Analysis of Medicare Advantage Enrollee Demographics, Utilization, Spending, and Quality Compared to Fee-for-Service Medicare Among Enrollees with Chronic Conditions

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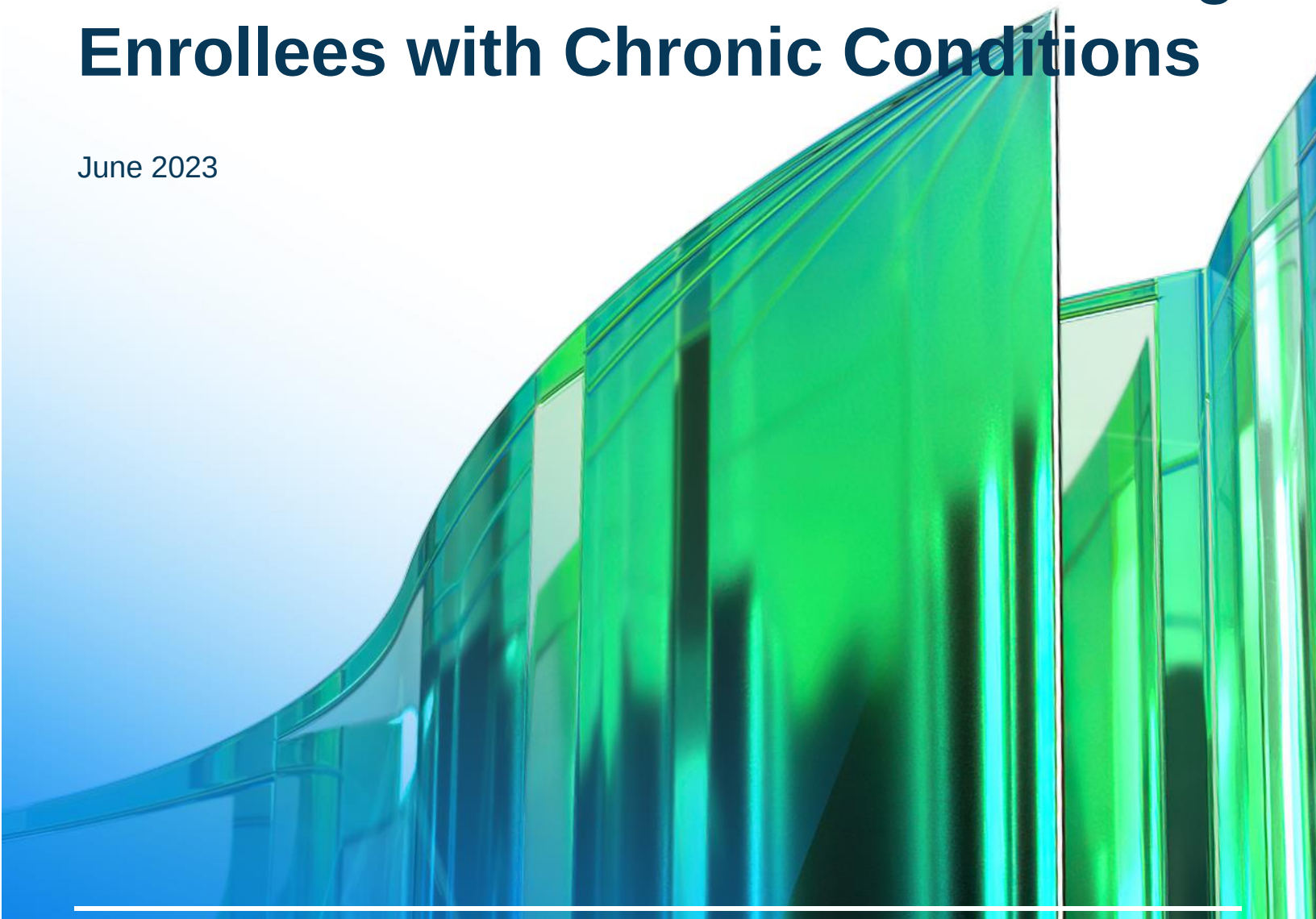

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Contents

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Acronyms

ACO	Accountable Care Organizations
AHRQ	Agency for Healthcare Research and Quality
BMA	Better Medicare Alliance
CBO	Congressional Budget Office
CCI	Charlson Comorbidity Index
CCSR	Clinical Condition Software Revised
CCW	Chronic Conditions Data Warehouse
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare & Medicaid Services
DME	Durable Medical Equipment
DUA	Data Use Agreement
ER	Emergency Room
ESRD	End Stage Renal Disease
FFS	Fee-for-Service
GAO	Government Accountability Office
HEDIS	Healthcare Effectiveness Data and Information Set
HCPCS	Healthcare Common Procedure Coding System
ICD-10-CM	International Classification of Diseases, Tenth Revision, Clinical Modification
MA	Medicare Advantage
MA-PD	Medicare Advantage Prescription Drug Plan
MedPAC	Medicare Payment Advisory Commission
MBSF	Master Beneficiary Summary File
MOOP	Maximum Out-of-Pocket

MORE²	Medical Outcomes Research for Effectiveness and Economics
NCQA	National Committee for Quality Assurance
OOP	Out-of-Pocket
OREC	Original Reason for Entitlement Code
PDE	Part D Encounter
PHE	Public Health Emergency
PMPM	Per Member Per Month
RAS	Renin-Angiotensin System
SNP	Special Needs Plans
SSBCI	Special Supplemental Benefits for the Chronically Ill

Executive Summary

The Medicare program is the largest payer of healthcare in the United States. In 2012, just over one quarter of all Medicare beneficiaries were in an MA plan whereas in 2022 nearly half were.[1] Given the substantial growth in MA enrollment over the past decade, policymakers and other stakeholders have a shared interest in comparing trends in care delivery, outcomes, and beneficiary characteristics between FFS Medicare and Medicare Advantage.

Understanding treatment trends between MA and FFS is crucial for evaluating differences and similarities in effectiveness of care delivery and management between these 2 programs. Hypertension, hyperlipidemia, and diabetes are common among Medicare beneficiaries and any increase in this triad of conditions has implications for the Medicare system. Analyzing trends among beneficiaries with these conditions enrolled in MA and FFS can provide insight into differences in spending and health outcomes between these programs.

This study is an update of an Avalere analysis from 2018 that compared demographic and clinical characteristics between beneficiaries in MA as compared to those in FFS. That 2018 study compared outcomes, based on 2015 data, between 2 large national samples of MA and FFS beneficiaries with hypertension, hyperlipidemia, and/or diabetes. This study follows a similar methodology in comparing the subgroups, includes many of the same metrics used for this comparison, and uses 2019 claims and demographic data. Across the updated analyses, different subgroups of the populations of interest are referenced and defined as follows:

1. **Sample Population**: MA or FFS beneficiaries enrolled for all of 2019 with 1 or more of 3 selected chronic conditions (hypertension, hyperlipidemia, diabetes)
2. **Condition Subgroups**: Beneficiaries with chronic conditions of interest (hypertension, hyperlipidemia, diabetes). Note that beneficiaries may have more than 1 condition and therefore be in multiple condition subgroups
3. **Dual Eligibility-Based Subgroups**: MA or FFS beneficiaries who are eligible for Medicare and Medicaid.
4. **Clinically Complex Subgroups**: Beneficiary group with all 3 chronic conditions (Hypertension, Hyperlipidemia, and Diabetes)

Key Findings

Among beneficiaries with 1 or more of the 3 conditions studied, MA had a higher proportion of beneficiaries who identify as racial and ethnic minorities than FFS (28.1% in MA vs. 12.8% in FFS) or who were enrolled in Medicare due to a disability (27.0% in MA vs. 21.6% in FFS).

Beneficiaries in MA had lower rates of inpatient utilization and ER visits, and higher rates of physician visits. The average length of inpatient stay was higher for beneficiaries in MA than in FFS.

1 Boards of Trustees for Medicare. 2022 Medicare Trustees Report. Available here: https://www.cms.gov/files/document/2022-medicare-trustees-report.pdf

- Utilization of healthcare services was lower for MA beneficiaries in the study, with fewer inpatient stays observed in each of the chronic condition subgroups. Per 1,000 beneficiaries, these annual rates among MA beneficiaries vs. FFS beneficiaries were: 365 vs. 375 (hypertension), 355 vs. 378 (hyperlipidemia), and 427 vs. 435 (diabetes).
- ER visits were less common among MA beneficiaries, ranging between 442-511 visits per 1,000 MA beneficiaries when stratified by chronic condition subgroup, compared to a range of 573-665 visits per 1,000 among FFS beneficiaries for the same conditions.
- MA beneficiaries had a longer average length of inpatient stay than FFS beneficiaries in each of the subgroups (7 days vs. 5 days).
- MA beneficiaries in the condition subgroups had slightly higher rates of physician office visits, with MA beneficiaries having 11.0-12.0 visits per year, compared to 10.1-10.5 visits per year among FFS beneficiaries.

Regardless of the specific chronic condition, MA beneficiaries in these subgroups had lower overall healthcare spending than FFS beneficiaries, on a PMPM basis across all expenditure types in the analysis (including acute inpatient, ambulatory outpatient, prescription drug, and all other medical costs).

- Total spending was consistently higher among FFS beneficiaries, across all subgroups. MA PMPM spending ranged from $1,532 for beneficiaries with diabetes to $1,276 for beneficiaries with hyperlipidemia, compared to $2,204 and $1,834, respectively, for FFS beneficiaries.

Quality was similar between MA and FFS beneficiaries on several measures, including all-cause readmissions and adherence of certain medications.

- MA beneficiaries had higher rates of comprehensive diabetes care, particularly among beneficiaries with hypertension (64.2% in MA vs. 56.3% in FFS) and hyperlipidemia (66.2% in MA s. 59.0% in FFS).

Differences between dual-eligible beneficiaries in MA and FFS were also analyzed. Trends in utilization, spending, and quality among dual-eligible beneficiaries in MA and FFS across all the 3 studied condition subgroups were similar to MA and FFS beneficiaries in the full sample population.

Background

Medicare Advantage

Medicare beneficiaries can receive their benefits through the federally administered traditional FFS Medicare program or through Medicare Advantage, an alternative offered through private health plans. While these private plans have been in existence since the 1970s, they were codified in legislation officially in 1982, and the current framework for the Medicare Advantage (MA) program was created by the Medicare Modernization Act of 2003. The average Medicare beneficiary has access to 43 MA plans in 2023—twice as many as in 2018.[2]

MA enrollment has grown considerably over the past 20 years, from 4.6 million beneficiaries in 2003 (11% of Medicare enrollment) to 30.2 million in 2023 (46%).[3, 4] By 2032, the CBO projects that MA will account for over 60% of total Medicare enrollment.[5]

Payment Mechanics

MA plans are paid on a prospective, capitated basis, which can offer incentives to reduce unnecessary health services, provide preventive health services, and coordinate care. CMS sets county benchmarks based on projected FFS costs at the county level. MA plans submit bids to CMS that reflect the expected average costs to care for each beneficiary in their plan. To limit the possibility that adverse selection might occur, bids are risk-adjusted to account for beneficiary differences in health status and other characteristics, such as age, gender, dual eligibility, and disability status.

Plans that bid below the benchmark receive a portion of the savings as a rebate. According to the MedPAC, the average monthly rebate per beneficiary in 2023 was a record high of $196.[6] MA plans can use rebates to provide lower OOP costs and supplemental benefits to their enrollees. Plans also receive higher rebates for providing high-quality care to enrollees via the Star Ratings system, where plans with at least 4 stars receive additional payments per beneficiary through the quality bonus program to provide additional benefits to enrollees.

MA plans can use their rebate dollars to provide expanded primarily health-related supplemental benefits (starting in 2019) as well as non-primarily health-related SSBCI (starting in 2020). These benefits can be used to address social and environmental factors that may impact health. For beneficiaries with chronic conditions such as hypertension, hyperlipidemia, and diabetes, lifestyle modifications attained through targeted benefits can directly lead to improvements in health outcomes. Plan uptake of newly targeted benefit designs, including SSBCI, was low in 2020 (only 6% of MA plans), possibly due to limited evidence for these benefits or other barriers

2 MedPAC. The Medicare Advantage program: Status report. January 2023. Available here: https://www.medpac.gov/wp-content/uploads/2023/01/MedPAC-MA-status-report-Jan-2023.pdf

3 GAO. Medicare Demonstration PPOs: Financial and Other Advantages for Plans, Few Advantages for Beneficiaries. September 2004. Available here: https://www.gao.gov/products/gao-04-960

4 CMS. Access to Health Coverage. January 31. 2023. Available here: https://www.cms.gov/pillar/expand-access

5 CBO. The Budget and Economic Outlook: 2022 to 2032. May 2022. Available here: https://www.cbo.gov/publication/57950

6 MedPAC. The Medicare Advantage program: Status report. January 2023. Available here: https://www.medpac.gov/wp-content/uploads/2023/01/MedPAC-MA-status-report-Jan-2023.pdf

to investment.[7] Research on the utilization and eventual impact of these benefits on enrollee health remains limited as well.[8]

Table 1—Comparison Between the Medicare Advantage and FFS Medicare Programs[9]

	Medicare Advantage	FFS Medicare
Part A & B	• Must cover all Parts A and B FFS services • May cover additional supplemental benefits (e.g., dental, vision, hearing)	• Parts A and B covered services
Limit on Part A & B OOP Cost Sharing	• Annual out-of-pocket limit for Parts A and B; beneficiaries cannot purchase Medigap plans • MA beneficiaries are typically exposed to higher OOP costs for Part B drugs than FFS beneficiaries until they reach the MOOP • Median MOOP was $5,000 for 2023 enrollment	• No out-of-pocket limit, but beneficiaries can purchase Medigap plans to reduce OOP costs
Provider Access	• Certain provider networks that must meet adequacy standards (e.g., time and distance) • Beneficiaries can sometimes access out-of-network services at higher cost	• No networks; beneficiaries can see any provider who accepts Medicare
Part D	• For prescription drug benefits, beneficiaries can enroll in an MA-PD plan with combined medical and drug benefits, which may charge a higher premium • MA prescription drug plans provide access to Part D benefits	• For prescription drug benefits, beneficiaries can enroll in a stand-alone PDP for an additional premium
Quality Incentives	• MA plan quality (e.g., health outcomes, patient experience) is measured through the Star Ratings program, which also impacts payments to plans	• Providers and facilities participate in quality measurement programs that may alter their payment
Payment	• Providers are paid by MA plans. MA plans have flexibility in how they set rates to providers • MA plans receive a capitated PMPM payment from the government	• Providers are paid per service, and bill Medicare directly for payment. • Payment rates are based on prospective payment systems or fee-schedules set by Medicare

7 Kornfield et al. Commonwealth Fund. "Medicare Advantage Plans Offering Expanded Supplemental Benefits: A Look at Availability and Enrollment." February 2021. Available here: https://doi.org/10.26099/345k-kc32

8 GAO. Report to Congressional Committees. Plans Generally Offered Some Supplemental Benefits, but CMS Has Limited Data on Utilization. January 2023. Available here: https://www.gao.gov/assets/gao-23-105527.pdf

9 MedPAC. The Medicare Advantage program: Status report. January 2023. Available here: https://www.medpac.gov/wp-content/uploads/2023/01/MedPAC-MA-status-report-Jan-2023.pdf

Chronic Conditions Among Medicare Beneficiaries

The majority of Medicare beneficiaries have at least 1 chronic condition, and many have multiple comorbid conditions. The complexity of their health and care management needs can lead to poorer outcomes and increased healthcare spending, compared to beneficiaries without chronic conditions. Almost 40% of the FFS Medicare population had 4 or more chronic conditions in 2018; these beneficiaries accounted for 95% of hospital readmissions and 78% of Medicare expenditures.[10] Compared to traditional FFS Medicare, MA plans have more flexibility to manage their enrolled beneficiaries' chronic conditions. MA plans can implement care coordination to identify beneficiaries with unmet needs, conduct outreach to patients and providers, and provide targeted care delivery.

A subset of MA plans are SNPs, which are limited to certain types of beneficiaries, such as those with dual eligibility for Medicare and Medicaid, chronic conditions, or require long-term care from institutions. SNPs can offer benefits and plan designs tailored to specific healthcare needs, in addition to the other supplemental benefits that MA plans may offer to enrollees using rebate dollars. Similar rates of chronic condition counts were found between FFS Medicare and non-SNP MA beneficiaries, with SNP MA beneficiaries having significantly more chronic conditions per member.[11]

FFS Medicare beneficiaries with chronic conditions can also receive coordinated care management from ACOs. ACOs are provider groups which arrange management and coordination activities for patients in return for bonus payments from CMS tied to quality and outcomes measures. In a survey of ACOs with Medicare contracts from 2017 to 2018, a majority (63%) reported that they had implemented comprehensive care management programs for patients with chronic conditions, which included patient identification, care transition support, and patient engagement.[12] An analysis of beneficiaries with complex needs who were attributed to those ACOs showed no change in outcomes associated with care management programs.[13] Evaluations of ACO models suggest that ACOs reduce Medicare spending without reducing quality of care, although ACOs have faced criticism for selective participation.[14]

Chronic Conditions Included in This Study

Hypertension, hyperlipidemia, and diabetes are chronic conditions which can present many health and financial challenges for patients, providers, and payers. Furthermore, prevalence and treatment for patients can vary considerably by beneficiaries' demographic characteristics, race, ethnicity, and geography, resulting in differential outcomes and spending. Successful implementation of care management programs to improve service delivery and quality of care can improve health outcomes and reduce costs.[15]

10 CMS. Chartbook and Charts. 2018. Available here: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Chartbook_Charts

11 Jacobson et al., Commonwealth Fund. "Medicare Advantage vs. Traditional Medicare: How Do Beneficiaries' Characteristics and Experiences Differ?" October 2021. Available here: https://doi.org/10.26099/yxq0-1w42

12 Peck et al. Commonwealth Fund. "How ACOs Are Caring for People with Complex Needs." December 2018. Available here: https://doi.org/10.26099/s155-a088

13 Ouayogodé et al. JAMA Network Open. "Association Between Care Management and Outcomes Among Patients with Complex Needs in Medicare Accountable Care Organizations." July 2019. Available here: https://doi.org/10.1001/jamanetworkopen.2019.6939

14 Jacobs et al. The New England Journal of Medicine. "Expanding Accountable Care's Reach among Medicare Beneficiaries." July 2022. Available here: https://doi.org/10.1056/NEJMp2202991

15 Agency for Healthcare Research and Quality. Care Management: Implications for Medical Practice, Health Policy, and Health Services Research. Available here: https://www.ahrq.gov/ncepcr/care/coordination/mgmt.html#summ

Hypertension

Hypertension, or high blood pressure, is a risk factor for several severe diseases, including coronary heart disease, congestive heart failure, end-stage renal disease, and stroke.[16] Hypertension is one of the most common chronic conditions among Medicare beneficiaries. In 2021, 64% of the FFS Medicare population had at least one claim with a hypertension diagnosis.[17] An analysis of MA beneficiaries 65 years and older in the Health Outcomes Survey found that 64% had hypertension from 2011-2015.[18] The prevalence of hypertension is projected to increase dramatically in the next decade, but the condition remains largely unmanaged and uncontrolled among diagnosed adults, leading to high medical costs and in some cases, early death.[19, 20]

CMS monitors hypertension management through HEDIS quality measures, including adherence to RAS inhibitors and statin use. Accordingly, MA plans may offer reduced or $0 cost sharing on these drugs to facilitate access for enrollees with hypertension.[21] Other plans may offer $0 cost sharing for blood pressure self-measurement equipment.[22] Self-measured blood pressure monitoring is only available for FFS Medicare beneficiaries with ESRD receiving home dialysis.[23] However, prior research comparing beneficiaries with hypertension in FFS Medicare and MA found that more MA beneficiaries had a usual source of care, but FFS Medicare beneficiaries had fewer financial concerns related to their medical bills.[24]

Hyperlipidemia

Hyperlipidemia, or high blood levels of cholesterol or triglycerides, is a well-established risk factor for cardiovascular diseases. Hyperlipidemia is second only to hypertension in its prevalence among Medicare patients, with almost half of FFS beneficiaries having a diagnosis of hyperlipidemia in 2019.[25] Beneficiaries who were enrolled in FFS Medicare or MA in 2007 had similar rates of hyperlipidemia in the 3-8 years prior to their enrollment.[26] Progress has been made on identifying and reducing hyperlipidemia among US adults in the past decade, but

16 Fuchs and Whelton. Hypertension. “High Blood Pressure and Cardiovascular Disease.” February 2020. Available here: https://doi.org/10.1161/hypertensionaha.119.14240

17 CMS. Data SNAPSHOT: Hypertension Disparities in Medicare Fee-For-Service Beneficiaries. January 2023. Available here: https://www.cms.gov/files/document/data-snapshot-hypertension-jan-2023.pdf

18 Đoàn et al. The Journals of Gerontology: Series A. “Trends in Cardiovascular Disease by Asian American, Native Hawaiian, and Pacific Islander Ethnicity, Medicare Health Outcomes Survey 2011-2015.” February 2022. Available here: https://doi.org/10.1093/gerona/glab262

19 American Heart Association. Cardiovascular Disease: A Costly Burden for America – Projections Through 2035. 2017. Available here: https://www.heart.org/-/media/Files/About-Us/Policy-Research/Fact-Sheets/Public-Health-Advocacy-and-Research/CVD-A-Costly-Burden-for-America-Projections-Through-2035.pdf

20 CDC. Hypertension Cascade: Hypertension Prevalence, Treatment and Control Estimates Among US Adults Aged 18 Years and Older Applying the Criteria From the American College of Cardiology and American Heart Association’s 2017 Hypertension Guideline—NHANES 2015–2018. 2021. Available here: https://millionhearts.hhs.gov/data-reports/hypertension-prevalence.html

21 BlueCross BlueShield of South Carolina. The Quality Connection. 2022. Available here: https://www.southcarolinablues.com/web/public/resources/c9dae1ab-ad8f-4363-bde1-24fbcbd2880c/MEDA_216134_22_Provider+Newsletter+-+Fall+2022.pdf?MOD=AJPERES&CVID=olzNXc2

22 MVP Health Care. Medicare Advantage Plans Condition-Specific Benefits. 2023. Available here: https://www.mvphealthcare.com/providers/quality-programs/medicare-condition-specific-benefits/

23 National Association of Chronic Disease Directors. A National Analysis of Self-Measured Blood Pressure Monitoring Coverage and Reimbursement. February 2020. Available here: https://chronicdisease.org/resource/resmgr/website-2020/consultants/cvh/smbp/synthesis_of_smbp_coverage_f.pdf

24 Oseran, Andrew, et al. Circulation: Cardiovascular Quality and Outcomes. “Association Between Medicare Program Type and Health Care Access, Acute Care Utilization, and Affordability Among Adults with Cardiovascular Disease.” September 2022. Available here: https://doi.org/10.1161/CIRCOUTCOMES.121.008762

25 CMS. Medicare Beneficiaries at a Glance. 2021. Available here: https https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Beneficiary-Snapshot/Downloads/Bene_Snaphot.pdf

26 CDC. National Health Statistics Reports, Number 53. May 2012. Available here: https://www.cdc.gov/nchs/data/nhsr/nhsr053.pdf

public health officials are still eager to see improvement on total cholesterol levels and treatment.[27, 28]

In a retrospective study, adult patients with hyperlipidemia who experience a cardiovascular event had increased healthcare utilization and spending compared to patients with hyperlipidemia who did not experience a cardiovascular event.[29] Improved management of hyperlipidemia through medication and lifestyle change can reduce the risk of cardiovascular events.[30] In a study of FFS Medicare beneficiaries with Medigap coverage and statin use, beneficiaries who were adherent to their statins had lower rates of healthcare utilization and expenditures.[31] A comparison of beneficiaries with coronary artery disease found that MA patients with elevated cholesterol levels were more likely to receive medication treatment than similar patients in FFS Medicare; however, there were no differences in cholesterol levels.[32]

Diabetes

Diabetes is a chronic condition in which the body cannot properly control its blood sugar, or glucose levels. Diabetes can lead to the development of other health complications, such as heart disease, eye disease, and chronic kidney disease.[33] Diabetes requires ongoing management and treatment.[34] An analysis of the 2018 Medicare Current Beneficiary Survey found similar rates of diabetes in FFS Medicare (34%) and non-SNP MA (37%), with higher rates in MA SNP plans (59%).[35] In 2019, CMS found that over a quarter of all FFS Medicare beneficiaries had diabetes.[36] Even more beneficiaries have prediabetes, a condition in which blood glucose levels are above normal but not high enough for a diagnosis of diabetes and associated with increased risks of heart disease and stroke.[37] Nationally, diabetes remains a significant health concern, with recent declines in the proportion of patients with diabetes under glycemic control.[38]

Patients with diabetes enrolled in an MA plan may have access to additional targeted benefit designs, such as meals after inpatient stays and transportation to doctor's visits and pharmacies.[39] Prior research has shown conflicting results when comparing outcomes for enrollees with diabetes in FFS Medicare and MA. A previous Avalere study found that patients with diabetes in MA plans had higher medication fills, fewer ER visits and hospitalizations, and

27 CDC. Healthy People 2020. Available here: https://www.cdc.gov/nchs/healthy_people/hp2020.htm
28 CDC. Healthy People 2030. Available here: https://www.cdc.gov/nchs/healthy_people/hp2030/hp2030.htm
29 Fox et al. BMC Cardiovascular Disorders. "Clinical and economic burden associated with cardiovascular events among patients with hyperlipidemia: a retrospective cohort study ." Available here: https://doi.org/10.1186/s12872-016-0190-x
30 Grundy et al. Journal of the American College of Cardiology. "2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines." Available here: https://doi.org/10.1016/j.jacc.2018.11.002
31 Campbell et al. Medicine. "Hypertension, cholesterol and diabetes medication adherence, health care utilization and expenditure in a Medicare Supplemental sample." Available here: https://doi.org/10.1097/MD.0000000000027143
32 Figueroa et al., JAMA Cardiology. "Differences in Management of Coronary Artery Disease in Patients With Medicare Advantage vs Traditional Fee-for-Service Medicare Among Cardiology Practices." Available here: https://doi.org/10.1001/jamacardio.2019.0007
33 National Institute of Diabetes and Digestive and Kidney Diseases. Diabetes, Heart Disease, & Stroke. Available here: https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/heart-disease-stroke
34 Ibid.
35 Jacobson et al., Commonwealth Fund. "Medicare Advantage vs. Traditional Medicare: How Do Beneficiaries' Characteristics and Experiences Differ?" October 2021. Available here: https://doi.org/10.26099/yxq0-1w42
36 CMS. Diabetes Disparities in Medicare Fee-For-Service Beneficiaries. November 2021 Available here: https://www.cms.gov/About-CMS/Agency-Information/OMH/Downloads/Data-Snapshots-Diabetes.pdf
37 Ibid.
38 Fang et al. The New England Journal of Medicine. "Trends in Diabetes Treatment and Control in U.S. Adults, 1999–2018." June 2021. Available here: https://doi.org/10.1056/nejmsa2032271
39 Kornfield et al. The Commonwealth Fund. Medicare Advantage Plans Offering Expanded Supplemental Benefits: A Look at Availability and Enrollment. February 10, 2021. Available here: https://www.commonwealthfund.org/publications/issue-briefs/2021/feb/medicare-advantage-plans-supplemental-benefits

lower total medical spending when compared to FFS Medicare patients with diabetes.[40] However, another study has found that while MA patients with diabetes received preventive care more often, they received fewer prescriptions for newer, more expensive treatments and had slightly higher blood pressure, cholesterol, and blood glucose levels.[41]

Why Avalere Did This Study

In 2018, BMA commissioned Avalere to conduct a study on the differences on select measures of utilization, spending, and quality for beneficiaries with 3 chronic conditions using a nationally representative sample of MA and FFS Medicare beneficiaries enrolled in either program throughout 2015.[42]

That study found that:

- The MA population had a higher proportion of beneficiaries with clinical and social risk factors than the FFS Medicare population.
- The MA population had lower utilization of high-cost services, comparable annual spending, and generally performed better on quality-of-care measures such as hospitalizations and preventive testing.
- Beneficiaries in the MA population had lower rates of hypertension (70.3%) compared to the FFS Medicare population (75.5%), as well as lower rates of hyperlipidemia (63.9% in MA vs. 69.0% in FFS). Rates of diabetes were the same across the MA and FFS populations (32.6%).
- MA dual-eligible beneficiaries had fewer hospitalizations and ER visits, in addition to lower annual healthcare spending, than FFS dual-eligible beneficiaries.

Due to growth in the MA program and changes in plan flexibilities in recent years (e.g., ability to offer a wider array of supplemental benefits), BMA commissioned Avalere to update the 2018 study. This updated study compares differences in utilization, spending, and quality using nationally representative samples of MA and FFS Medicare beneficiaries enrolled for the full year of 2019, prior to the COVID-19 pandemic and initiation of the PHE. The study also examines differences in the 2 Medicare populations and includes an assessment of utilization and spending for dual-eligible beneficiaries in each sample population. The results provide evidence characterizing differences between the populations and inform ongoing policy discussions on the relative performance and value of the MA program in comparison to FFS Medicare, specifically among beneficiaries with chronic conditions.

40 Avalere Health. “Comparing Detection, Treatment, Outcomes, and Spending for Patients with Type 2 Diabetes Between Medicare Advantage and Fee-For-Service Medicare.” January 2023. Available here: https://bettermedicarealliance.org/wp-content/uploads/2023/01/Avalere-Diabetes-Progression-Whitepaper_1.10.23.pdf

41 Essien et al. Diabetes Care. “Diabetes Care Among Older Adults Enrolled in Medicare Advantage Versus Traditional Medicare Fee-For-Service Plans: The Diabetes Collaborative Registry.” July 2022. Available here: https://doi.org/10.2337/dc21-1178

42 Avalere Health. “Medicare Advantage Achieves Cost-Effective Care and Better Outcomes for Beneficiaries with Chronic Conditions Relative to Fee-for-Service Medicare.” July 2018. Available here: https://avalere.com/press-releases/medicare-advantage-achieves-better-health-outcomes-and-lower-utilization-of-high-cost-services-compared-to-fee-for-service-medicare

Study Populations

To assist in navigating the various terms used to differentiate the beneficiaries studied, the following key terms are defined as:

1. **Sample Population:** MA or FFS beneficiaries enrolled for all of 2019 with 1 or more of 3 selected chronic conditions (hypertension, hyperlipidemia, diabetes)
2. **Condition Subgroups:** Beneficiaries with chronic conditions of interest (hypertension, hyperlipidemia, diabetes). Note that beneficiaries may have more than 1 condition and therefore be in multiple condition subgroups.
3. **Dual Eligibility-Based Subgroups:** MA or FFS beneficiaries who are eligible for Medicare and Medicaid.
4. **Clinically Complex Subgroups:** Beneficiary group with all 3 chronic conditions (Hypertension, Hyperlipidemia, and Diabetes)

The overall population of Medicare beneficiaries examined in this retrospective observational study were extracted from large nationally representative samples of the Medicare populations: the MA sample population was composed of beneficiaries from Inovalon's MORE^2 Registry®, and the FFS Medicare sample population was composed of beneficiaries identified in the 100% Medicare FFS claims and enrollment data, accessed by Avalere via a research collaboration with Inovalon, Inc. and governed by a research-focused CMS DUA, (see the Methods section for additional detailed description of data sources used in the analysis). Inclusion criteria required beneficiaries to have been enrolled for the full year in 2019.

We evaluated the representativeness of the MORE^2 MA population by comparing it to national enrollment data from the MBSF (see Appendix). MORE^2 accounts for about 20% of MA enrollees. To ensure that dual eligibility and other demographics were representative of the MA program overall, the MORE^2 MA data was adjusted using weights accounting for beneficiary state, age, gender, and dual eligibility. The FFS sample was multiplied by 5 to account for the use of the 20% random sample. No additional weighting was needed as the 20% sample is representative of the FFS population.

The condition subgroups consist of beneficiaries from MA and FFS with 1 or more of the 3 selected chronic conditions. As beneficiaries could have multiple conditions, the condition subgroups are not mutually exclusive and do not sum up to the totals observed in the sample population. Results are stratified by coverage type, condition type, and dual vs. non-dual enrollment (Table 2). Dual enrollee subgroups included individuals who were both fully dual-eligible and partially dual-eligible.

Table 2—Study Population by Coverage, Condition, and Dual Eligibility (2019)

	Medicare Advantage*	FFS Medicare
Total 2019 Program Enrollment[43]	**~23.1 million beneficiaries**	**~39.4 million beneficiaries**
Condition Subgroups		
Hypertension		
Total	11.0 million	11.9 million
Dual	2.4 million	2.8 million
Non-Dual	8.6 million	9.1 million
Hyperlipidemia		
Total	9.7 million	9.9 million
Dual	2.0 million	2.0 million
Non-Dual	7.7 million	7.9 million
Diabetes		
Total	5.1 million	5.0 million
Dual	1.3 million	1.5 million
Non-Dual	3.8 million	3.5 million

*Population sizes determined using weighted estimates of enrollment; details on weighting included in Methodology

43 Tarazi et al. Office of the Assistant Secretary for Planning and Evaluation. "Medicare Beneficiary Enrollment Trends and Demographic Characteristics." March 2022. Available here: https://aspe.hhs.gov/sites/default/files/documents/f81aafbba0b331c71c6e8bc66512e25d/medicare-beneficiary-enrollment-ib.pdf

Results

Results are organized into categories as follows:

1. Study Population Description
2. Clinical Complexity and Comorbidity Indicators
3. Healthcare Utilization
4. Spending on Care
5. Quality Measures and Outcomes
6. Dual-Eligible Beneficiaries

1. Study Population Description

Avalere assessed the prevalence of each of the chronic conditions of interest—hypertension, hyperlipidemia, and diabetes—and differences in utilization of care, related spending, and relevant indicators of quality of care between chronic condition subgroups (Table 3). The MA and FFS Medicare condition subgroups studied had a similar prevalence and distribution of chronic conditions in both populations.

- Within the MA population, 17.3% of beneficiaries had hypertension only, 10.2% had hyperlipidemia only, and 2.1% had diabetes only.
- Within the FFS population, 20.5% of beneficiaries had hypertension only, 10.4% had hyperlipidemia only, and 2.8% had diabetes only.
- Across both populations, the majority of beneficiaries had 2 or more of the chronic conditions (70.4% in MA and 66.3% in FFS).
- Most frequently beneficiaries had both hypertension and hyperlipidemia (32.8% in MA and 33.8% in FFS).
- A larger portion of the in the MA population had all 3 conditions (28.8%) as compared to the FFS population (23.7%).

Table 3—Prevalence of Chronic Conditions in Medicare Advantage and FFS Medicare Sample Population (2019)

	Medicare Advantage	FFS Medicare
Condition Subgroup	**12.9 million**	**14.1 million**
Hypertension only	17.3%	20.5%
Hyperlipidemia only	10.2%	10.4%
Diabetes only	2.1%	2.8%
Hypertension and Hyperlipidemia	32.8%	33.8%
Hypertension and Diabetes	6.0%	6.4%
Hyperlipidemia and Diabetes	2.7%	2.3%
Hypertension, Hyperlipidemia, and Diabetes ("clinically complex subgroup")	28.8%	23.7%

Avalere compared age, gender, race, ethnicity, census region, OREC, and dual eligibility across the MA and FFS populations to identify similarities and differences across the MA and FFS condition subgroups (Table 4).

- More FFS than MA beneficiaries identified as White: 82.6% with hypertension, 84.2% with hyperlipidemia, and 77.6% with diabetes, compared to 64.8%, 66.8%, and 59.6%, respectively, in MA.
- More beneficiaries in both the MA and FFS populations were female than male across all condition subgroups.
- Because more beneficiaries in the FFS population were originally eligible for Medicare based on their age across all condition subgroups, FFS beneficiaries were slightly older on average than MA beneficiaries, while more MA beneficiaries were eligible based on a disability.

Table 4—Descriptive Statistics and Demographic Distributions by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare
Condition Subgroup Total	**11.0 million**	**11.9 million**	**9.7 million**	**9.9 million**	**5.1 million**	**5.0 million**
Age Group						
18-54	3.6%	3.9%	3.5%	3.5%	4.2%	5.1%
55-64	10.4%	6.6%	10.3%	6.2%	12.3%	8.7%
64-69	21.6%	18.6%	22.7%	19.8%	22.6%	19.7%
70-74	22.7%	23.4%	23.7%	24.9%	23.2%	23.9%
75-79	18.2%	19.3%	18.5%	19.8%	17.9%	18.8%
80-84	12.2%	13.8%	11.7%	13.4%	11.2%	12.7%
85+	11.3%	14.5%	9.7%	12.3%	8.5%	11.1%
Gender						
Female	56.7%	57.1%	56.5%	56.0%	54.3%	53.2%
Male	43.3%	42.9%	43.5%	44.0%	45.7%	46.8%
Race/Ethnicity						
African American or Black	20.2%	9.5%	16.8%	7.6%	21.6%	11.8%
American Indian or Alaska Native	0.0%	0.5%	0.0%	0.4%	0.0%	0.7%
Asian	3.9%	2.2%	4.5%	2.3%	4.9%	3.0%
Hispanic/ Latino	6.7%	1.9%	7.0%	1.9%	8.8%	3.1%
Other	4.5%	3.3%	4.9%	3.6%	5.2%	3.8%
White	64.8%	82.6%	66.8%	84.2%	59.6%	77.6%
Census Region						
Midwest	18.0%	23.4%	18.1%	22.4%	16.0%	23.8%
Northeast	21.8%	19.4%	22.0%	20.4%	21.5%	19.1%
South	35.2%	40.6%	34.4%	40.9%	36.8%	39.8%
West	25.0%	16.7%	25.5%	16.2%	25.7%	17.3%
OREC						
Aged	73.2%	78.7%	73.8%	80.0%	68.3%	72.4%
Disabled	26.8%	21.3%	26.2%	20.0%	31.7%	27.6%
Dual						
Fully Eligible	15.5%	17.2%	14.6%	15.4%	18.6%	22.5%
Partially Eligible	6.4%	5.9%	6.1%	5.2%	7.1%	7.1%
Not Dual-Eligible	78.0%	76.9%	79.3%	5.2%	74.2%	70.5%

2. Clinical Complexity and Comorbidity Indicators

Avalere compared clinical complexity between the MA and FFS chronic condition subgroups (Table 5). To make this assessment, Avalere used the CCI, a weighted index that measures illness severity and relative mortality of hospitalized patients.[44] In general, severity of comorbidities are categorized into 3 grades with a maximum allowable score of 24: mild, with CCI scores of 1-2; moderate, with CCI scores of 3-4; and severe, with CCI scores ≥5.[45] Overall, the data suggest that MA and FFS Medicare beneficiaries were similar in clinical complexity based on clinical prevalence and severity of chronic conditions. Additional findings include:

- Among the diabetes subgroup, MA beneficiaries had a lower mean CCI score (e.g., lower risk of death) compared to FFS beneficiaries (4.6 vs. 5.3, respectively).
- Mean CCI scores were 3.8 for the hypertension and hyperlipidemia subgroups in both MA and FFS.
- In analysis of beneficiaries with at least 1 hospitalization, the mean CCI scores were higher among beneficiaries with hypertension and/or hyperlipidemia in MA compared to FFS but were similar among beneficiaries with diabetes.

Table 5—CCI Score by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
Condition Subgroup	**Medicare Advantage**	**FFS Medicare**	**Medicare Advantage**	**FFS Medicare**	**Medicare Advantage**	**FFS Medicare**
Full Sample	3.8	3.8	3.8	3.8	4.6	5.3
Patients with ≥1 Hospital Admission	5.5	5.2	5.7	5.3	6.8	6.8

Avalere also analyzed complications-related claims specific to beneficiaries with diabetes (Table 6). Complications were defined as claims for cellulitis, ulceration, osteomyelitis, gangrene, or amputation; serious complications were defined as individuals with 2 or more complications in 1 calendar year. Compared to MA beneficiaries with diabetes, a larger percentage of FFS beneficiaries had at least 1 complication (13.6% in FFS vs. 9.3% in MA).

Table 6—Rate of Complications Among Beneficiaries with Diabetes by Coverage and Dual Eligibility (2019)

	Dual-Eligible		Non-Dual-Eligible		Total	
Condition Subgroup	**Medicare Advantage**	**FFS Medicare**	**Medicare Advantage**	**FFS Medicare**	**Medicare Advantage**	**FFS Medicare**
	1.3 million	**1.5 million**	**3.8 million**	**3.5 million**	**5.1 million**	**5.0 million**
Diabetes Complications						
0 Complications	87.2%	80.4%	90.0%	86.8%	89.3%	84.9%
1 Complication	9.3%	13.6%	7.5%	9.8%	7.9%	10.9%
2+ Serious Complications*	3.6%	6.0%	2.5%	3.4%	2.8%	4.2%

*Defined as 2 or more of the defined complications in 1 calendar year

44 Charlson et al. PLOS One. "The Charlson Comorbidity Index Can Be Used Prospectively to Identify Patients Who Will Incur High Future Costs." December 2014. Available here: https://doi.org/10.1371/journal.pone.0112479

45 Kuswardhani et al. Diabetes Metab Syndr. Charlson comorbidity index and a composite of poor outcomes in COVID-19 patients: A systematic review and meta-analysis. 2020. Available here: https://doi.org/10.1016/j.dsx.2020.10.022

3. Healthcare Utilization

Avalere examined differences in healthcare service utilization between the MA and FFS chronic condition subgroups (Table 7). Based on claims associated with specific visit types, MA beneficiaries had lower utilization of acute care but higher utilization of physician visits than those in FFS. In particular:

- Utilization of healthcare services was lower for MA beneficiaries, with fewer inpatient stays for all chronic condition subgroups. Per 1,000 beneficiaries, these annual rates were: 365 vs. 375 (hypertension), 355 vs. 378 (hyperlipidemia), and 427 vs. 435 (diabetes) compared to FFS beneficiaries.
- ER visits were less common among MA beneficiaries, ranging between 442-511 visits per 1,000 beneficiaries when stratified by chronic condition, compared to a range of 573-665 visits per 1,000 among FFS beneficiaries for the same conditions.
- MA beneficiaries had a longer average length of stay than FFS beneficiaries (7 days in MA vs. 5 days in FFS).
- MA beneficiaries had slightly higher rates of physician office visits, with MA beneficiaries having 11.0-12.0 visits per year, compared to 10.1-10.5 visits per year for FFS beneficiaries.

Table 7—Healthcare Utilization by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
Condition Subgroup	Medicare Advantage 11.0 million	FFS Medicare 11.9 million	Medicare Advantage 9.7 million	FFS Medicare 9.9 million	Medicare Advantage 5.1 million	FFS Medicare 5.0 million
Hospitalizations (Average/1,000 Beneficiaries)	365	375	355	378	427	435
Average Length of Stay (Days)	6.9	5.4	6.8	5.3	7.0	5.7
ER Visits (Average/1,000 Beneficiaries)	470	610	442	573	511	665
Physician's Office Visits (Per Beneficiary)	11.0	10.1	11.2	10.5	12.0	10.5

4. Spending on Care

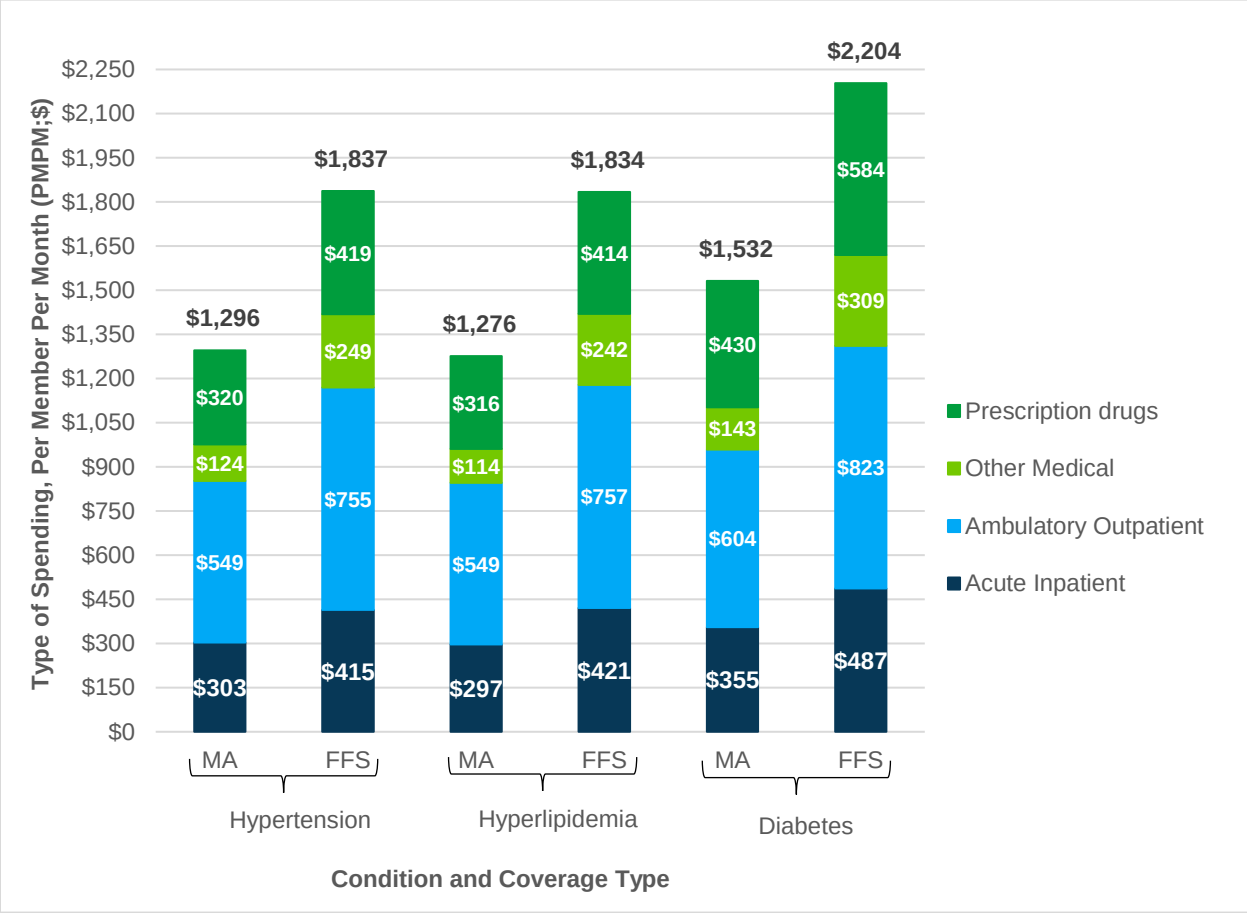
The study assessed the overall PMPM spending across categories connected with healthcare utilization, including:

- Acute inpatient care: all spending on costs associated with inpatient care
- Ambulatory outpatient care: ER-related spending, all general outpatient spending costs, and any other physician and other health professional spending
- Prescription drugs: spending on medications covered by Medicare Part D
- Other medical costs: other medical spending including any post-acute care and DME costs.

Across all chronic conditions and categories of spending, average total PMPM spending for MA beneficiaries was lower than total spending for FFS beneficiaries (Figure 1). In both MA and

FFS, total spending was highest for the subgroup of beneficiaries with diabetes and lowest for the subgroup of beneficiaries with hyperlipidemia.

Figure 1—Healthcare Spending by Coverage and Condition, Per Member Per Month (PMPM; $) (2019)



- PMPM spending on care for MA beneficiaries ranged from $1,532 for beneficiaries with diabetes to $1,276 for beneficiaries with hyperlipidemia, compared to $2,204 and $1,834, respectively, for FFS beneficiaries. Increased utilization of outpatient services among MA beneficiaries (Table 7) may have also resulted in decreased total spending (Figure 1), as physician services are less expensive on a PMPM basis than inpatient hospitalizations.

5. Quality Measures and Outcomes

Avalere also examined differences in health outcomes between MA and FFS beneficiaries for the condition subgroups using HEDIS measures. HEDIS quality measures are proxy performance measures designed to provide purchasers and consumers with the information needed for reliable comparison of health plan performance.

HEDIS measures examined for this analysis included plan all-cause 30-day readmissions, medication adherence measures, and comprehensive diabetes care. The all-cause readmission measure served as an indicator of inadequate quality of care in the hospital and/or a lack of appropriate post-discharge planning and care coordination. Avalere included measures tied to medication adherence based on their relevance, reliability, and validity with regard to the chronic conditions of interest. Avalere included comprehensive diabetes care, which is a multi-component measure of diabetes care, to provide a comprehensive picture of the clinical management of patients with diabetes. Overall, the analysis found:

- There were similar outcomes for MA and FFS beneficiaries based on the selected measures across all 3 chronic conditions (Table 8).
- Plan All-Cause 30-Day Readmissions were slightly higher in MA for beneficiaries with hypertension and hyperlipidemia than in FFS, while they were slightly lower for beneficiaries with diabetes.
- Rates of cholesterol medication adherence were slightly higher among FFS beneficiaries, with the greatest difference for hypertension (70.6% in FFS beneficiaries vs. 68.0% in MA beneficiaries).
- Among individuals with diabetes, comprehensive diabetes care was slightly higher for FFS beneficiaries (93.4% in FFS vs. 92.0% in MA beneficiaries).

Table 8—HEDIS Quality Measures by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
HEDIS Quality Measure	**Medicare Advantage**	**FFS Medicare**	**Medicare Advantage**	**FFS Medicare**	**Medicare Advantage**	**FFS Medicare**
Plan All-Cause 30-Day Readmissions, Total*	20.5%	19.9%	20.1%	19.9%	19.9%	22.8%
Hypertension Medication Adherence	70.2%	71.3%	------	------	------	------
Cholesterol Medication Adherence	68.0%	70.6%	67.8%	70.2%	67.6%	70.1%
Diabetes Medication Adherence	------	------	------	------	76.3%	77.4%
Comprehensive Diabetes Care	64.2%	56.3%	66.2%	59.0%	92.0%	93.4%

*30-day readmission rates are the number of acute inpatient stays during the measurement year that were followed by an unplanned acute readmission for any diagnosis within 30 days. In Table 8, these readmissions are presented as a percentage of inpatient acute hospitals stays.

6. Dual-Eligible Beneficiaries

Avalere also evaluated differences in clinical characteristics, healthcare utilization, and healthcare spending among dual-eligible beneficiaries in MA and FFS (Table 9).

- A greater percentage of dual-eligible MA beneficiaries identify as African American/Black or Hispanic/Latino across all 3 chronic conditions compared to dual-eligible FFS beneficiaries. The percentage of dual-eligible beneficiaries who identify as Asian are similar across MA and FFS and by chronic conditions (6.7% vs. 6.3%).
- Compared to dual-eligible FFS beneficiaries, dual-eligible MA beneficiaries were more frequently eligible for Medicare on the basis of age rather than disability (53.8% vs. 46.0%)
- Fewer dual-eligible MA beneficiaries were under age 65 as compared to FFS (29.5% vs. 35.7%).

Table 9—Descriptive Statistics and Demographic Distributions of Dual-Eligible Beneficiaries in Medicare Advantage and FFS Populations (2019)

	Medicare Advantage	FFS Medicare
	Dual	Dual
Total	**2.8 million**	**3.2 million**
Age Group		
18-54	11.3%	16.1%
55-64	18.2%	19.6%
64-69	20.5%	15.7%
70-74	17.5%	14.4%
75-79	13.2%	11.6%
80-84	9.8%	9.7%
85+	9.5%	12.9%
Gender		
Female	64.6%	62%
Male	35.4%	38%
Race/Ethnicity		
African American or Black	27.4%	18.9%
American Indian or Alaska Native	0.0%	1.2%
Asian	6.7%	6.3%
Hispanic/Latino	15.6%	6.8%
Other	5.1%	3.6%
White	45.2%	63.2%
Census Region		
Midwest	12.6%	19.8%
Northeast	25.4%	20.3%
South	40.1%	37.9%
West	21.9%	22.0%
OREC		
Aged	53.8%	46.0%
Disabled	46.2%	54.0%

For comparisons of the dual-eligible MA and FFS population by chronic condition subgroups see the Appendix (Tables A3 and A4).

Overall, MA and FFS comparisons of the dual-eligible population by chronic condition subgroup were similar to the distribution of characteristics for the full sample population (dual eligible and non-dual eligible).

Analysis of the CCI suggests some differences in clinical complexity, based on prevalence and severity of chronic conditions, between dual-eligible MA and FFS beneficiaries (Table 10). CCI-related findings include:

- Compared to dual-eligible FFS beneficiaries, dual-eligible MA beneficiaries had lower mean CCI scores (e.g., lower risk of death), with the greatest difference observed between beneficiaries with diabetes (4.9 in MA vs. 5.6 in FFS).
- This trend was not observed within the subgroups of dual-eligible beneficiaries who had 1 or more hospital admission, as mean CCIs among these subgroups were more severe than the full dual-eligible sample population. Compared to dual-eligible FFS beneficiaries, dual-eligible MA beneficiaries with 1 or more hospitalization had higher mean CCI scores (e.g., higher risk of death) (6.1 in MA vs. 5.9 in FFS). Mean CCIs scores were similar among beneficiaries with diabetes (Table 10).

Table 10—CCI Score Among Dual-Eligible Beneficiaries by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare
	Dual	Dual	Dual	Dual	Dual	Dual
Full Dual-Eligible Sample Population	4.2	4.4	4.3	4.5	4.9	5.6
Dual-Eligible Patients with ≥1 Hospital Admission	5.9	5.7	6.1	5.9	6.9	6.9

Analysis of complications-related claims for dual-eligible beneficiaries with diabetes suggested that FFS Medicare beneficiaries have higher rates of complications than MA beneficiaries (Table 11).

- Among dual-eligible beneficiaries with diabetes, more MA beneficiaries had no complications compared to FFS beneficiaries (87.2% in MA vs. 80.4% in FFS).
- Among dual-eligible beneficiaries with diabetes, FFS beneficiaries had a higher rate of serious complications compared to MA beneficiaries (6.0% in FFS vs. 3.6% in MA).

Table 11—Rate of Complications Among Dual-Eligible Beneficiaries with Diabetes by Coverage (2019)

	Medicare Advantage	FFS Medicare
	Dual 1.3 million	Dual 1.5 million
Diabetes		
No Complications (0)	87.2%	80.4%
Complications (1)	9.3%	13.6%
Serious Complications (2+) *	3.6%	6.0%

*Defined as 2 or more of the defined complications in 1 calendar year

Based on claims associated with specific visit types, there were also differences in healthcare utilization between dual-eligible MA and FFS beneficiaries (Table 12).

- Dual-eligible MA beneficiaries had lower utilization of inpatient care and hospitalization compared to dual-eligible FFS beneficiaries across all condition subgroups.
- Compared to dual-eligible FFS beneficiaries, dual-eligible MA beneficiaries had a longer average length of stay across all condition subgroups.
- Dual-eligible FFS beneficiaries had higher utilization of primary care, with increased physician's office visits compared to dual-eligible MA beneficiaries across all condition subgroups (82.3%-83.6% visits in FFS vs. 62.7%-64.0% visits in MA).

Table 12—Healthcare Utilization Among Dual-Eligible Beneficiaries by Coverage and Condition (2019)

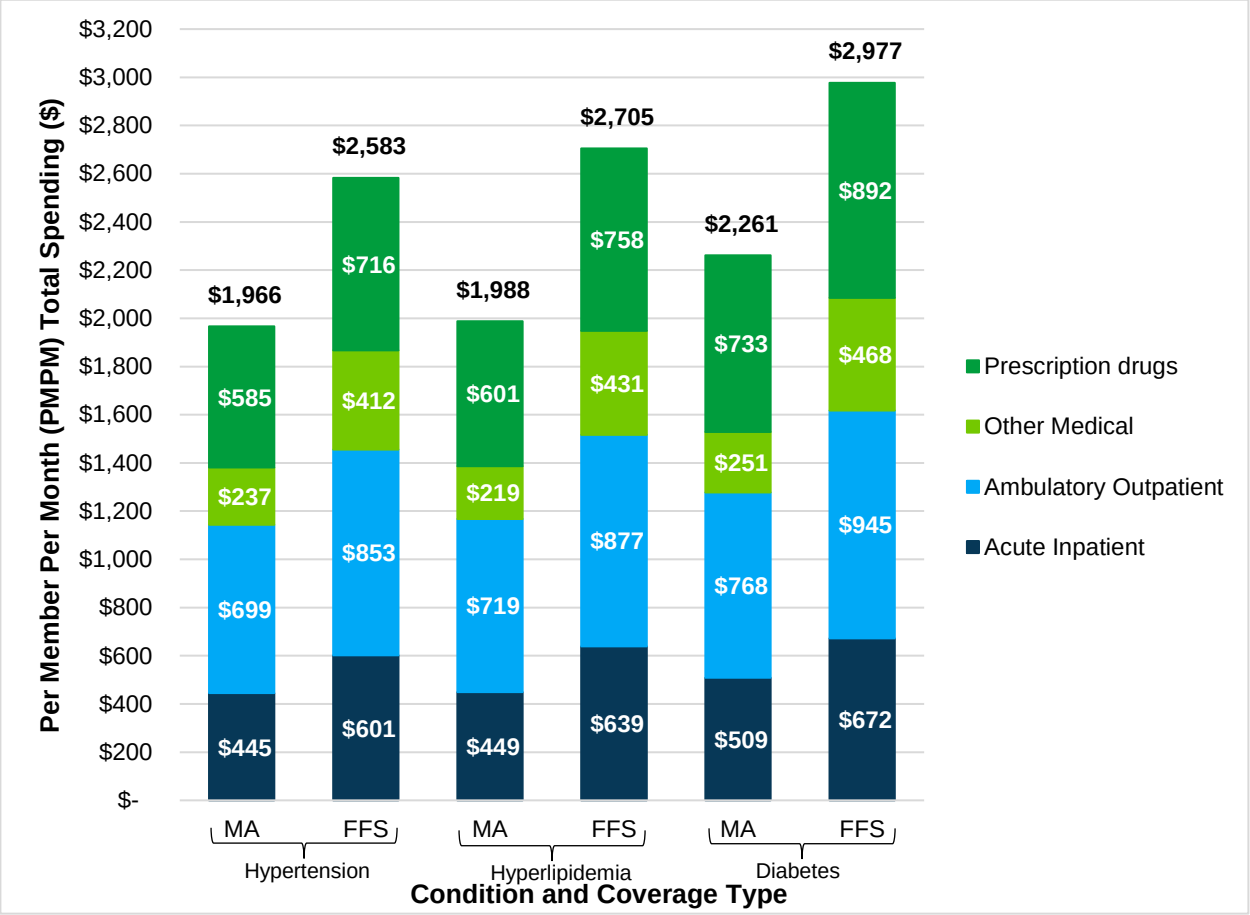
	Hypertension		Hyperlipidemia		Diabetes	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare
	Dual	Dual	Dual	Dual	Dual	Dual
Condition Subgroup	**2.4 million**	**2.7 million**	**2.0 million**	**2.0 million**	**1.3 million**	**1.5 million**
Hospitalizations (Average/1,000 Beneficiaries)	22.1%	29.6%	22.1%	31.0%	23.9%	30.6%
Average Length of Stay (Days)	8.2	6.5	8.2	6.3	8.0	6.5
ER Visits (Average/1,000 Beneficiaries)	93.0%	88.3%	94.0%	91.0%	93.7%	89.1%
Physician's Office Visits (Per Beneficiary)	63.4%	83.0%	62.7%	82.3%	64.0%	83.6%

Healthcare spending was assessed by chronic condition among dual-eligible beneficiaries. For each of the 3 chronic conditions, MA dual-eligible beneficiaries had lower healthcare spending than FFS dual-eligible beneficiaries (Figure 2).

- On average, spending on dual-eligible MA beneficiaries was $683 less PMPM than for dual-eligible FFS beneficiaries.

- Dual-eligible MA beneficiaries had lower overall healthcare spending than dual-eligible FFS beneficiaries for hypertension ($1,966 in MA vs. $2,583 in FFS), and hyperlipidemia ($1,988 in MA vs. $2,705 in FFS), and the greatest difference in overall PMPM spending on care was observed among dual-eligible beneficiaries with diabetes ($2,261 in MA vs. $2,977 in FFS).

Figure 2—Healthcare Spending Among Dual-Eligible Beneficiaries by Coverage and Condition, Per Member Per Month (PMPM; $) (2019)



Finally, as done with the full sample population, Avalere assessed differences in select health outcomes between MA and FFS dual-eligible beneficiaries using HEDIS measures (Table 13). Overall, the analysis found:

- Dual-eligible MA beneficiaries had a lower percentage of inpatient acute hospital readmissions (plan all-cause 30-day readmissions) compared to dual-eligible FFS beneficiaries across all condition subgroups.
- Medication adherence was similar between dual-eligible MA and FFS beneficiaries, but compared to dual-eligible FFS beneficiaries, comprehensive diabetes care was higher for dual-eligible MA beneficiaries with hypertension (68.0% in MA vs. 60.0% in FFS) and with hyperlipidemia (72.1% in MA vs. 65.4% in FFS).

Table 13— HEDIS Quality Measures Among Dual-Eligible Beneficiaries by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare
	Dual	Dual	Dual	Dual	Dual	Dual
HEDIS Quality Measure						
Plan All-Cause 30-Day Readmissions, Total*	20.1%	24.6%	20.0%	24.9%	20.7%	26.6%
Hypertension Medication Adherence	68.9%	67.6%	--	--	--	--
Cholesterol Medication Adherence	67.3%	68.0%	67.2%	68.1%	68.3%	68.4%
Diabetes Medication Adherence	--	--	--	--	77.0%	76.5%
Comprehensive Diabetes Care	68.0%	60.0%	72.1%	65.4%	90.1%	90.1%

*30-day readmission rates are the number of acute inpatient stays during the measurement year that were followed by an unplanned acute readmission for any diagnosis within 30 days. In Table 13, these readmissions are presented as a percentage of inpatient acute hospitals stays.

Discussion

Enrollment in MA has grown considerably in recent years, and in 2022, nearly half of Medicare beneficiaries were enrolled in a MA plan.[46] MA is projected to account for over 60% of total Medicare enrollment by 2032.[47] As a result, stakeholders are increasingly focused on comparing trends in care delivery, spending, and quality between FFS Medicare and MA.

This study compared demographic and clinical characteristics, utilization, spending on healthcare, and quality outcomes in 2 sample populations for MA and FFS beneficiaries with at least 1 of 3 highly prevalent and clinically related chronic conditions: hypertension, hyperlipidemia, and diabetes. By comparing differences in outcomes and spending between MA and FFS for enrollees with at least one of these conditions, this study adds to the existing research assessing these two programs.

Prevalence of diabetes, hypertension, and hyperlipidemia, and combinations of these conditions, was similar between the MA and FFS populations, though MA had more beneficiaries with all 3 conditions (28.8% in MA vs. 23.7% in FFS). Generally, the study found that MA beneficiaries with any of the 3 conditions had more physician office visits, fewer ER visits, and fewer hospitalizations than FFS beneficiaries. This study also found that healthcare spending for MA beneficiaries was lower than healthcare spending for FFS beneficiaries. Monthly spending on healthcare services and visits varied by chronic condition subgroup, ranging between $1,200-$1,500 for MA beneficiaries compared to $1,800-$2,200 for FFS beneficiaries. Spending on care was also lower among dual-eligible MA beneficiaries when compared to dual-eligible FFS beneficiaries. Among the select populations assessed, MA beneficiaries, in general, had less acute care and ER utilization and, subsequently, had lower costs. At the same time, quality was comparable between the MA and FFS study populations on several measures.

The MA population had a greater proportion of beneficiaries who identified as racial and ethnic minorities than the FFS study population. The study's finding of a larger share of racial and ethnic minorities in MA with at least 1 of the 3 conditions is consistent with research that has found large increases in enrollment in MA among beneficiaries who identify as racial and ethnic minorities.[48] Other research has shown that older beneficiaries who identify as racial and ethnic minorities experience a higher rate of unmet medical needs, particularly among older adults who are Black.[49]

Limitations

Several factors limit the generalizability of our findings. First, this was a retrospective observational analysis that was not designed to examine causal relationships. Given the descriptive nature of our findings, there are limitations in our ability to suggest strength or significance of associations beyond the observed prevalence. Furthermore, the beneficiary populations studied were defined by the beneficiaries' choice to enroll in MA or FFS Medicare.

46 CMS. Access to Health Coverage. January 31. 2023. Available here: https://www.cms.gov/pillar/expand-access

47 CBO. The Budget and Economic Outlook: 2022 to 2032. May 2022. Available here: https://www.cbo.gov/publication/57950

48 Meyers et al. Health Affairs. "Growth In Medicare Advantage Greatest Among Black And Hispanic Enrollees." June 2021. Available here: https://doi.org/10.1377/hlthaff.2021.00118

49 Berridge and Mor. J Aging Health. "Disparities in the Prevalence of Unmet Needs and Their Consequences Among Black and White Older Adults." October 2018. Available here: https://doi.org/10.1177%2F0898264317721347

Avalere's findings were not risk-adjusted for differences in clinical and social risk factors and thus may understate or overstate the performance of MA and/or FFS Medicare. Additionally, given the disruptions to care associated with the PHE for COVID-19, Avalere restricted this analysis on the period of time prior to the PHE. These limitations warrant the need for additional multivariate analysis, risk adjustment, and further research, particularly to better characterize potential changes in trends in the time following the PHE expiration and continued growth in MA.

Conclusion

This study adds to the existing literature by providing additional analysis regarding differences between the MA and FFS programs and beneficiaries. While additional research is necessary to explore the factors driving differences between MA and FFS, the findings suggest that demographic differences between the populations exist, and that spending is lower in MA while outcomes on select quality measures are comparable to FFS. As enrollment in the MA program continues to grow, research such as that from this study are important to understand the role that MA has in managing costs and improving outcomes within the Medicare program as compared to FFS.

Methodology

As an update to a previous report published in 2018, Avalere conducted an independent analysis of differences in demographic and clinical characteristics, reviewing outcomes related to healthcare utilization, clinical quality, and costs between comparable subgroups of beneficiaries in MA and FFS Medicare. Subgroups were derived from nationally representative samples of each of the populations. The results supplement evidence to characterize trends between the subgroups on the relative performance and value of the MA program in comparison to FFS Medicare.

Objectives

The objective of this analysis was to develop descriptive demographic, clinical, utilization, quality and cost metrics to profile and compare MA and FFS Medicare beneficiaries with at least 1 of the following chronic conditions, selected based on prevalence in the Medicare population: hypertension, hyperlipidemia, and diabetes. The results were further stratified by key patient characteristics.

Data

This study used two sources of data. The first is a database of 100% Medicare FFS claims, accessed by Avalere via a research collaboration with Inovalon, Inc. and governed by a

research-focused CMS DUA. This includes the 100% sample of Medicare Part A and Part B Medicare FFS claims data and the 100% sample of PDE data for all Part D plans (including MA-PD plans).

The second is a subset of the Inovalon MORE² Registry®, which encompasses approximately 20% of all MA enrollees nationally. These data were linked to Medicare enrollment data to provide detailed information on dual eligibility, original reason for entitlement, and other demographic characteristics (e.g., age, gender, race).

Study Design and Subgroup Selection

The sample inclusion criteria required Medicare beneficiaries to be continuously enrolled in the same MA plan (with pharmacy benefit coverage) or in FFS with medical and pharmacy benefit coverage for the 12-month reporting period from January 1, 2019, to December 31, 2019 (with a standard allowable gap of no more than 45 days, consistent with HEDIS and CMS definitions). Patients were eligible for inclusion in a particular chronic condition category (hypertension, hyperlipidemia, or diabetes) if they were diagnosed (using 1 inpatient or 2 outpatient criteria in alignment with the CCW) at any point in 2019. Avalere applied standard exclusions for beneficiaries with ESRD, beneficiaries in US Territories (including Puerto Rico), and those in hospice care. Patients were defined as dual-eligible if they were either full or partial dual-eligible for a plurality of their enrollment in 2019; otherwise, they were deemed to be non-dual-eligible.

Data Analysis

All results were aggregated by coverage type (MA, FFS) and condition (hypertension, hyperlipidemia, or type 2 diabetes) and then also stratified by whether a beneficiary was dual-eligible within each coverage type and condition category. Continuous variables were characterized by their mean value and frequency and percentages of the sample were output for categorical attributes.

Demographic and Clinical Characteristics

Avalere identified the demographic (age, sex, census region, and race/ethnicity) and enrollment (OREC and dual eligibility) factors from enrollment data. Avalere used medical claims for these beneficiaries to identify several clinical dimensions of clinical characteristics. The CCI classifies ICD-10-CM diagnosis codes into 17 generally comorbid conditions that are then used to calculate a weighted score of mortality risk that accounts for both the number and severity level of comorbid conditions; a higher score indicating higher burden of illness. In addition, to identify other acute and chronic conditions sample beneficiaries may have, Avalere used the Agency for Healthcare Research and Quality's (AHRQ) Clinical Condition Software Revised (CCSR) categories and mapped claim diagnoses to 538 clinically homogenous categories.
The diabetes subgroups were also partitioned into groups as having no complications, complications, or serious complications. The specific diabetes complications were cellulitis, ulceration, osteomyelitis, gangrene, or amputation in a year. A person with 2 or more of these was classified as having serious complications.

Healthcare Services and Utilization

Avalere used the sample beneficiaries' medical claims to identify their use of the following healthcare services: inpatient stays (excluding post-acute care facilities), ER visits, physician office visits, and other (institutional) outpatient visits. For inpatient discharges Avalere also identified the associated length of stay. ER visits were identified by HCPCS codes; ER visits resulting in inpatient admission were excluded.

Physician visits were restricted to routine office visits with individual providers by using professional claims to identify visits with evaluation and management codes;[50] DME-only services were removed. Outpatient visits were restricted to ambulatory visits with institutional providers using outpatient facility-only claims (excluding ER visits).

Spending

Spending was defined as total allowed cost amount, including both payments from the payer to the provider as well as patient responsibility. FFS costs came directly from claims while MA used estimated costs of services based on FFS allowed amounts (removing any cost differences due to plan contracting). Categories of service payer cost are analogous to those used for measuring healthcare service utilization but also include additional categories for post-acute care, DME, and prescription drugs covered under Part D. Both FFS and MA prescription drug costs were sourced directly from the PDE data. Payer costs were expressed as average costs PMPM.

Quality Measures

Avalere followed the 2019 HEDIS measure specifications for Plan All-Cause 30-Day Readmissions, and Comprehensive Diabetes Care).[51] Avalere also calculated 3 2019 Star measures for medication adherence to hypertension, diabetes, and cholesterol medication. Medication adherence measures utilized PDE data for both MA and FFS.

50 Codes include: '99201', '99202', '99203', '99204', '99205', '99211', '99212', '99213', '99214', and '99215'

51 HEDIS Measures and Technical Resources. NCQA. Accessed February 13, 2023. Available here: https://www.ncqa.org/hedis/measures/

Appendix

Table A1—Demographic Distributions of the Medicare Advantage Population in the MORE^2 Registry vs. National Medicare Advantage Population (2019)

	MORE^2 Medicare Advantage	National Medicare Advantage
Total	**100.00%**	**100.00%**
Age Group		
18-54	6.2%	7.9%
55-64	9.4%	7.2%
64-69	22.1%	21.8%
70-74	24.2%	23.6%
75-79	17.3%	16.9%
80-84	10.9%	11.1%
85+	10.0%	11.4%
Gender		
Female	56.9%	57.4%
Male	43.1%	42.6%
Medicaid Dual Eligibility		
Dual	33.7%	25.6%
Non-Dual	66.3%	74.4%

Table A2— Descriptive Statistics and Demographic Distributions by Coverage and Dual Eligibility (2019)

	Dual-Eligible		Non-Dual-Eligible	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare
Total	**2.8 million**	**3.2 million**	**10.2 million**	**10.8 million**
Age Group				
18-54	11.3%	16.1%	2.1%	1.0%
55-64	18.2%	19.6%	8.5%	3.0%
64-69	20.6%	15.7%	23.2%	20.9%
70-74	17.6%	14.4%	24.5%	26.7%
75-79	13.2%	11.6%	19.1%	21.1%
80-84	9.8%	9.7%	12.0%	14.0%
85+	9.5%	12.9%	10.6%	13.3%
Gender				
Female	64.6%	61.6%	54.9%	56.0%
Male	35.4%	38.4%	45.1%	44.0%
Race/Ethnicity				
African American or Black	27.4%	18.9%	15.9%	5.6%
American Indian or Alaska Native	0.0%	1.2%	0.0%	0%
Asian	6.7%	6.3%	3.5%	1.0%
Hispanic/Latino	15.6%	6.8%	4.4%	1.0%
Other	5.1%	3.6%	4.5%	3.4%
White	45.2%	63.2%	71.7%	89.1%
Census Region				
Midwest	12.6%	19.8%	19.8%	24.4%
Northeast	25.5%	20.3%	20.8%	19.5%
South	40.1%	37.9%	32.1%	40.2%
West	21.9%	22.0%	27.3%	15.9%
OREC				
Aged	53.8%	46.0%	78.3%	87.9%
Disabled	46.2%	54.0%	21.7%	12.1%

Table A3—Descriptive Statistics and Demographic Distributions by Condition and Dual Eligibility, Medicare Advantage (2019)

	Medicare Advantage					
	Hypertension		Hyperlipidemia		Diabetes	
	Dual	Non-Dual	Dual	Non-Dual	Dual	Non-Dual
	2.4 million	8.6 million	2.0 million	7.7 million	1.4 million	3.8 million
Age Group						
18-54	9.7%	1.9%	9.8%	1.8%	10.0%	2.2%
55-64	17.9%	8.3%	18.0%	8.3%	18.7%	10.1%
64-69	20.4%	21.9%	21.2%	23.1%	20.8%	23.2%
70-74	17.8%	24.1%	18.4%	25.1%	18.3%	24.9%
75-79	13.7%	19.5%	13.9%	19.7%	13.9%	19.3%
80-84	10.4%	12.7%	10.0%	12.1%	10.0%	11.6%
85+	10.1%	11.6%	8.7%	9.9%	8.3%	8.6%
Gender						
Female	64.8%	54.4%	64.7%	54.3%	64.7%	50.7%
Male	35.2%	45.6%	35.3%	45.7%	35.3%	49.3%
Race/Ethnicity						
African American or Black	30.4%	18.1%	25.4%	14.6%	28.0%	19.4%
American Indian or Alaska Native	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Asian	7.0%	3.4%	8.2%	3.7%	7.0%	4.4%
Hispanic/Latino	15.4%	4.4%	17.0%	4.9%	17.1%	5.9%
Other	3.0%	3.2%	3.0%	3.4%	3.0%	3.9%
White	44.2%	70.9%	45.4%	72.4%	42.9%	65.4%
Census Region						
Midwest	12.4%	19.5%	11.7%	19.8%	11.8%	17.4%
Northeast	25.3%	20.8%	25.6%	21.1%	26.5%	19.8%
South	41.3%	33.5%	41.3%	32.6%	39.2%	36.0%
West	21.0%	26.2%	21.4%	26.5%	22.5%	26.8%
OREC						
Aged	55.3%	78.2%	55.1%	78.7%	53.0%	73.6%
Disabled	44.7%	21.8%	44.9%	21.3%	47.0%	26.4%

Table A4—Descriptive Statistics and Demographic Distributions by Condition and Dual Eligibility, FFS Medicare (2019)

	FFS Medicare					
	Hypertension		Hyperlipidemia		Diabetes	
	Dual	Non-Dual	Dual	Non-Dual	Dual	Non-Dual
	2.7 million	9.1 million	2.0 million	7.8 million	1.5 million	3.5 million
Age Group						
18-54	13.7%	0.9%	14.0%	0.8%	14.3%	1.3%
55-64	18.8%	2.9%	19.5%	2.7%	19.9%	4.0%
64-69	15.8%	19.5%	16.0%	20.8%	16.3%	21.1%
70-74	14.7%	25.9%	15.3%	27.4%	15.4%	27.4%
75-79	12.3%	21.4%	12.6%	21.7%	12.6%	21.5%
80-84	10.5%	14.7%	10.4%	14.3%	10.2%	13.7%
85+	14.2%	14.7%	12.2%	12.3%	11.3%	11.0%
Gender						
Female	62.2%	55.6%	61.6%	54.5%	61.5%	50.3%
Male	37.8%	44.4%	38.4%	45.5%	38.5%	49.7%
Race/Ethnicity						
African American or Black	20.3%	6.2%	17.1%	5.2%	20.2%	8.2%
American Indian or Alaska Native	1.1%	0.3%	0.9%	0.2%	1.5%	0.4%
Asian	6.2%	1.0%	7.2%	1.1%	6.8%	1.5%
Hispanic/Latino	6.7%	0.5%	7.1%	0.5%	8.3%	0.9%
Other	3.7%	3.2%	3.9%	3.5%	3.9%	3.7%
White	62.0%	88.8%	63.8%	89.5%	59.3%	85.3%
Census Region						
Midwest	19.5%	24.5%	19.0%	23.3%	19.8%	25.5%
Northeast	19.7%	19.3%	21.2%	20.2%	19.9%	18.8%
South	39.3%	41.0%	38.7%	41.5%	37.4%	40.9%
West	21.5%	15.2%	21.1%	15.0%	22.9%	14.9%
OREC						
Aged	48.5%	87.8%	47.4%	88.4%	45.6%	83.7%
Disabled	51.5%	12.2%	52.6%	11.6%	54.4%	16.3%

Table A5—Healthcare Spending by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare	FFS Medicare	Medicare Advantage
Population Total	11.0 million	11.9 million	9.7 million	9.9 million	5.1 million	5.0 million
Type of Spending ($, PMPM)						
Inpatient	$303	$415	$297	$421	$355	$487
Hospital outpatient/ambulatory surgical centers						
Emergency Room (ER)	$39	$42	$37	$40	$44	$46
Outpatient (OP)	$163	$278	$163	$271	$172	$313
Physician and other health professional spending	$347	$435	$349	$445	$388	$464
Professional Outpatient						
Post-acute care	$111	$212	$102	$206	$128	$258
DME	$13	$37	$12	$36	$15	$51
Prescription drugs	$320	$419	$316	$414	$430	$584
TOTAL	**$1,296**	**$1,837**	**$1,276**	**$1,834**	**$1,532**	**$2,204**

Table A6—Healthcare Spending Among Dual-Eligible Beneficiaries by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare
	Dual	Dual	Dual	Dual	Dual	Dual
Population Total	2.4 million	2.7 million	2.0 million	2.0 million	1.3 million	1.5 million
Type of Spending ($, per-member per-month (PMPM)						
Inpatient	$445	$601	$449	$639	$509	$672
Hospital outpatient/ambulatory surgical centers						
Emergency Room (ER)	$69	$68	$68	$68	$73	$70
Outpatient (OP)	$195	$336	$200	$335	$207	$382
Physician and other health professional spending	$435	$449	$451	$474	$488	$493
Professional Outpatient						
Post-acute care	$216	$359	$197	$379	$226	$404
DME	$22	$53	$22	$52	$25	$64
Prescription drugs	$585	$716	$601	$758	$733	$892
TOTAL	$1,966	$2,583	$1,988	$2,705	$2,261	$2,977

Table A7—Healthcare Spending Among Non-Dual-Eligible Beneficiaries by Coverage and Condition (2019)

	Hypertension		Hyperlipidemia		Diabetes	
	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare	Medicare Advantage	FFS Medicare
	Non-Dual	Non-Dual	Non-Dual	Non-Dual	Non-Dual	Non-Dual
Population Total	8.6 million	9.1 million	7.7 million	7.8 million	3.8 million	3.5 million
Type of Spending ($, per-member per-month (PMPM)						
Inpatient	$263	$359	$257	$364	$302	$410
Hospital outpatient/ambulatory surgical centers						
Emergency Room (ER)	$31	$34	$29	$33	$34	$36
Outpatient (OP)	$154	$260	$153	$255	$160	$285
Physician and other health professional	$322	$431	$323	$438	$353	$452
Professional Outpatient						
Post-acute care	$82	$168	$78	$161	$94	$197
DME	$10	$32	$10	$31	$12	$45
Prescription drugs	$246	$330	$241	$325	$324	$455
TOTAL	$1,107	$1,613	$1,091	$1,608	$1,279	$1,879

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