

High-Need Beneficiary Enrollment Patterns in Medicare Advantage and Traditional Medicare

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Health care expenditures in the US are highly concentrated, with roughly 5% of the population responsible for half of total expenditures and 20% responsible for more than 80% of total expenditures.¹ Many in the high-cost group are Medicare beneficiaries with complex medical and social needs, including those with multiple chronic conditions, functional limitations, and disabilities.²⁻⁴ Health care expenditures for high-need adults (who are likely to also be high cost) are more than 5 times greater than for those in the general population.⁵

Due to the aging of the US population and growing prevalence of chronic conditions, the number of high-need Medicare beneficiaries is expected to increase.⁶ This growth will intensify existing financial pressure on the Medicare program and have other implications as well, given the lower levels of education and financial resources and higher levels of social isolation among high-need individuals.⁷ As a result, the provision of managed care and nonmedical services may be needed to improve outcomes for this population, reduce unneeded health care utilization, and aid in controlling spending.

Two avenues through which Medicare beneficiaries can receive managed care are Medicare Advantage (MA) and accountable care organizations (ACOs). The MA program, in which private plans receive capitated payments to provide coverage to Medicare beneficiaries, has grown in popularity in recent years due to the availability of low-cost plans and supplemental medical and nonmedical benefits.⁸ In 2022, MA plans served nearly 50% of the Medicare population, with MA as the dominant coverage in many counties.⁹ ACOs are groupings of health care entities (hospitals, doctors, or other health care providers) that provide coordinated care to Medicare beneficiaries, who are notified that their provider is enrolled in an ACO. In 2023, there were 456 ACOs participating in the Medicare Shared Savings Program (the largest ACO initiative in Medicare) covering approximately 11 million or 30% of traditional Medicare (TM) beneficiaries.¹⁰

In this article, we evaluate the extent to which high-need beneficiaries are represented in MA, TM ACOs, and TM non-ACOs as well as the composition of the high-need and non-high-need populations. We analyze beneficiaries who switched from TM to

ABSTRACT

OBJECTIVES: High-need Medicare beneficiaries require elevated levels of care and coordination to manage their conditions. We evaluated the extent to which high-need beneficiaries enrolled in Medicare Advantage (MA) or traditional Medicare (TM) accountable care organizations (ACOs) relative to TM non-ACOs.

STUDY DESIGN: Using Medicare claims and MA encounter data, we identified 3 groups of high-need beneficiaries: (1) individuals younger than 65 years with a disability or end-stage kidney disease, (2) frail individuals, and (3) older individuals with major complex or multiple noncomplex chronic conditions. For comparison, we included non-high-need beneficiaries in the analysis, including those with minor complex chronic conditions.

METHODS: Descriptive analysis of Medicare enrollment patterns and beneficiary characteristics of high-need and other beneficiaries between 2016 and 2019.

RESULTS: In 2019, high-need beneficiaries accounted for 18 million or 32% of enrollees in TM and MA, an increase of approximately 1 million since 2016, driven by growth in MA. A larger share of beneficiaries in TM ACOs was high need (38%) compared with MA (24%). Although the total count of high-need beneficiaries in TM remained stable from 2016 to 2019, ACOs saw an increase of almost 1.5 million high-need beneficiaries (39% increase), and TM non-ACOs saw a decrease of 1.9 million (23% decrease).

CONCLUSIONS: We found that high-need beneficiaries were more likely to be in TM non-ACOs than in MA through 2019. However, an increasing number of these beneficiaries are enrolling in MA or aligned with a TM ACO. A projected increase in the population of older adults will increase the economic burden of caring for high-need individuals.

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MA or vice versa during the course of a year separately from those who are continuously enrolled in a particular enrollment type because characteristics of switchers might substantially differ from those of nonswitchers. Given the growth in MA, particularly among racial/ethnic minority individuals and Medicare-Medicaid (dually eligible) enrollees,¹¹ we also examine how enrollment of high-need beneficiaries in each of the programs changed between 2016 and 2019. We hypothesize that high-need beneficiaries may be increasingly enrolling in MA because the number of MA plans specifically focused on beneficiaries with special needs has increased. Understanding these enrollment trends as well as the redistribution of economic burden associated with caring for high-need beneficiaries can help shape policy to improve care for these Medicare beneficiaries.

METHODS

We conducted a retrospective analysis of 2016-2019 enrollment patterns and Medicare beneficiary characteristics using inpatient (facility claims for inpatient hospitalizations), outpatient (facility claims for outpatient medical events), and carrier (provider claims for inpatient and outpatient services) TM claims and MA encounter data. Demographic characteristics and enrollment status were obtained from the annual Medicare Beneficiary Summary File (MBSF). In conjunction with the Medicare Shared Savings Program ACO Beneficiary File, the MBSF was used to assign beneficiaries to 1 of 3 mutually exclusive groups: MA, TM ACO, and TM non-ACO. We deduplicated Medicare encounter data, following the methodology of Jung et al,¹² and then combined them with the TM claims to describe the health of beneficiaries over a full year. Beneficiaries were assigned to MA in a year if they were enrolled in an MA plan every month of the calendar year or until deceased. We used an annual list of TM beneficiaries aligned with ACO programs to assign beneficiaries to this group. Finally, the TM non-ACO group in any year consisted of beneficiaries in TM who were not assigned to an ACO during that year. Beneficiaries who switched enrollment type during the year (ie, MA to TM or TM to MA) were flagged as switchers and analyzed separately. Our analysis was limited to beneficiaries who were continuously enrolled in Medicare Part A and Part B during a year. Beneficiaries from the US territories were excluded.

Using information on chronic conditions, frailty status, and age, we sequentially assigned beneficiaries to 6 mutually exclusive segments using a high-need assignment algorithm described by Joynt et al.⁴ The segments were (1) Medicare beneficiaries younger than 65 years with a disability or end-stage kidney disease; (2) frail individuals 65 years or older; (3) major complex (65 years or older with at least 3 complex conditions or 6 noncomplex conditions); (4) minor complex (65 years or older with 1 or 2 complex conditions and fewer than 6 noncomplex conditions); (5) simple chronic (65 years

TAKEAWAY POINTS

High-need beneficiaries accounted for almost 18 million of all Medicare enrollees in 2019. We found that despite their increasing enrollment in Medicare Advantage (MA), high-need beneficiaries were more likely to be in traditional Medicare (TM) than in MA through 2019.

- ▶ MA enrollees were more likely to be relatively healthy compared with TM accountable care organization (ACO) and TM non-ACO enrollees.
- ▶ When comparing managed care settings, high-need beneficiaries represented a larger share of beneficiaries enrolled in ACOs (38%) than in MA (24%).

or older with no complex conditions but with 1 to 5 noncomplex conditions); and (6) relatively healthy (65 years or older with no chronic conditions). Beneficiaries in 1 of the first 3 segments were defined as the high-need population, whereas all others were assigned to the non-high-need population.

The identification of various high-need population segments relies on diagnosis codes recorded on claims and encounters. MA plans have financial incentives to record as many *International Statistical Classification of Diseases, Tenth Revision* codes as possible due to the patient complexity adjustment to capitated payments.¹³ To minimize the impact of diagnosis upcoding, we excluded chart reviews, which plans use to add or delete diagnosis codes, and also diagnoses obtained from health risk assessments when identifying medical conditions from the MA encounter data.

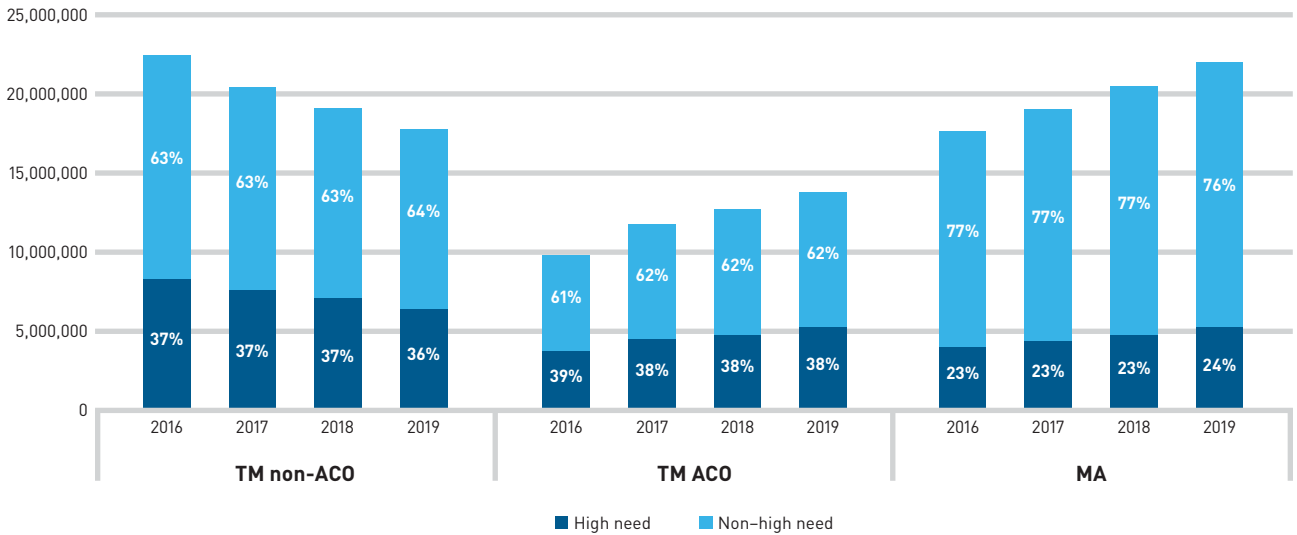
We compared trends over time for the share of enrollees who were high need by Medicare enrollment type and analyzed the composition of high-need group by segment (eg, frail individuals 65 years or older). We assessed differences in mean population characteristics using *t* tests. We also explored the characteristics of our cohort separately for those who switched between MA and TM during a year and those who did not. The exploration of interaction between switching status and high-need status is especially insightful because a significant proportion of the growth in MA is due to switching from TM.¹⁴

RESULTS

High-Need Beneficiaries Accounted for Almost 18 Million of All Medicare Enrollees in 2019

Our analytic file consisted of 50.9 million and 54.7 million total Medicare beneficiaries in 2016 and 2019, respectively. Approximately 32% of Medicare enrollees were identified as high-need beneficiaries from 2016 to 2019, and this share remained fairly stable over the study period. In 2016, we identified 16.6 million or 32.7% of Medicare enrollees as high need. By comparison, we identified 17.6 million or 32.1% of Medicare enrollees as high need in 2019. The net increase of approximately 1 million high-need beneficiaries between 2016 and 2019 was driven by a steady increase in MA enrollment. In 2019, approximately 2% of Medicare enrollees switched between TM and MA during the year. In the following results, we exclude switchers from overall analyses and examine this cohort separately.

FIGURE 1. Medicare Beneficiaries by High-Need Status and Enrollment Type, 2016-2019^a

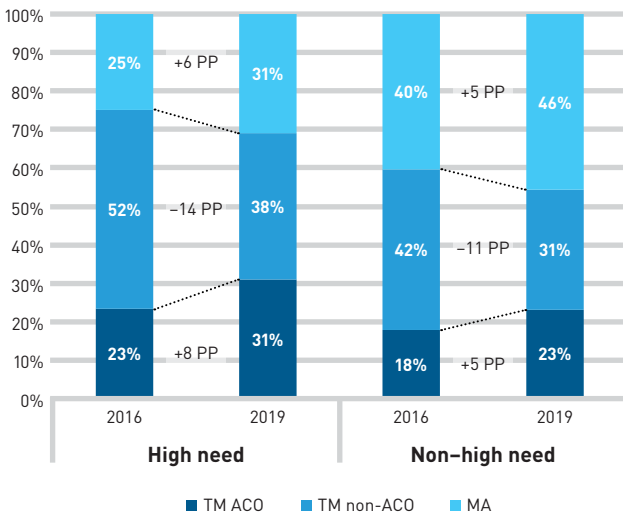


ACO, accountable care organization; MA, Medicare Advantage; TM, traditional Medicare.

^aTM non-ACO, TM ACO, and MA are 3 mutually exclusive groups. Switchers are excluded from the analysis. High-need beneficiaries are individuals younger than 65 years with a disability or end-stage kidney disease, frail individuals, and individuals with major complex chronic illness. Non-high-need beneficiaries are individuals with minor complex or simple chronic illness and those who are relatively healthy.

Source: Authors' analysis of 2016-2019 Medicare claims and MA encounter data.

FIGURE 2. Changes in Enrollment Type Shares by High-Need Status, 2016 and 2019^a



ACO, accountable care organization; MA, Medicare Advantage; PP, percentage points; TM, traditional Medicare.

^aTM non-ACO, TM ACO, and MA are 3 mutually exclusive groups. Switchers are excluded from the analysis. High-need beneficiaries are individuals younger than 65 years with a disability or end-stage kidney disease; frail individuals; and individuals with major complex chronic illness. Non-high-need beneficiaries are individuals with minor complex or simple chronic illness and those who are relatively healthy. Percentage change across years may not precisely add up due to rounding.

Source: Authors' analysis of 2016-2019 Medicare claims and MA encounter data.

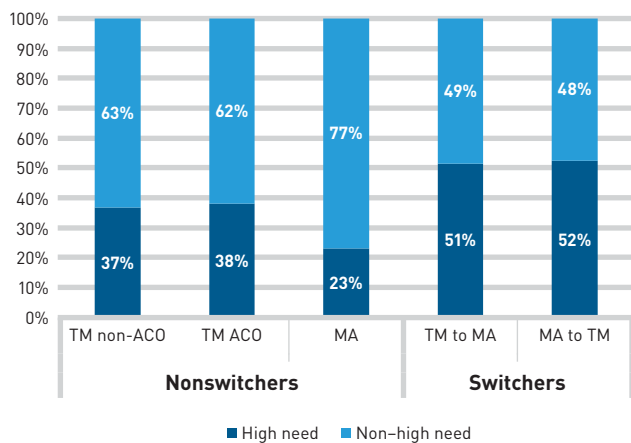
A Larger Share of Beneficiaries in ACOs Are High Need Than in MA

We observed larger variation in high-need share by Medicare enrollment type. In 2019, 36% of beneficiaries in TM non-ACOs and 38% of beneficiaries in TM ACOs were high need (Figure 1). The MA population had the lowest high-need share (2019: 24%). The cumulative count of high-need beneficiaries in TM remained stable at approximately 11.7 million, but an increasing number of high-need beneficiaries were aligned with an ACO, tracking with the overall growth of beneficiaries who are aligned with TM ACOs.

Although beneficiary enrollment in MA and alignment with TM ACOs increased, TM non-ACOs remained the main source of coverage for the high-need population in 2019 (Figure 2). Nevertheless, the shift away from TM non-ACOs between 2016 and 2019 occurred more rapidly for the high-need population: The share of high-need beneficiaries enrolled in MA or aligned with TM ACOs increased by 14 percentage points between 2016 and 2019, whereas the share of non-high-need beneficiaries in MA or TM ACOs increased by 11 percentage points.

Finally, a comparison of the share of high-need beneficiaries within switchers (ie, beneficiaries who change coverage from TM to MA or vice versa during the year) relative to nonswitchers shows that dynamics in this group differ from the rest of the Medicare population. Specifically, we found that slightly more than 50% of beneficiaries who switched from TM to MA or vice versa were high need (Figure 3).

FIGURE 3. Medicare Beneficiaries by High-Need Status, Enrollment Type, and Switching Status, 2016-2019^a



ACO, accountable care organization; MA, Medicare Advantage; TM, traditional Medicare.

^aTM non-ACO, TM ACO, and MA are 3 mutually exclusive groups. High-need beneficiaries are individuals younger than 65 years with a disability or end-stage kidney disease; frail individuals; and individuals with major complex chronic illness. Non-high-need beneficiaries are individuals with minor complex or simple chronic illness and those who are relatively healthy.

Source: Authors' analysis of 2016-2019 Medicare claims and MA encounter data.

MA Enrollees Are Relatively Healthy Compared With TM ACO and TM Non-ACO Enrollees

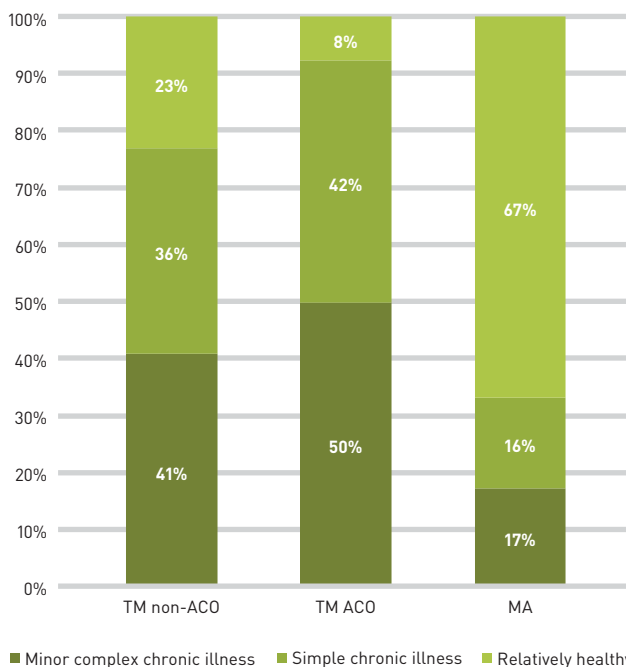
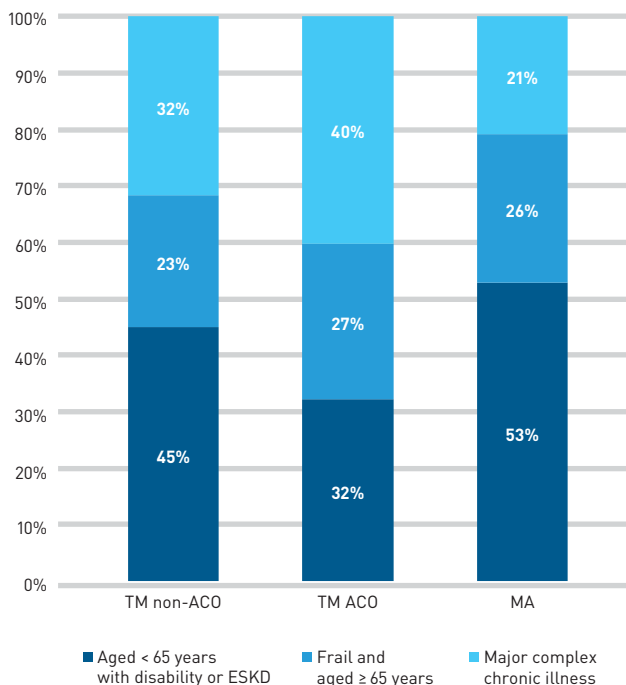
Among beneficiaries classified as high-need between 2016 and 2019, TM ACOs and TM non-ACOs had a larger share qualifying as high need because of major complex chronic conditions (40% and 32%, respectively) compared with MA (21%) (Figure 4). In contrast, MA enrollees were more likely to qualify as high need because of disability (53% for MA vs 45% for TM non-ACOs and 32% for TM ACOs). Among non-high-need beneficiaries, a majority of MA enrollees (67%) were identified as relatively healthy. In contrast, more than 75% of TM non-ACO and TM ACO non-high-need beneficiaries were found to have at least 1 chronic condition.

Finally, compared with nonswitchers, switchers were generally more likely to be high-need beneficiaries, suggesting that high-need beneficiaries may be more dissatisfied with their health care because of their multiple needs (eAppendix Table 1 [eAppendix available at ajmc.com]). Disabled beneficiaries younger than 65 years represent the largest proportion of all switchers, with 37% switching to MA and 24% to TM in 2019. Finally, beneficiaries who disenrolled from MA were more than twice as likely to be frail individuals 65 years or older (19%) as those who disenrolled in the other direction (8%).

High-Need TM Beneficiaries Are Older, More Often White, and Have More Chronic Conditions Than High-Need MA Beneficiaries

High-need TM beneficiaries (combined TM ACO and TM non-ACO) were more likely to be White than the MA population (eAppendix

FIGURE 4. Distribution of High-Need and Non-High-Need Beneficiaries by High-Need Segment and Enrollment Type, 2016-2019^a



ACO, accountable care organization; ESKD, end-stage kidney disease; MA, Medicare Advantage; TM, traditional Medicare.

^aTM non-ACO, TM ACO, and MA are 3 mutually exclusive groups. Switchers are excluded from the analysis. High-need beneficiaries are individuals younger than 65 years with a disability or ESKD; frail individuals; and individuals with major complex chronic illness. Non-high-need beneficiaries are individuals with minor complex or simple chronic illness and those who are relatively healthy.

Source: Authors' analysis of 2016-2019 Medicare claims and MA encounter data.

Table 2). On average, high-need TM beneficiaries have more chronic conditions (6.3 vs 4.0 among MA beneficiaries), are slightly older, and reside in zip code areas with higher median income and lower MA penetration. The demographic characteristics of high-need switchers indicate that, relative to high-need nonswitchers, these beneficiaries are more likely to be racial minorities and be dually eligible than the general population. The latter is not surprising given a coverage change flexibility available for dual Medicare beneficiaries. Moreover, high-need beneficiaries disenrolling from TM are younger, more likely to be disabled, and have fewer complex and noncomplex chronic conditions than the population disenrolling from MA, indicating that the sicker population was moving to TM. Our finding points to a broader issue than previously reported higher MA disenrollment rates among Medicare populations with a specific condition (eg, Alzheimer disease and related dementias).¹⁵

DISCUSSION

Over the past decade, beneficiary enrollment in MA and the number of beneficiaries aligned with Medicare ACO programs have grown significantly as beneficiaries and their physicians have shifted away from TM toward MA and ACOs, respectively. Our findings demonstrate that such shifting has been larger for high-need beneficiaries than for other beneficiaries.

Despite the shift of high-need beneficiaries away from TM non-ACOs, we found that high-need beneficiaries were more likely to be in TM non-ACOs than in MA through 2019. Specifically, we found that high-need Medicare beneficiaries were 23% more likely to be enrolled in TM non-ACOs than MA. With respect to TM ACOs, we found that high-need beneficiaries were equally likely to be aligned with a TM ACO or be in MA (with approximately 5.2 million high-need beneficiaries in each program in 2019), despite TM ACOs being two-thirds the size of MA in terms of enrollment in 2019 (eAppendix Table 1). In addition, we found greater disenrollment from TM and MA among high-need beneficiaries during a year, suggesting that both programs may not be meeting the needs of these beneficiaries sufficiently.

Debate exists about the impact of MA enrollment on Medicare finances, but high-need beneficiaries increasingly enrolling in MA or being aligned with ACOs may positively impact patient outcomes, although empirical studies comparing outcomes across Medicare programs for high-need beneficiaries are limited. ACOs and MA plans can offer more coordinated care to manage the conditions and other needs of these beneficiaries. In MA in particular, plans that cater to beneficiaries with special needs, including special needs plans (SNPs) and institutional SNPs that focus on beneficiaries in long-term institutional settings such as nursing homes, are growing, with the number of SNPs in MA increasing by 79% from 717 in 2019 to 1284 in 2023.¹⁶

Limitations

Our study has several limitations. First, a known limitation of encounter data is their incompleteness.¹⁷ However, this is more of

a concern for measuring utilization than for reporting diagnoses, which tend to be overdocumented in MA given the financial incentives for MA plans. To limit the impact of coding differences between MA and TM, we excluded MA encounter chart reviews and diagnoses from health risk assessments from the analysis. Although excluding these records could help mitigate upcoding, it might not completely eliminate it; hence, our counts of MA high-need beneficiaries might still be high. Excluding diagnoses from chart reviews and health risk assessments had only a small impact on our findings, showing slightly fewer high-need beneficiaries in MA compared with TM non-ACOs and TM ACOs. Second, we excluded new Medicare enrollees from the analysis (ie, those who turned 65 and joined Medicare after January 1 of a year). In addition, we were only able to include data through 2019, although MA has continued to grow significantly since then. Thus, the share of high-need patients enrolled in MA may be different today. Third, Puerto Rico, which has a high MA penetration rate, was excluded from the analysis because we excluded US territories. Finally, our analysis is associational in nature and should not be interpreted as causal.

CONCLUSIONS

Most beneficiaries served by MA in 2019 were not high need. Half of the total MA population (across both high-need and non-high-need beneficiaries) is in the relatively healthy segment. Although the proportion of high-need beneficiaries in MA is smaller than that in TM ACOs and TM non-ACOs, high-need beneficiaries in MA are predominantly disabled and younger than 65 years, potentially attracted by SNPs. We also found evidence of both growing enrollment in MA and alignment with TM ACOs between 2016 and 2019 as beneficiaries shifted away from TM non-ACOs, with a more rapid shift among high-need beneficiaries. The movement into managed care via enrollment in MA or alignment with TM ACOs may have positive impacts on the outcomes of high-need beneficiaries because these entities may be able to better meet the needs of this population. The high-need population is often associated with a higher economic burden, which has financial implications for the Medicare program overall and TM in particular. Our findings indicate that at least through 2019, TM ACOs and TM non-ACOs are more likely to serve this population. However, we also found that the share of high-need beneficiaries within TM who switch to MA has increased over time, whereas the share of high-need MA beneficiaries switching to TM has decreased over time. ■

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Authorship Information: Concept and design (AU, IC, LK); acquisition of data (IC, LK); analysis and interpretation of data (AU, IC, JS, LK); drafting of the manuscript (AU, IC, JS, LK); critical revision of the manuscript for important intellectual content (AU, LK); statistical analysis (AU, JS); obtaining funding (LK); administrative, technical, or logistic support (AU, JS); and supervision (IC, LK).

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eAppendix Table 1. Composition of Beneficiaries by Segment, Insurance Type, and Switching Status

	Non-Switchers (counts)						Switchers (counts)			
	TM non-ACO		TM ACO		MA		TM to MA		MA to TM	
	2016	2019	2016	2019	2016	2019	2016	2019	2016	2019
Total	22,493,944	17,814,893	9,794,286	13,763,022	17,655,804	22,005,320	586,900	793,069	347,848	344,039
Total High-Need	8,344,175	6,450,352	3,777,199	5,245,528	3,999,425	5,223,944	289,947	418,946	182,407	183,137
Disabled, <65	3,850,856	2,780,696	1,326,820	1,568,684	2,205,872	2,685,131	203,831	294,849	92,058	83,262
Frail elderly	1,863,063	1,558,119	1,036,956	1,457,017	990,795	1,441,511	43,593	65,108	57,828	66,467
Major complex chronic illness	2,630,256	2,111,530	1,413,423	2,219,827	802,758	1,097,302	42,523	58,989	32,521	33,408
Total Non-High-Need	14,149,769	11,364,548	6,017,087	8,517,494	13,656,379	16,781,376	296,953	374,123	165,441	160,902
Minor complex chronic illness	5,934,863	4,517,104	2,986,927	4,266,076	2,289,715	2,959,622	114,864	145,835	66,444	63,820
Simple chronic	5,230,992	4,068,035	2,544,167	3,597,224	2,094,578	2,734,548	78,815	99,918	45,927	44,658
Relatively healthy	2,983,914	2,779,409	485,993	654,194	9,272,086	11,087,206	103,274	128,370	53,070	52,424
	Non-Switchers (percentages)						Switchers (percentages)			
	TM non-ACO		TM ACO		MA		TM to MA		MA to TM	
	2016	2019	2016	2019	2016	2019	2016	2019	2016	2019
Total High-Need	37%	36%	39%	38%	23%	24%	49%	53%	52%	53%
Disabled, <65	17%	16%	14%	11%	12%	12%	35%	37%	26%	24%
Frail elderly	8%	9%	11%	11%	6%	7%	7%	8%	17%	19%
Major complex chronic illness	12%	12%	14%	16%	5%	5%	7%	7%	9%	10%
Total Non-High-Need	63%	64%	61%	62%	77%	76%	51%	47%	48%	47%
Minor complex chronic illness	26%	25%	30%	31%	13%	13%	20%	18%	19%	19%
Simple chronic	23%	23%	26%	26%	12%	12%	13%	13%	13%	13%
Relatively healthy	13%	16%	5%	5%	53%	50%	18%	16%	15%	15%

Source: Authors' analysis of 2016–2019 Medicare claims and Medicare Advantage Encounter data. Note: For switchers, TM includes TM non-ACO and TM ACO beneficiaries.

eAppendix Table 2. Characteristics of Beneficiaries by High-Need Status, Insurance Type, and Switching Status

	Non-switchers				Switchers			
	High-Need		Non-High-Need		High-Need		Non-High-Need	
	TM	MA	TM	MA	TM to MA	MA to TM	TM to MA	MA to TM
Demographic characteristics								
Male	48%	46%	44%	43%	44%	44%	43%	43%
Female	52%	54%	56%	57%	56%	56%	57%	57%
Age	68.00	66.32	74.62	74.87	59.01	65.23	71.79	73.42
White	76%	66%	82%	70%	55%	57%	51%	60%
Black	13%	17%	7%	10%	26%	24%	18%	15%
Other	11%	17%	11%	20%	18%	19%	31%	25%
Full Dual eligible	29%	26%	7%	8%	59%	58%	37%	28%
% Disabled	40%	53%	na	na	71%	48%	na	na
% ESRD	3%	2%	0%	0%	2%	3%	0%	0%
% <65 years	40%	53%	na	na	71%	48%	na	na
% Frail	25%	26%	na	na	15%	34%	na	na
# of CC Conditions	2.17	1.49	0.59	0.22	1.58	2.19	0.52	0.53
# of Non-CC Conditions	4.14	2.45	2.20	0.63	2.93	3.83	1.52	1.65
Geographic characteristics								
Median income in zipcode	\$66,338	\$62,674	\$71,612	\$69,176	\$58,236	\$60,796	\$64,369	\$66,161
% of Living alone in the county	28%	29%	28%	27%	30%	29%	28%	28%
% with high-school education	62%	61%	63%	62%	59%	59%	60%	61%
% below poverty level	13%	14%	12%	13%	16%	16%	15%	14%
MA penetration level in a county	32%	40%	31%	41%	37%	38%	38%	37%
Number of bene-year observations	47,745,272	18,357,578	80,148,205	60,840,576	1,420,074	733,276	1,343,058	663,994

Source: Authors' analysis of 2016–2019 Medicare claims and Medicare Advantage Encounter data.

Note: TM includes TM non-ACO and TM ACO beneficiaries. TM: Traditional Medicare, ACO: Accountable Care Organization, MA: Medicare Advantage. Differences between TM and MA means for all variables were statistically significant.