
80+	41	41	42	37
Race/ethnicity				
Non-Hispanic White	70	71	58	69
Black	15	15	14	14
Asian/Pacific Islander	2	2	5	2
Hispanic	11	10	20	12
American Indian/Alaska Native	<1	<1	<1	<1
Other or unknown	2	2	2	2
Urban/rural				
Metropolitan	87	86	95	88
Micropolitan	8	9	3	8
Rural	5	5	1	4
Dually eligible or had LIS during year				
No	65	66	64	59
Yes	35	34	36	41
Had hospital stay in year				
No	39	39	44	48
Yes	61	61	56	52
Plan characteristics				
MA plan type				
HMO plan	61	59	76	64
PPO plan	39	41	24	36
Provider-sponsored plan				
No	85	85	80	86
Yes	15	15	20	14
Had home health care cost sharing				
No	82	82	89	85
Yes	18	18	11	15

Note: MA (Medicare Advantage), OASIS (Outcome and Assessment Information Set), EDS (encounter data set), LIS (low-income subsidy), HMO (health maintenance organization), PPO (preferred provider organization). "Any home health (EDS or OASIS)" includes MA enrollees present in either the home health encounter data or OASIS data in the year. "Matched (EDS and OASIS)" are MA enrollees found in both the encounter data and the OASIS data. "Only EDS" are MA enrollees found only in the home health encounter data and not the OASIS data. "Only OASIS" are MA enrollees found only in the OASIS data and not in the home health encounter data. Table 3-1 (p. 147) provides counts of MA enrollees in each of the subgroups.

Source: MedPAC analysis of Medicare enrollment, home health encounter, and OASIS data from CMS.

TABLE 3–3

MA home health care users with only encounter data received fewer overall visits per beneficiary but more home health aide visits compared with matched users

	MA enrollees with home health encounter records	
	Matched (EDS and OASIS)	Only EDS
Mean visits per beneficiary	21	17
Median visits per beneficiary	13	9
(25th to 75th percentile)	(7 to 24)	(4 to 17)
Share of beneficiaries with one visit	3%	10%
Share of visits per beneficiary by visit type		
Skilled nursing	43%	38%
Therapy	50	45
Home health aide	6	16
Medical social services	1	<1

Note: MA (Medicare Advantage), EDS (encounter data set), OASIS (Outcome and Assessment Information Set). "Matched (EDS and OASIS)" are MA enrollees found in both the home health encounter data and OASIS. "Only EDS" are MA enrollees found only in the home health encounter data and not OASIS data. The table includes 1.6 million matched MA enrollees and 124,000 encounter data–only MA enrollees who were identified as having home health care visits in the year. (The text box on p. 161 describes how home health care visits were defined.)

Source: MedPAC analysis of enrollment, home health encounter, and OASIS data from CMS.

threshold were identified as having higher match rates. Applying this criterion increased the average match rate to 94 percent but decreased the number of counties included in the sample by 17 percent (to 83 percent of counties). The counties meeting the high-match-rate threshold accounted for 72 percent of Medicare beneficiaries in our population. Compared with the full population, the high-match-rate counties had similar shares of MA enrollees and rural Medicare beneficiaries (Table 3-4, p. 152). We did find regional variation in match rates. Counties that were excluded were more likely to be in the West: 22 percent of the Medicare population lived in the West census region, but only 15 percent of all Medicare beneficiaries in the high-match counties lived there (data not shown).

Home health care analytic samples

Our analytic sample was composed of 36 million Medicare beneficiaries who resided in counties meeting the high-match-rate threshold (Table 3-5, p. 152). Among these beneficiaries, 1.4 million MA enrollees and 1.7 million FFS beneficiaries had at least one home health record in 2021.

The last row of Table 3-5 (p. 152) shows the number of beneficiaries with visit information from the encounter file and assessment information from the OASIS file. This row includes beneficiaries who had at least one home health care visit and who had at least one OASIS assessment for the start or resumption of care in the year. The presence of the assessment for the start or resumption of care was required since we use information on functional and clinical status of beneficiaries from the beginning of their home health stay rather than from interim assessments made for long-term home health care users.[11] We excluded any beneficiaries who had visits that occurred before their first OASIS assessment in the year since they likely started care in the prior year. Table 3-5 shows that our

TABLE 3–4

Most Medicare beneficiaries resided in counties with a high MA home health data match rate, 2021

	Match rate (EDS and OASIS)	Counties (in percent)	Medicare beneficiary share	MA share of Medicare beneficiaries	Rural Medicare beneficiary share
All counties	88%	100%	100%	38%	7%
10th to 90th percentile	(73% to 98%)				
High-match-rate counties	94	83	72	39	8
10th to 90th percentile	(87% to 98%)				

Note: EDS (encounter data set), OASIS (Outcome and Assessment Information Set), MA (Medicare Advantage). "High-match-rate counties" refers to the subset of counties for which match rates between MA home health encounter data and OASIS data were at least 85 percent. "Match rate (EDS and OASIS)" is the share of MA enrollees with home health encounter records or OASIS records who had both types of records in the year. The 10th to 90th percentile match rates by county are shown in parentheses.

Source: MedPAC analysis of enrollment, home health encounter, and OASIS data from CMS.

analytic sample for assessing home health care visits per beneficiary consisted of 1.0 million MA enrollees and 1.3 million FFS beneficiaries.

Analytic approaches for estimating the probability of home health care use and home health visits per user

We used multivariable regressions to examine the relationships between home health care use and the many characteristics that may influence the use of home health care. (The text box describes the characteristics we used in our analysis.) We ran separate regressions for the probability of any home health use and, conditional on receiving home health care, the number of visits beneficiaries received. Regressions were run with ordinary least squares and standard errors were clustered at the county level. To mitigate the impact of a small number of very large values, we winsorized visits per beneficiary at the 99th percentile value across MA and FFS

TABLE 3–5

Home health care analytic samples used in our analysis, 2021

	Number of Medicare beneficiaries (in millions)	
	MA	FFS
Resided in county with high match rate	16.4	19.5
Had any home health care	1.4	1.7
Had home health care visits and OASIS	1.0	1.3

Note: MA (Medicare Advantage), FFS (fee-for-service), OASIS (Outcome and Assessment Information Set). "Resided in county with high match rate" refers to beneficiaries residing in the subset of counties for which the MA home health encounter data to OASIS data match rate was at least 85 percent. "Had any home health care" included beneficiaries who had a home health encounter or OASIS assessment in the year for MA enrollees and FFS beneficiaries who had a home health FFS claim or OASIS assessment. "Had home health care visits and OASIS" included beneficiaries who had home health visits as reported in the home health encounter or FFS claims and had an OASIS assessment at the start or resumption of care in the year. Beneficiaries with home health visits taking place before their first OASIS start or resumption of care assessment in the year were excluded.

Source: MedPAC analysis of enrollment, MA home health encounter, home health claims, and OASIS data from CMS.

Home health beneficiary, plan, and provider characteristics

We examined a comprehensive set of beneficiary characteristics, including demographic, geographic, and health status information, that likely affect home health care use. These include:

- **Demographics:** We included the current reason for Medicare entitlement, age, sex, geography, and low-income status (measured by indicators for dual eligibility and Part D low-income subsidy status).
- **Hospitalizations:** Many beneficiaries use home health care to recover after an acute care hospitalization. We identified hospitalizations that occurred at any time in the year as well as those that occurred within 14 days of the start of home health care.[12] Home health care may follow skilled nursing facility (SNF) stays or other types of institutional care, but we did not incorporate those other types of stays into this analysis. We are assessing the completeness of SNF and inpatient rehabilitation facility (IRF) Medicare Advantage (MA) encounter data and plan to incorporate these types of care in future work.
- **Clinical and functional status from OASIS:** Beneficiaries with greater functional impairment or clinical severity may need more home health care visits. We used data from home health care patients' Outcome and Assessment Information Set (OASIS) assessments at the start or resumption of care to categorize them on a set of functional, clinical, and other items (below, we describe how we used OASIS data to obtain beneficiary functional and clinical status).

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home health care users. To control for geographic variation in home health care use, we included county-level fixed effects (which are indicators for the beneficiaries' county of residence) in all regressions. The main results focus on the estimated relationship between MA plan attributes and home health care use among MA enrollees as well as the estimated difference in MA and FFS home health care use among all Medicare beneficiaries. We also ran an alternative specification using HHA-level fixed effects to investigate whether visits per beneficiary differed between MA and FFS beneficiaries within the same HHA.

In descriptive tables provided below showing home health use rates and visits per user by beneficiary and plan characteristics, we geographically standardize both MA and FFS values using the county's share of overall MA enrollment but otherwise do not adjust for other characteristics. Descriptive tables are labeled as "unadjusted" in table headers.

Probability of home health care use among Medicare beneficiaries

We now turn to our results on home health care use rates. Table 3-7 (p. 156) reports the shares of beneficiaries using home health care by beneficiary and plan characteristics and unadjusted (but geographically standardized) rates of home health care use. Overall, among MA enrollees, the home health use rate was 8.4 percent, similar to the 8.6 percent rate among FFS beneficiaries. Not surprisingly, home health use rates were much higher for MA enrollees who had a general acute care hospitalization in the year (41.5 percent). Home health use rates were also higher for those who were female (9.1 percent), were ages 80 and above (15.9 percent), or had low incomes (11.7 percent). The patterns were similar among FFS beneficiaries.

As shown in the bottom part of Table 3-7 (p. 156), among MA enrollees in our study population, 45

Home health beneficiary, plan, and provider characteristics (cont.)

Among MA enrollees, we also assessed how certain plan types and attributes were associated with home health care use. These include:

- **Health maintenance organization (HMO) vs. preferred provider network (PPO):** HMO plans generally require their enrollees to receive care from only in-network providers with whom the plan has negotiated contracts. Under PPOs, MA enrollees can seek care outside of the specified network, though frequently with higher cost sharing.

- **Provider-sponsored plans:** These plans are affiliated with hospitals, physicians, health systems, or other providers. Supporters of these plans tout the closer relationship with and understanding of patients' clinical needs that can improve population health and result in better quality of care. Many but not all of these plans are HMOs. The data to categorize plans as provider sponsored were obtained from the Managed Markets Insight & Technology (MMIT) Directory of Health Plans.

- **Home health care cost sharing:** Some plans require cost sharing on home health care use (through deductibles, copayments, or coinsurance). These requirements may affect the use of home health care (both the probability of any use and the number of visits, depending on how the cost sharing is implemented), particularly in comparison with fee-for-service (FFS) Medicare, which has no home health care cost sharing. We used bid data to determine whether plans required home health cost sharing for their enrollees.[13]

Almost all plans required some sort of prior authorization for home health care use, so there was too little variation to assess its association with home health care use. Additional fields describing the type of prior authorization were not well populated (for example, some plans indicated that prior authorization was required after 60 days or was required for certain types of therapy or social work services, but most plans did not describe the type of prior authorization required). A recent qualitative study found substantial variation in how prior authorization is implemented across plans (Thomas et al. 2025).

Last, we examined the attributes of the home health agencies (HHAs) in our analytic sample that treated Medicare beneficiaries and how they varied by the share of the HHAs' Medicare beneficiaries who were covered by MA. Attributes included HHAs' size (measured by the number of Medicare beneficiaries treated in a year), ownership (tax status), and type (freestanding vs. hospital based).

Beneficiary information from OASIS

Since its implementation in 1999, HHAs have been required to collect information using the OASIS on Medicare beneficiaries (both FFS and MA) upon admission and at various other points during their home health stay (Centers for Medicare & Medicaid Services 1999).[14] We use information from the start of care (SOC) and resumption of care (ROC) assessments since they indicate the beginning of a home health stay (Abt Associates 2023). In our analytic sample of MA enrollees with home health encounter records (or FFS beneficiaries with home health claims) and OASIS, 90 percent of beneficiaries had only SOC assessments, 9 percent had both SOC and ROC assessments, and less than 1 percent had only ROC assessments.

OASIS items can have multiple responses. For example, responses for activity of daily living (ADL) items range from most independent to most impaired. For other items, responses may indicate the severity of the condition. Table 3-6 shows the items on OASIS we used to describe patients' clinical and functional status in our analyses. We categorized responses into two groups based on the level of severity or impairment, with input from our staff clinician (Table 3-6). That is,

(continued next page)

Home health beneficiary, plan, and provider characteristics (cont.)

responses that indicated greater impairment or severity were assigned into "higher impairment or severity"; otherwise, they were assigned into "lower impairment or severity."

If beneficiaries had multiple SOC or ROC assessments in the year, we incorporated responses from all the assessments by assigning the beneficiary a value of "higher impairment or severity" if responses on any SOC or ROC assessment indicated a "higher impairment or severity" grouping. In our analytic sample, most beneficiaries (over 70 percent) had only one assessment, about 20 percent had two assessments, and the remaining 10 percent of beneficiaries had three or more assessments. ■

TABLE 3–6

Grouping OASIS item responses, 2021

OASIS item (item code)	Responses grouped into "lower impairment or severity"	Responses grouped into "higher impairment or severity"
Activities of daily living		
Grooming (M1800)	0, 1	2, 3
Dress upper body (M1810)	0, 1	2, 3
Dress lower body (M1820)	0, 1	2, 3
Bathing (M1830)	0, 1, 2	3, 4, 5, 6
Toilet transferring (M1840)	0, 1	2, 3, 4
Toileting hygiene (M1845)	0, 1	2, 3
Transferring (M1850)	0, 1	2, 3, 4, 5
Ambulation/locomotion (M1860)	0, 1, 2	3, 4, 5, 6
Feeding or eating (M1870)	0, 1	2, 3, 4, 5
Clinical and other items		
Therapies (IV, TPN, enteral) (M1030)	4	1, 2, 3
Lives alone with occasional or no assistance (M1100)	1–3, 6–9, 11–14	4, 5, 10, 15
Vision (M1200)	0	1, 2
Unhealed pressure ulcer/injury at stage 2 or higher (M1306)	0	1
Surgical wound (M1340)	0	1, 2
Urinary incontinence or urinary catheter presence (M1610)	0	1, 2
Bowel incontinence frequency (M1620)	0, 1	2, 3, 4, 5, N/A
Cognitive functioning (M1700)	0, 1	2, 3, 4
Depression (M1730)	0, 1	2, 3
Frequency of disruptive behavior symptoms (reported or observed) (M1745)	0, 1, 2	3, 4, 5

Note: OASIS (Outcome and Assessment Information Set), IV (intravenous), TPN (total parenteral nutrition), N/A (not applicable).

Source: OASIS–D All Item Set (https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/homehealthqualityinits/downloads/oasis-d_all-items_final.pdf).

TABLE 3–7

Medicare beneficiaries who had a hospitalization, were female, were age 80 or older, or had low incomes were more likely to use home health care (unadjusted), 2021

		Beneficiaries using home health care (in percent)	
	Share of all beneficiaries	MA	FFS
Overall	**100%**	**8.4%**	**8.6%**
Current eligibility status			
Aged	89	8.6	8.9
Disabled	11	7.2	6.9
Sex			
Female	56	9.1	9.5
Male	44	7.4	7.5
Age categories			
<45	3	4.0	4.1
45–64	9	8.1	8.5
65–79	65	6.3	6.1
80+	22	15.9	16.7
Race/ethnicity			
Non-Hispanic White	77	8.4	8.6
Black	10	9.5	9.5
Asian/Pacific Islander	3	5.5	6.1
Hispanic	7	7.9	7.9
American Indian/Alaska Native	<1	9.8	9.7
Other or unknown	3	5.1	4.9
Urban/rural			
Metropolitan	80	8.4	8.7
Micropolitan	12	8.3	8.2
Rural	8	8.4	8.3
Dually eligible or had LIS during year			
No	78	7.3	7.9
Yes	22	11.7	11.5
Had acute care hospitalization in year			
No	88	3.7	4.2
Yes	12	41.5	40.4
MA enrollees only			
MA plan type			
HMO plan	55	8.5	N/A
PPO plan	45	8.1	N/A
Provider-sponsored plan			
No	85	8.4	N/A
Yes	15	7.8	N/A
Had home health care cost sharing			
No	77	8.7	N/A
Yes	23	7.2	N/A

Note: MA (Medicare Advantage), FFS (fee-for-service), LIS (low-income subsidy), HMO (health maintenance organization), PPO (preferred provider organization), N/A (not applicable). Table includes Medicare beneficiaries residing in counties with high match rates for MA home health data (see Table 3-5 on p. 152 for beneficiary counts). "MA beneficiaries using home health care" are defined as those with a home health encounter data set record or Outcome and Assessment Information Set (OASIS) record in the year. FFS home health users are defined as beneficiaries with a home health claim or OASIS record in the year. Rates of home health care use were weighted to reflect the counties where MA enrollees reside to standardize for differences in the geographic composition of the MA and FFS populations. Figures were not adjusted for any other differences in characteristics between MA and FFS populations.

Source: MedPAC analysis of enrollment, MA home health and inpatient encounter, home health claims, OASIS, Medicare Provider Analysis and Review, and plan benefit data from CMS.

percent were enrolled in PPO plans, while 55 percent were in HMO plans. Fifteen percent were enrolled in provider-sponsored plans, and 23 percent were enrolled in a plan with home health care cost sharing. There were some differences in the rates of home health care use by MA plan attributes: Beneficiaries enrolled in HMOs had slightly higher rates than those enrolled in PPO plans (8.5 percent vs. 8.1 percent). Among those enrolled in provider-sponsored plans, 7.8 percent used home health care compared with 8.4 percent of those not enrolled in a provider-sponsored plan. Enrollees in plans with cost sharing for home health care had a lower probability of using home health care (7.2 percent compared with 8.7 percent among those with no cost sharing for home health).

Rates of home health care use varied across MA plans. Among the 4,600 plans in our analysis, the 10th percentile to 90th percentile of home health care use rates was 5 percent to 12 percent. Across the 180 MA plan parent organizations, the home health care use rate ranged from 7 percent to 9 percent (10th percentile to 90th percentile).

Among MA enrollees, rates of home health care use were lower for those enrolled in plans with cost sharing even after adjusting for beneficiary characteristics

To examine the association between plan attributes and home health care use rates, we regressed an indicator for home health care use on the beneficiary characteristics listed in Table 3-7 and included indicators for each of the plan attributes (in separate regressions). As shown in the top section of Table 3-8 (p. 158), rates of home health care use did not differ for PPO enrollees compared with HMO enrollees or enrollees on provider-sponsored plans compared with those not on provider-sponsored plans. However, we found that beneficiaries enrolled in plans with home health cost sharing had, on average, a 6.9 percent lower adjusted rate of home health care use (7.9 percent compared with 8.4 percent for enrollees who were not on plans with home health cost sharing). This difference was statistically significant at the 1 percent level.

As shown in the second section of Table 3-8 (p. 158), only about 4 percent of MA enrollees who did not have a hospitalization in the year used home health care, and those enrolled in plans with home health care cost sharing had a 12.6 percent lower probability of using home health care, on average. Whether or not the beneficiary was enrolled in a PPO or HMO plan or provider-sponsored plan was not associated with any differences in the rates of home health care use (Table 3-8). The patterns were the same among MA enrollees who had a hospital stay during the year: Only home health care cost sharing was associated with a difference in home health use rates (see the bottom section of Table 3-8).

We note that our indicator for acute hospital stay denotes whether the beneficiary had a hospitalization at any point during the year, regardless of when the home health stay occurred. The hospital stay may or may not have been related to the home health care stay (and could, in fact, occur nearly 12 months apart). It is also possible that a hospital stay occurred following home health care use for some beneficiaries (indeed, potentially preventable hospitalization is an outcome measure used by CMS). Whether a hospitalization occurred during the year is an important beneficiary characteristic that is highly related to home health care use, and future work could specifically examine rates of posthospital or community-admitted home health care use (by linking hospitalizations to subsequent home health care stays). Below, when we examine home health care visits per user, we do define prior hospital stays (using the 14 days prior to the start of home health care).

Rates of MA and FFS home health care use, adjusted for beneficiary characteristics, differ depending on whether hospitalizations occurred in the year

We used the population of MA and FFS beneficiaries to examine differences in the probability of home health care use by payer. We regressed home health care use on the beneficiary characteristics listed in Table 3-7 (excluding MA-plan attributes) and included an indicator for payer. As shown in the top row of Table 3-9 (p. 159), we found that the probability of home health care use (adjusting for beneficiary characteristics) was slightly lower among MA enrollees: 8.3 percent among MA enrollees compared with 8.6 percent among FFS beneficiaries (a difference of 4 percent).

TABLE 3–8

The probability of home health care use was lower among MA enrollees in plans with home health cost sharing (adjusted), 2021

	Regression-adjusted probability of home health care use		Difference	
	Yes	No	Percentage points	Percent
Overall				
PPO plan (vs. HMO)	8.3%	8.3%	0.08	1.0%
Provider-sponsored plan	8.3	8.3	0.02	0.3
Plan had home health care cost sharing	7.9	8.4	–0.57*	–6.9
No hospital stay in year				
PPO plan (vs. HMO)	3.7	3.7	0.07	1.9
Provider-sponsored plan	3.7	3.7	–0.004	–0.1
Plan had home health care cost sharing	3.3	3.8	–0.47*	–12.6
Had hospital stay in year				
PPO plan (vs. HMO)	41.7	41.6	0.15	0.4
Provider-sponsored plan	41.7	41.7	0.10	0.2
Plan had home health care cost sharing	40.5	42.0	–1.4*	–3.4

Note: MA (Medicare Advantage), PPO (preferred provider organization), HMO (health maintenance organization). Table includes MA enrollees residing in counties with high match rates for MA home health data (see Table 3-5 on p. 152 for beneficiary counts). Among MA enrollees, we regressed an indicator for whether the beneficiary had any home health care and controlled for the beneficiary characteristics listed in Table 3-7 (p. 156). We included each of the plan attributes separately and county fixed effects. The results in this table show the regression-adjusted probability of home health care use by each plan characteristic using the estimates from the regressions. Differences and percentages were calculated on unrounded numbers.
* Indicates statistical significance at the 1 percent significance level with Bonferroni corrections for multiple comparisons.

Source: MedPAC analysis of enrollment, MA home health and inpatient encounter, home health claims, Outcome and Assessment Information Set, Medicare Provider Analysis and Review, and plan benefit data from CMS.

The differences were in opposite directions when we estimated rates of home health care use by whether the beneficiary had a hospital stay in the year (using separate regression models). Among those without a hospital stay, the rate of home health care use was 13.7 percent lower among MA enrollees than FFS beneficiaries (3.7 percent vs. 4.2 percent, as shown in the second row of Table 3-9). Among those with a hospital stay, the adjusted probability of home health care use was 3.2 percent higher among MA enrollees than among FFS beneficiaries (41.7 percent vs. 40.4 percent).

Several considerations related to plan and provider behavior may drive differences in home health use rates between MA and FFS beneficiaries. Lower rates of home health care use in MA compared with FFS might be explained by MA plans taking actions to manage the home health care use of their enrollees through prior authorization or cost sharing, neither of which are used for home health care in FFS. On the provider side, some HHAs may prefer seeing FFS patients than MA patients. In fact, one large HHA chain we interviewed said that payment for MA home health care patients was frequently below the cost of providing care and, all else equal, they favored

TABLE 3–9

The rate of home health care use differed between MA and FFS beneficiaries by whether they had a hospital stay in the year (adjusted), 2021

	Regression-adjusted probability of home health care use		Difference	
	MA	FFS	Percentage points	Percent
All beneficiaries	8.3%	8.6%	–0.34*	–4.0%
No hospital stay in year	3.7	4.2	–0.54*	–13.7
Hospital stay in year	41.7	40.4	1.32*	3.2

Note: MA (Medicare Advantage), FFS (fee-for-service). Table includes MA enrollees residing in counties with high MA home health data match rates (see Table 3-5, p. 152, for beneficiary counts). Among all Medicare beneficiaries, we regressed an indicator for whether the beneficiary had any home health care and controlled for the beneficiary characteristics listed in Table 3-7 (p. 156) (excluding the MA-only plan attributes). We included an indicator for enrollment in MA and included county fixed effects. Regressions were run separately for beneficiaries with and without a hospitalization in the year. The results in this table show the regression-adjusted probability of home health care use by MA and FFS using the estimates from the regressions. Differences and percentages were calculated on unrounded numbers.
* Indicates statistical significance at the 1 percent significance level with Bonferroni corrections for multiple comparisons.

Source: MedPAC analysis of enrollment, MA home health and inpatient encounter, home health claims, Outcome and Assessment Information Set, Medicare Provider Analysis and Review, and plan benefit data from CMS.

admitting FFS patients over MA enrollees. Another consideration for dually eligible beneficiaries is the receipt of Medicaid-covered home- and community-based services (HCBS). One preliminary study found that Medicaid HCBS may be substituting for community-admitted Medicare home health care (that does not follow a hospitalization) and that the substitution occurred more frequently among MA enrollees receiving HCBS (Qi et al. 2024).

The higher use of home health care among MA enrollees with a hospital stay might be explained by plans encouraging substitution of home health care in place of more costly SNF post-acute care following a hospitalization. Leadership of a large HHA chain we interviewed stated that despite lower payments for MA enrollees, they continued to admit posthospital MA patients in order to maintain hospital referral relationships.

We emphasize that, with the information available, it is not possible to draw conclusions on the appropriateness of care based solely on observing these differences.

Visits per beneficiary among Medicare home health care users

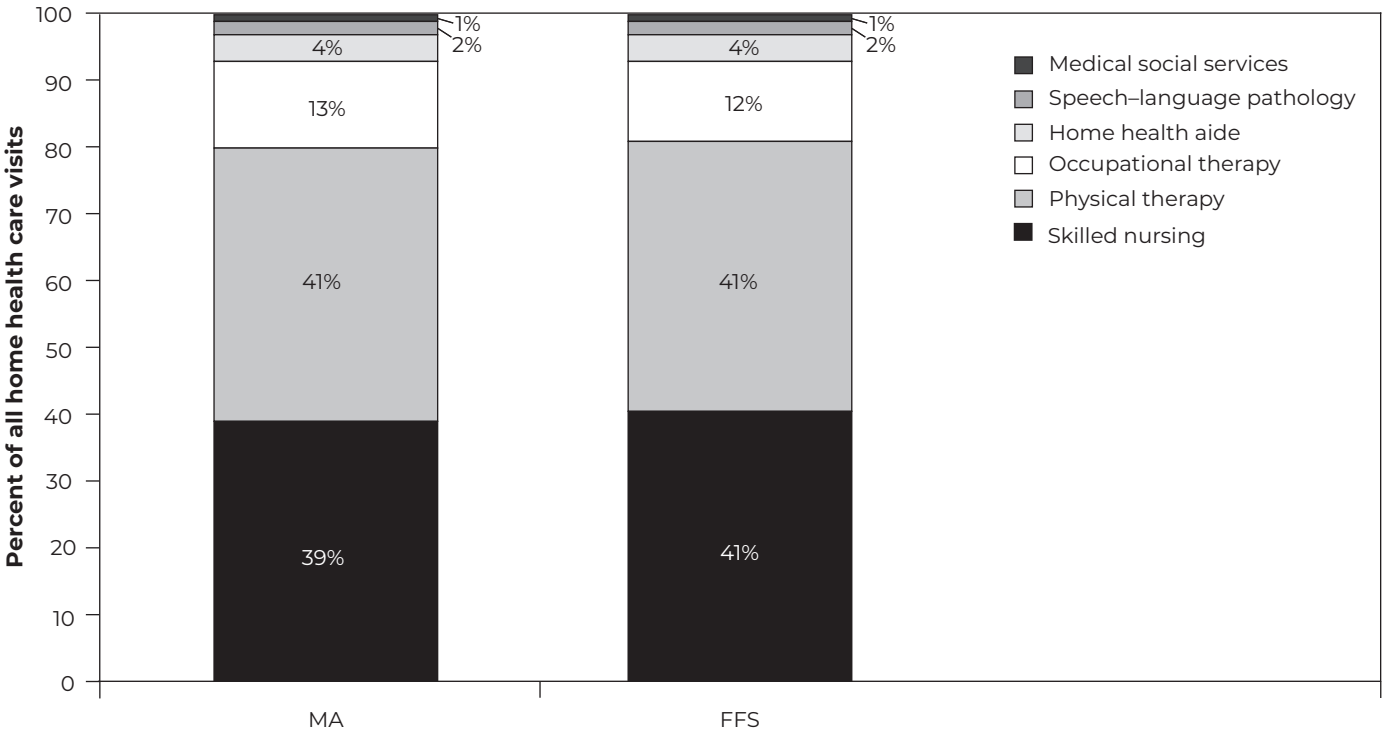
We turn to examining the characteristics of beneficiaries who use home health care and how these characteristics relate to the number of visits received in the year. (The text box on p. 161 describes how visits were identified in the home health encounter and claims data.)

For each home health user, we summed visits across each of the six home health disciplines that occurred in 2021: skilled nursing, therapy (physical, occupational, and speech–language pathology), home health aide, and medical social services. Figure 3-3 (p. 160) shows that skilled nursing, physical therapy, and occupational therapy visits made up more than 90 percent of home health visits among both MA and FFS home health users.

The analysis in the remainder of this chapter analyzes total visits (summed across disciplines) per home health user. An area for future work would be to further assess the association of MA plan types and payer with visits by type.

FIGURE 3–3

Skilled nursing and physical therapy were the most common visits among Medicare home health care users (unadjusted), 2021



Note: MA (Medicare Advantage), FFS (fee-for-service). The figure shows the share of visits per home health care user by each of the home health disciplines. (The text box, p. 161, describes how we identified home health visits in the home health encounter and claims data.) Visits were not adjusted for differences in characteristics between MA and FFS populations.

Source: MedPAC analysis of MA home health encounter, claims, and enrollment data from CMS.

As shown in Table 3-11 (p. 162), the most common clinical reason for home health care among beneficiaries in our analytic sample (based on the principal diagnosis cost listed on OASIS) was musculoskeletal rehabilitation (about 30 percent of home health care users). Around 15 percent used home health care for Medication Management, Teaching, and Assessment (MMTA) related to cardiac and circulatory conditions, and 11 percent used home health care for neurological rehabilitation. The distribution of clinical conditions was similar between MA and FFS home health care users.

On average, MA home health users received 17.8 visits during the year (Table 3-11, p. 162). MA enrollees using home health for wound care received the most visits (25.1 visits per beneficiary, on average). The fewest visits per beneficiary, on average, were among patients using home health care for MMTA surgical aftercare (14.5 visits per beneficiary). On average, FFS home health care users received more visits than MA home health care users across all conditions, though the patterns of visits per user by clinical condition were similar. Overall, the average number of visits per beneficiary among FFS home health users was 20.5 visits.

As shown in Table 3-12 (p. 163), visits per home health user also varied by other beneficiary and plan characteristics. Among MA enrollees, older home health users (ages 80 or more) tended to have more

Methods for counting home health visits

We identified records in the home health encounter data set for Medicare Advantage (MA) enrollees and claims data for fee-for-service (FFS) beneficiaries with revenue center codes and Level II Healthcare Common Procedure Coding System (HCPCS) codes describing home health visits in the six home health disciplines (Table 3-10) (Centers for Medicare & Medicaid Services 2023). In addition to G-codes describing the discipline of the clinician providing the home health visit, we included certain S-codes in the home health encounter data. These are codes used primarily by private insurance and not payable by Medicare, but they were present for about 10 percent of visits for MA enrollees using home health care (Centers for Medicare & Medicaid Services 2022). Since MA organizations (MAOs) may be accustomed to using these S-codes for their commercial populations, we included them when they were present on the record with the corresponding revenue center code. We did not include home health supplies or durable medical equipment, personal care visits not covered under the Medicare home health benefit, or telehealth visits (which were not required to be recorded in the claim until July 2023). MA enrollees using home health care may also receive supplemental benefits that are not included in these analyses.

Visits reported in the home health MA encounter data set and in FFS claims include the number of "units" for the visit, representing 15-minute increments. Thus, it is possible to calculate the length of visits and overall amount of services received by multiplying the number of units by 15 minutes. However, MAOs vary in how comprehensively they report information on visits and units in the encounter data. Encounter records are supposed to include certain fields that also exist in FFS claims, but since MAOs may pay home health agencies differently from FFS, the data may be less complete. For example, although revenue center code instructions indicate that units represent 15-minute increments (so one visit may be composed of multiple units), MAOs that pay HHAs for a package of visits may incorrectly input the units. Our prior work demonstrated systematic differences in home health visits and units between the encounter record and MA contracts' bid data, even when the same units were indicated (Medicare Payment Advisory Commission 2024a). In future work, we will explore incorporating units and length of visits in the analysis. ■

TABLE 3–10

Codes used to identify home health visits

Discipline	Revenue center codes	Home health HCPCS codes (G-codes)	Additional home health codes (S-codes)
Skilled nursing	055X	G0162, G0493, G0494, G0495, G0496, G0299, G0300	S9123, S9124
Physical therapy	042X	G0151, G0157, G0159, G2168	S9131
Occupational therapy	043X	G0152, G0158, G0160, G2169	S9129
Speech–language pathology	044X	G0153, G0161	S9128
Medical social services	056X	G0155	S9127
Home health aide	057X	G0156	S9122

Note: HCPCS (Healthcare Common Procedure Coding System). "Additional home health codes" were used in addition to the HCPCS G-codes to identify home health visits in the Medicare Advantage encounter data set. These S-codes are used by private payers and not by Medicare.

Source: Medicare claims processing manual (Centers for Medicare & Medicaid Services 2023).

TABLE 3–11

Home health care visits varied by the clinical reason for using home health care (unadjusted), 2021

	MA		FFS	
	Share of beneficiaries	Visits per beneficiary (mean)	Share of beneficiaries	Visits per beneficiary (mean)
Overall	100%	17.8	100%	20.5
Neurological rehabilitation	11	20.7	11	23.9
Wounds	8	25.1	8	28.0
Complex nursing interventions	1	18.6	1	20.3
Musculoskeletal rehabilitation	29	15.5	31	17.6
Behavioral health	2	17.0	2	19.9
MMTA: Surgical aftercare	6	14.5	7	16.1
MMTA: Cardiac and circulatory	15	18.3	14	21.6
MMTA: Endocrine	5	19.3	4	23.3
MMTA: Gastrointestinal tract and genitourinary system	5	17.2	5	19.8
MMTA: Infectious disease, neoplasms, and blood-forming disease	4	17.3	4	19.6
MMTA: Respiratory	11	16.9	10	20.1
MMTA: Other	3	16.6	4	19.5

Note: MA (Medicare Advantage), FFS (fee-for-service), MMTA (Medication Management, Teaching, and Assessment). Table includes Medicare beneficiaries residing in counties with high MA home health data match rates (see Table 3-5, p. 152, for beneficiary counts). Visits per beneficiary were geographically standardized to resemble the locations where MA enrollees reside but were otherwise unadjusted. Clinical groups were determined using the principal diagnosis code listed on beneficiaries' Outcome and Assessment Information Set (OASIS).

Source: MedPAC analysis of enrollment, MA home health encounter, home health claims, and OASIS data from CMS.

visits (19.0 visits per year). Home health users with a prior hospitalization (in the 14 days before their start or resumption of care assessment) had more visits, on average, than those without a prior hospitalization (18.9 visits per beneficiary vs. 16.8). FFS home health users had more visits per beneficiary, on average, than MA home health users across all categories we examined.

There was some variation in visits per user by MA plan characteristics. The largest difference was for home health care users enrolled in provider-sponsored plans: They received 15.8 visits compared with 18.1 among home health users not enrolled in these plans.

Table 3-13 (p. 164) shows that beneficiaries with greater impairment or severity on OASIS-based variables tend to receive more visits than those who are less impaired or severe, on average. For example, among MA home health users categorized as "higher impairment or severity" in dressing of the upper body (item M1810 on OASIS), the average number of visits was 19.5 compared with 12.5 among those categorized as "lower impairment or severity." Differences by impairment and severity exhibited similar patterns among MA and FFS home health users, though FFS beneficiaries received more visits across all categories, on average. For example, among FFS home health users with "higher impairment or severity" in upper body dressing, the average number of visits received was 22.2 (and 14.0 among those with "lower impairment or severity") (Table 3-13). In general, across most OASIS

TABLE 3–12

Prior hospitalizations and certain types of MA plans were associated with a higher number of visits per home health care user (unadjusted), 2021

	MA		FFS	
	Share of beneficiaries	Visits per beneficiary (mean)	Share of beneficiaries	Visits per beneficiary (mean)
Overall	**100%**	**17.8**	**100%**	**20.5**
Current eligibility status				
Aged	90	17.8	93	20.5
Disabled	9	17.8	7	20.1
Sex				
Female	62	17.8	61	20.6
Male	38	17.7	39	20.3
Age categories				
<45	1	17.2	1	19.3
45–64	10	17.8	7	20.3
65–79	50	16.8	46	18.9
80+	40	19.0	46	22.2
Race/ethnicity				
Non-Hispanic White	73	17.8	84	20.3
Black	15	18.6	9	21.8
Asian/Pacific Islander	2	16.2	2	19.1
Hispanic	8	17.1	4	20.2
American Indian/Alaska Native	<1	18.1	<1	20.9
Other or unknown	1	16.2	2	18.4
Urban/rural				
Metropolitan	84	17.6	79	20.3
Micropolitan	1	18.4	12	21.1
Rural	6	18.9	8	21.4
Dually eligible or had LIS during year				
No	68	17.5	79	20.1
Yes	32	18.5	21	21.8
Had prior acute care hospitalization (14 days before home health care use)				
No	53	16.8	54	19.7
Yes	47	18.9	46	21.5
MA enrollees only				
MA plan type				
HMO plan	56	17.4	N/A	N/A
PPO plan	44	18.4	N/A	N/A
Provider-sponsored plan				
No	86	18.1	N/A	N/A
Yes	14	15.8	N/A	N/A
Had home health care cost sharing				
No	80	17.9	N/A	N/A
Yes	20	17.4	N/A	N/A

Note: MA (Medicare Advantage), FFS (fee-for-service), LIS (low-income subsidy), HMO (health maintenance organization), PPO (preferred provider organization), N/A (not applicable). Table includes Medicare beneficiaries residing in counties with high MA home health data match rates (see Table 3-5, p. 152, for beneficiary counts). Visits per beneficiary were geographically standardized to resemble the locations where MA enrollees reside but were otherwise unadjusted.

Source: MedPAC analysis of enrollment, MA home health and inpatient encounter, home health claims, Outcome and Assessment Information Set, Medicare Provider Analysis and Review, and plan benefit data from CMS.

TABLE 3–13

Home health users with greater severity or impairment received more visits (unadjusted), 2021

		MA		FFS	
Selected OASIS items	**Impairment or severity category**	**Share of beneficiaries**	**Visits per beneficiary (mean)**	**Share of beneficiaries**	**Visits per beneficiary (mean)**
Activities of daily living					
Dress upper body (M1810)	Lower	25%	12.5	21%	14.0
	Higher	75	19.5	79	22.2
Bathing (M1830)	Lower	11	11.6	9	13.0
	Higher	89	18.5	91	21.2
Toilet transferring (M1840)	Lower	64	15.1	62	17.3
	Higher	36	22.9	38	25.7
Toileting hygiene (M1845)	Lower	23	12.7	20	14.3
	Higher	77	19.4	80	22.0
Transferring (M1850)	Lower	17	12.5	15	14.2
	Higher	83	18.9	85	21.5
Ambulation/locomotion (M1860)	Lower	11	12.5	9	14.2
	Higher	89	18.5	91	21.1
Feeding or eating (M1870)	Lower	89	16.9	88	19.4
	Higher	11	24.9	12	27.9
Clinical and other items					
Lives alone with occasional or no assistance (M1100)	Lower	83%	17.5	83	20.2
	Higher	17	19.0	17	21.6
Vision (M1200)	Lower	68	16.0	66	18.2
	Higher	32	21.6	34	24.8
Unhealed pressure ulcer/injury at stage 2 or higher (M1306)	Lower	95	17.0	95	19.6
	Higher	5	32.7	5	36.8
Surgical wound (M1340)	Lower	68	18.3	67	21.5
	Higher	32	16.7	33	18.4
Urinary incontinence or urinary catheter presence (M1610)	Lower	45	13.9	43	15.6
	Higher	55	20.9	57	24.1
Bowel incontinence frequency (M1620)	Lower	87	16.6	86	19.1
	Higher	13	25.8	14	29.0
Cognitive functioning (M1700)	Lower	85	16.9	82	19.2
	Higher	15	22.6	18	26.0

Note: MA (Medicare Advantage), FFS (fee-for-service), OASIS (Outcome and Assessment Information Set). Table includes Medicare beneficiaries residing in counties with high MA home health data match rates (see Table 3-5, p. 152, for beneficiary counts). Table 3-6 (p. 155) describes how OASIS responses were coded into lower and higher impairment or severity categories. Visits per beneficiary were geographically standardized to resemble the locations where MA enrollees reside but were otherwise unadjusted.

Source: MedPAC analysis of enrollment, MA home health and inpatient encounter, home health claims, OASIS, MedPAR, and plan benefit data from CMS.

items examined, a greater share of FFS beneficiaries using home health care were categorized in the "higher impairment or severity" group compared with MA home health care users.

Visits per home health user were generally higher among those who had a prior hospitalization compared with those who did not, but the patterns by OASIS item and between MA and FFS were similar when subsetting

TABLE 3–14

Among MA enrollees, visits per beneficiary were higher among PPO plans and plans with no home health care cost sharing (adjusted), 2021

	Regression-adjusted average visits per beneficiary		Difference	
	Yes	No	Number	Percent
PPO plan (vs. HMO)	18.4	17.6	0.80*	4.5%
Provider-sponsored plan	16.5	18.2	–1.68*	–9.4
Plan had home health care cost sharing	17.6	18.0	–0.48*	–2.7

Note: MA (Medicare Advantage), PPO (preferred provider organization), HMO (health maintenance organization). Table includes MA enrollees residing in counties with high MA home health data match rates (see Table 3-5, p. 152, for beneficiary counts). Among MA enrollees, we regressed visits per user and controlled for the beneficiary characteristics listed in Table 3-11 (p. 162), Table 3-12 (p. 163), and Table 3-13 (p. 164) and county-level fixed effects. We ran separate regressions with each of the three plan attributes. This table shows the regression-adjusted mean visits per beneficiary by certain plan characteristics using the estimates from the regressions. Differences and percentages were calculated on unrounded numbers.
* Indicates statistical significance at the 1 percent significance level with Bonferroni corrections for multiple comparisons.

Source: MedPAC analysis of enrollment, MA home health and inpatient encounter, home health claims, Outcome and Assessment Information Set, Medicare Provider Analysis and Review, and plan benefit data from CMS.

the sample by home health users with and without a prior hospitalization (data not shown).

Home health visits per MA enrollee varied by plan attributes even after adjusting for functional and clinical status

We regressed visits per beneficiary on the characteristics listed in Table 3-11 (p. 162), Table 3-12 (p. 163), and Table 3-13 for MA enrollees who used home health care. We ran separate regressions with each of the three plan attributes. Table 3-14 shows that, after controlling for beneficiary characteristics, home health users enrolled in PPO plans had 4.5 percent more visits than those enrolled in HMO plans (18.4 vs. 17.6 visits per beneficiary). Provider-sponsored plans were associated with 9.4 percent fewer visits per beneficiary, after adjusting for beneficiary characteristics (16.5 visits vs. 18.2 visits). Plans with home health care cost sharing were associated with 2.7 percent fewer visits compared with those without (17.6 visits vs. 18.0 visits). The patterns were similar among MA home health care users with and without a prior hospital stay (data not shown).

Concerning home health care cost sharing, one HHA chain's interviewees noted that MA plans with per visit copays did result in some patients limiting the number of visits they were willing to receive from the HHA. It is not clear why provider-sponsored plans were associated with fewer visits per beneficiary, even after controlling for functional and clinical status. One possibility is that many provider-sponsored plans are HMOs, and some of them are integrated systems such that the HHAs used by the enrollees may see only patients in that given plan. In such cases, data reporting (such as visits on the encounter record) may be less complete (even after applying our high-match-rate county restrictions). However, we note that the directions of the estimates remained the same even after excluding one readily identifiable integrated plan.

Adjusting for functional and clinical status, MA home health care users had fewer visits per beneficiary compared with FFS home health care users

Next, we used the population of MA and FFS home health users to examine differences in visits per beneficiary by payer. We regressed visits per beneficiary on the characteristics listed in Table 3-11 (p. 162), Table 3-12 (p. 163), and Table 3-13, excluding MA plan attributes and including an indicator for payer. Table 3-15 (p. 166) shows that the average adjusted visits per beneficiary were 18.2 among MA home health

TABLE 3–15

MA enrollees using home health care received fewer home health visits compared with FFS beneficiaries (adjusted), 2021

	Regression-adjusted average visits per beneficiary		Difference	
	MA	FFS	Number	Percent
All beneficiaries	18.2	20.4	–2.1*	–11.0%
No prior hospital stay	17.4	19.7	–2.3*	–12.2
Had prior hospital stay	19.2	21.2	–2.0*	–9.7

Note: MA (Medicare Advantage), FFS (fee-for-service). Table includes Medicare beneficiaries residing in counties with high MA home health data match rates (see Table 3-5 on p. 152 for beneficiary counts). Among all Medicare beneficiaries, we regressed visits per user and controlled for the beneficiary characteristics listed in Table 3-11 (p. 162), Table 3-12 (p. 163), and Table 3-13 (p. 164) (excluding the MA-only plan attributes). We included an indicator for enrollment in MA and county-level fixed effects. Separate regressions were run for home health users with and without prior hospitalizations. The results in this table show the regression-adjusted mean visits per beneficiary by MA and FFS using the estimates from the regressions. Differences were calculated on unrounded numbers.
* Indicates statistical significance at the 1 percent significance level with Bonferroni corrections for multiple comparisons.

Source: MedPAC analysis of enrollment, MA home health and inpatient encounter, home health claims, Outcome and Assessment Information Set, and Medicare Provider Analysis and Review data from CMS.

care users and 20.4 among FFS home health care users, a difference of 2.1 visits, or 11.0 percent. The results were similar and in the same direction for beneficiaries with and without a prior hospital stay.

One large HHA chain's interviewees said that their MA patients likely received fewer visits than FFS patients with similar conditions. Although they noted variation in how MA plans structured the home health benefit for their enrollees, generally, the plans they contracted with tended to require prior authorization for home health care up to a certain number of visits and require additional authorization for more visits. They noted that the prior authorization for more visits could be difficult to obtain even if the clinician assessed that the patient needed more visits.

Home health agencies treating Medicare beneficiaries

We used the provider number indicated on the home health care users' OASIS assessment to identify which HHA treated the beneficiaries. The same beneficiary could be assigned to multiple HHAs if the beneficiary was treated by more than one HHA in the year (affecting less than 10 percent of beneficiaries). We found that fewer HHAs treated MA enrollees compared with FFS beneficiaries: 4,600 HHAs treated at least 20 MA enrollees, and 7,000 HHAs treated at least 20 FFS beneficiaries (4,300 HHAs treated both).

To examine the characteristics of HHAs that serve Medicare beneficiaries and understand whether HHAs treating MA enrollees might differ from HHAs that treat FFS beneficiaries, we stratified HHAs by their share of Medicare beneficiaries enrolled in MA and reported the shares of beneficiaries by HHA characteristic (Table 3-16).[15] We excluded HHAs that served fewer than 50 beneficiaries in the year (about 5,900 HHAs remained in the analysis).[16] We found that HHAs serving higher shares of MA patients were more likely to be large agencies compared with HHAs serving lower shares of MA patients. HHAs with MA shares greater than 50 percent were more likely to be treating patients living in urban areas than HHAs with MA shares between 1 percent and 50 percent.

Table 3-16 implies that there were some differences in the HHAs that treat MA and FFS beneficiaries.

TABLE 3–16 **HHAs treating Medicare beneficiaries differed by MA enrollee share (unadjusted), 2021**

	HHAs' shares of MA enrollees				
	0%	1% to 20%	20% to 50%	50% to 99%	100%
Number of HHAs	700	1,200	2,400	1,600	20
Number of beneficiaries (MA and FFS)	28,000	269,000	1.2M	1.0M	4,100
Share of beneficiaries					
HHA type/ownership					
Freestanding for profit	92%	81%	67%	66%	58%
Freestanding nonprofit	5	11	17	23	42
Hospital-based nonprofit	1	6	12	8	<1
All others	3	2	3	3	<1
Geography (beneficiary residence)					
Metropolitan	88	79	78	87	98
Micropolitan	6	13	13	9	2
Other rural	6	8	9	5	1
Size of HHA (based on total Medicare beneficiaries served)					
Small (<120)	37	7	2	2	10
Medium (120–650)	57	41	27	21	19
Large (>650)	6	52	71	77	72

Note: HHA (home health agency), MA (Medicare Advantage), FFS (fee-for-service), M (million). Table includes shares of Medicare beneficiaries who resided in high-match-rate counties who were served by HHAs that treated 50 or more beneficiaries in the year.

Source: MedPAC analysis of enrollment, MA home health encounter, FFS home health claims, Outcome and Assessment Information Set, cost report, and provider of services data from CMS.

To determine whether our estimated differences in visits per beneficiary were driven by MA and FFS beneficiaries using different HHAs or whether the differences persist within the HHA, we re-ran the visits per beneficiary regression using provider fixed effects (indicators for each HHA) instead of county fixed effects.[17] We found that MA enrollees had, on average, 1.8 fewer visits (9.3 percent fewer) than FFS beneficiaries even when controlling for the HHAs in which they received treatment (data not shown). This result was only slightly lower than our findings above (11 percent fewer visits per beneficiary associated with MA enrollment from Table 3-15). This finding means that, on average, MA enrollees received fewer visits than FFS beneficiaries within the same HHA.

Limitations of this analysis

There are some important limitations of our work. We were limited to demographic characteristics from the Medicare enrollment file and an indicator for hospitalization in the year to compare rates of home health use for MA and FFS beneficiaries. Differences in health status across beneficiaries by MA plans and between MA and FFS likely play a role in home health care use rates. When assessing visits per home health care user, we were able to include functional and clinical variables from OASIS data.

Our analysis examines home health visits that are part of the home health benefit, as reported by plans. MA

enrollees may receive other services, depending on their MA plan, that are external to the Medicare home health care benefit but may be similar to aspects of this benefit (such as certain types of in-home health care that some plans offer as supplemental benefits). HHAs may also provide telehealth to their patients, which is not included in our analysis. Starting in July 2023, reporting of telehealth services to home health patients is required on the home health claim for FFS beneficiaries. When the data are available, we will explore the reporting of telehealth provision in MA home health encounters.

Some of the sample restrictions used to conduct this analysis may have affected the representativeness of our findings. We excluded Medicare beneficiaries who did not have a full 12 months of Part A and Part B, including those who were new to Medicare, died, or switched between MA and FFS during the year. These are important groups of beneficiaries who should be analyzed in the future.

We made an effort to base our analysis on complete data by restricting most analyses to beneficiaries in counties that had higher rates of data completeness; however, this restriction required a trade-off—including a subset of beneficiaries in these counties rather than the entire dataset. Although home health use results changed when we used the full sample, we did find that directions and patterns were generally similar. It is possible that the lack of data completeness, even with our adjustments, affected our results. It is important to continue to monitor reporting of home health care use for completeness and accuracy, as is currently required for MA plans.

With the information available, it is not possible to draw conclusions on the appropriateness of care based on any reported differences. Future, more nuanced work should examine the probability of post-acute or community-admitted home health care use and how that may differ by payer, and the types of home health visits, home health care stays, lengths of stay, and the case-mix groups associated with each home health patient to better understand home health care use under MA. ■

Endnotes

1 Between September 2024 and February 2025, we spoke with interviewees at three large nonprofit HHA chains.

2 MedPAC analyzed Medicare Provider Analysis and Review and home health claims data from CMS for 2021. Prior institutionalization includes acute care hospitals and SNFs.

3 Our June 2019 report to the Congress gives greater detail about the encounter data submission and screening process, feedback provided to plans about submitted data, potential uses of encounter data, and our assessment of encounter data completeness and accuracy (Medicare Payment Advisory Commission 2019).

4 If an episode of care consists of only a single home health care visit to the beneficiary, the HHA does not need to submit an OASIS to CMS if it is not billing CMS under the FFS home health PPS (https://qtso.cms.gov/system/files/qtso/OASIS_CAT_2_Static_QA_10-31-2023.pdf). That is, to receive payment for a FFS beneficiary, the HHA would still need to submit an OASIS assessment (so that information on the payment category is provided), but the HHA would not need to submit the OASIS records for MA enrollees since they are not paid under the home health PPS.

5 While HHAs are required to submit these assessments at multiple points throughout the patient's care, the home health PPS only uses items from the start of care, resumption of care, and follow-up (recertification) assessments to determine payment for FFS beneficiaries.

6 MA plans are typically required to submit encounter data within 13 months of the end of the plan year. The timeline was extended during the COVID-19 public health emergency such that MA plans were allowed to submit 2021 MA encounter data through July 2023 (Medicare Payment Advisory Commission 2023).

7 The match rates differ from those previously published due to small refinements made to the methods (Medicare Payment Advisory Commission 2024a). For example, in the current analyses, we allow for matches to occur the month before and the month after calendar year 2021 to account for differences in the timing of submissions between OASIS and encounter and claims data.

8 The majority of zero-Medicare-payment claims are for interim claims. Final billing claims include a payment amount.

9 For determining whether beneficiaries with OASIS data had home health encounters or claims during the year, we used only start of care, resumption of care, and follow-up OASIS assessments since these indicate ongoing home health care; all OASIS records were used when determining whether a beneficiary with home health claims or encounter data had a matching OASIS record.

10 In both the matched and encounter data–only groups, MA enrollees had some type of skilled home health visits (skilled nursing or therapy) during the year in addition to home health aide and medical social services visits (the Medicare home health benefit does not cover beneficiaries needing only nonskilled, personal care visits).

11 CMS defines the start of quality episodes using the presence of a start or resumption of care assessment in OASIS (Abt Associates 2023).

12 For home health care stays that began early in 2021, we used data from the end of 2020 to determine whether a prior acute care hospitalization occurred.

13 Using MA plan bid data, we categorized a plan as requiring cost sharing for home health care if the plan's expected beneficiary home health care cost sharing as a portion of total expected home health care spending was greater than zero. This share was available only for plans' non–dually eligible beneficiaries. We presumed that plans that serve only dually eligible beneficiaries had zero cost sharing (since Medicaid would generally cover any cost-sharing amount). We also assumed that fully dual-eligible beneficiaries had no home health care cost sharing no matter what plan they were enrolled in. PPO plans that expect enrollees to use some out-of-network home health agencies (for which cost sharing is required) would count as plans with home health cost sharing. While home health cost-sharing information was also available in the plan benefit–package data, we found these data fields to be inconsistently completed.

14 Patients under the age of 18 and maternity patients are excluded from this OASIS submission requirement. CMS has always required data submission of OASIS data for all Medicare (FFS and MA) and Medicaid patients receiving skilled home health services (with the exception of those under the age of 18 and/or those receiving maternity services). Starting July 1, 2025, CMS is extending the requirement to HHAs' non-Medicare and non-Medicaid patients (see https://www.cms.gov/files/document/oasisall-payer-transition-fact-sheetdec-2024.pdf).

15 We stratified HHAs based on the share of beneficiaries in our analytic sample that were enrolled in MA (see the

text box on pp. 148–149 describing our inclusion criteria). Thus, HHAs likely treated more Medicare beneficiaries who were not in our analytic sample (e.g., beneficiaries not enrolled in Part A and Part B for 12 months) and would not be counted here. Importantly, this finding means that HHAs categorized as 0 percent MA (and likewise 100 percent) may have treated other MA and FFS beneficiaries that were not in our analytic sample.

16 Although over 2,000 HHAs treated fewer than 50 beneficiaries in a year, they composed about 1 percent of beneficiaries in our analytic sample.

17 In order to include HHA fixed effects, we had to include only HHAs that treated both MA and FFS beneficiaries. The regression sample included 2.2 million beneficiaries treated by about 6,000 HHAs.

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