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Risk Adjustment for ADRD in Medicare Advantage and Health Care Experiences

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Abstract

Failure to account for the full complexity and costs of high-need populations in the risk-adjusted capitated payment model for Medicare Advantage (MA) plans may create financial disincentives for plans to invest in comprehensive care for affected beneficiaries, potentially exacerbating health disparities. This paper leverages the reinstatement of Alzheimer's Disease and Related Dementias (ADRD) hierarchical condition category (HCC) into the MA risk-adjusted payment model in 2020 as a quasi-natural experiment to study how risk-adjustment model affects access, affordability, and quality of care. Using MA beneficiaries in the Medicare Current Beneficiary Survey (2015–2022), we perform a difference-in-differences analysis by comparing beneficiaries with ADRD with those without ADRD but with similar neurologic conditions. We find that the revised risk-adjusted payment model is associated with a 6.6 percentage-point decrease in reporting any troubles accessing needed care and a 9.2 percentage-point decrease in reporting any medical financial burden among MA beneficiaries with ADRD. Its effects on satisfaction with access to specialists and satisfaction with overall quality of care are not notable. These findings suggest that refining risk adjustment to better capture the costs of chronic and complex conditions can help align MA plan incentives with the needs of vulnerable populations and promote equity in care.

JEL classification

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Keywords

medicare advantage, risk adjustment, ADRD, care experiences

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1. Introduction

Alzheimer's Disease and Related Dementias (ADRD) are among the leading causes of disability and dependence among older adults, affecting approximately 6.9 million individuals in the United States, placing a substantial burden on patients, caregivers, and the healthcare system, with annual costs exceeding $300 billion in 2024.[1] Medicare Advantage (MA) plans, which now enroll over half of all Medicare beneficiaries,[2] offer a unique approach to addressing the needs of this vulnerable population through enhanced care management programs. About one-third of Medicare-eligible beneficiaries with ADRD in 2018 enrolled in an MA plan, increasing from 22% in 2013.[2] However, MA plans historically faced challenges in providing equitable and high-quality care for beneficiaries with ADRD.[2-7]

Different from Medicare Fee-for-Service (FFS), the risk adjustment model used by the Centers for Medicare & Medicaid Services (CMS) plays a critical role in incentivizing MA plans to deliver care tailored to beneficiaries' health needs. MA plans are privately operated and receive prospective, capitated payments from CMS to finance and deliver healthcare services. The capitated payment is predicted through a risk adjustment model that accounts for a beneficiary's demographics and a selected set of Hierarchical Condition Categories (HCCs). From 2014 to 2020, ADRD diagnoses were excluded from the risk adjustment model due to concerns about coding and auditing claims accuracy.[8] As insurers bear increasing financial risks, for beneficiaries with HCCs not incorporated in the risk-adjusted payment model, the capitated payments may incentivize insurers to manage these beneficiaries' medical costs by providing insufficient coverage, restricting physician networks, or requiring prior authorization for care.[9]

In 2020, CMS reinstated ADRD in the risk-adjusted payment model, marking a significant policy shift. This decision offers a unique opportunity to examine the association between the new risk-adjusted payment model and care experiences among beneficiaries with ADRD. Recent studies have found a significant increase in the ADRD diagnosis rate among MA beneficiaries after this payment model change.[2,8,10] However, there remains limited empirical evidence on the broader implications of this payment model change for care access, affordability, and quality among beneficiaries with ADRD.

2. Methods

2.1 Data and Sample Inclusion

We used data from the nationally representative Medicare Current Beneficiary Survey Public Use Files (MCBS PUF) (2015-2022). The MCBS includes both FFS and MA beneficiaries aged 65 and older, as well as beneficiaries under 65 with disabling conditions residing in the continental United States. It provides rich information on beneficiaries' care experiences about services access and obstacles encountered. This study was waived from institutional board review and the requirement for informed consent by the Human Research Protection Program at Yale University, because it was considered not to involve human participation due to its use of secondary data. The study adhered to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline.

Our main sample included beneficiaries enrolled in any MA plan. In **Figure 1**, MA enrollees with ADRD were assigned as the treatment group, and MA enrollees without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or PD were assigned as the control group.

These control group conditions were selected because, similar to ADRD, they often require specialized neurological care and are therefore more comparable to the treatment group with respect to patterns of health care utilization. Unlike ADRD, these conditions were already included in the risk-adjustment model before 2020.

To address confounding due to plan-switch following the inclusion of ADRD HCCs in 2020, we excluded beneficiaries with only partial MA enrollment in the year preceding the survey. We also excluded veterans. Our sample consists of a repeated cross-sectional dataset of 5,353 beneficiaries-survey-year observations from 2015 to 2022 with complete data on all covariates.

2.2 Variables

We used information regarding MA plan enrollment to define MA status. ADRD and conditions for the control group were identified via self-reported physician diagnosis. Due to data limitations, we cannot ascertain the timing of diagnosis or the initial MA enrollment; we discussed potential implications of this limitation in the Discussion section.

We used information on whether a respondent reported any trouble obtaining needed care to measure accessibility of needed care. We defined a respondent as experiencing a medical financial burden if they reported problems paying medical bills (available since 2017) or expressed dissatisfaction with their out-of-pocket costs. Additionally, we examined two binary measures of satisfaction with care: satisfaction with specialist access and satisfaction with the quality of care.

Covariates in **Table 1** included demographic variables (age, gender, marital status, race/ethnicity, education, and household size) and health-related measures (BMI, number of chronic conditions, and indicators for functional limitations).

2.3 Statistical Analysis

We employed a Difference-in-Differences (DID) model to compare changes in care experiences between the treatment and control group before and after the inclusion of ADRD HCCs in the MA risk adjustment model in 2020 (e**Methods 1**). The treatment group included MA enrollees with ADRD, while the control group comprised MA enrollees without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. We adjusted the model by interacting the covariates with year indicators to mitigate biases arising from contemporaneous shocks (e.g., COVID-19). To address measurement errors in self-reported care experiences among beneficiaries with ADRD, we interacted covariates and year indicators with an indicator for surveys completed by proxy (e.g., family members), respectively. All analyses used heteroskedasticity-robust standard errors.

We conducted an event study analysis within the same framework, using 2019 as the reference year - the last year before the inclusion of ADRD HCC (**eMethods 2**). This analysis provides suggestive evidence for the parallel-trends assumption of the DID model and examines temporal association dynamics following the new payment model.

We conducted various robust and placebo tests (**eMethods 3 and 4**). In one illustrative placebo test, we designated MA enrollees with diabetes (but without ADRD) as a negative control group

and MA enrollees without either condition as the comparison group, hypothesizing no association between the 2020 risk adjustment change and their care experiences. We extended this strategy to additional placebo conditions, including hypertension, myocardial infarction, and stroke, among others.

We replicated the baseline DID design in an FFS sample as another placebo test, using FFS beneficiaries with ADRD as the negative control group and FFS beneficiaries with other neurological conditions (stroke, paralysis, Parkinson's) but not ADRD as the comparison group.

An important concern in DID analyses using repeated cross-sectional data is differential compositional changes in the treatment and/or control groups around the reform. We performed corresponding tests, described in **eMethods 5,** to mitigate this concern.

All statistical analyses used linear probability models for the DID estimator following existing health policy studies in major clinical journals,[11-17] and the level of statistical significance is based on two-sided tests. The analyses were performed using Stata 19.5 between January 2025 and December 2025.

3. Results

3.1 Sample Characteristics

In **Table 1**, among the 5,353 MA beneficiaries in our sample, 1,629 (30.4%) had been diagnosed with ADRD, while the remaining 3,724 had a stroke, paralysis, or Parkinson's disease. Approximately 18.4% of the sample was under 65, and 58.4% was 75 or older. The racial

composition (based on self-reported race/ethnicity) was predominantly non-Hispanic White (61.7%), followed by Hispanic beneficiaries (16.6%) and non-Hispanic Black beneficiaries (15.7%). About one-third were male or married with a spouse present. Over half have attained no more than a high school education. Approximately 73% lived with functional limitations (at least one IADL or ADL) and about 88% have more than two chronic conditions.

The sample size varies across care experience outcomes due to missing values in the corresponding measures. About 10% of the sample reported having any trouble accessing needed care, while about 23% reported any medical financial burdens. A significant majority (over 90%) expressed satisfaction with specialist access or the quality of care.

Figure 2 exhibits trends in each care experience outcome in our treatment and control groups, from 2015 to 2022. Since 2020, a notable decline has been observed in the proportion of MA beneficiaries with ADRD reporting any barriers to accessing needed healthcare (top left) and any medical financial burdens (top right) compared to the control group. However, the differences in satisfaction with specialist access (bottom left) or the quality of care (bottom right) between the two groups remained relatively small until 2022. **eTables 1** and **2** summarize the average outcomes by treatment status and over time. We reported summary statistics for each sample used in robustness and placebo tests in **eTables 4** to **20**.

3.2 Association Between MA Risk Adjustment Model Change and Care Experiences

Figure 3 shows improved care experiences following the inclusion of ADRD in the risk-adjusted payment model. The revised risk-adjusted payment model was associated with a 6.6 percentage-

point decrease in reporting any troubles accessing needed care (95% CI, -0.112 to -0.02; P = 0.005), and a 9.2 percentage-point decrease in reporting any medical financial burdens (95% CI, -0.161 to -0.023; P = 0.009) among MA beneficiaries with ADRD. The association between the revised payment model and the satisfaction with improved specialist access was marginally significant, with a coefficient of 4.0 percentage points (95% CI, -0.005 to 0.084; P = 0.083). No significant association was observed for satisfaction with the quality of care (coefficient, -0.014; 95% CI, -0.056 to 0.029; P = 0.53).

Figure 4 displays the dynamic association from 2015 to 2022 using the event study analysis. The negative coefficients and the steady downturn pattern in the period after 2019 reassured that the new risk adjustment model in 2020 was associated with a discernible reduction in troubles in getting needed care (top left: coefficient, -0.048; 95% CI, -0.129 to 0.033 in 2020; coefficient, -0.099; 95% CI, -0.181 to -0.016 in 2021, coefficient, -0.091; 95% CI, -0.183 to 0.001 in 2022 in **eTable 3**) and alleviated financial stress in paying medical bills (top right: coefficient, -0.097; 95% CI, -0.212 to 0.017 in 2020; coefficient, -0.103; 95% CI, -0.214 to 0.007 in 2021, coefficient, -0.117; 95% CI, -0.237 to 0.002 in 2022 in **eTable 3**) among MA beneficiaries with ADRD. Moreover, the stability and insignificance of the coefficients preceding the revised payment model in the top panels, being negative or hovering near zero, lend credibility to the underlying parallel-trends assumption for our DID model. The positive association between the 2020 revised payment model and beneficiaries' satisfaction with specialist access was relatively weak in 2020 and the subsequent years, although the magnitude of the association showed an increasing trend over time (bottom left). Conversely, the revised payment model demonstrated no significant correlation with

beneficiaries' satisfaction regarding the quality of care in any single year from 2015 to 2022, further reassuring the null association depicted in **Figure 3**.

We performed multiple robustness tests. To address self-reporting bias among MA beneficiaries with ADRD, we excluded self-respondents with ADRD; the estimates were unchanged (**eFigure 1**). Our results are robust to the exclusion of MA beneficiaries under 65 in **eFigure 2**, the adjustment of dual-eligible status in covariates in **eFigure 3**, and the alternative standard error calculations using balanced repeated replications in **eFigure 4**. To address bias from plan-switch driven by risk adjustment,[2,8,10] we restricted the sample to beneficiaries continuously enrolled in MA plans for at least 3 years, yielding consistent results **(eFigure 5**). Including beneficiaries in MA for less than one year does not alter our results (**eFigure 6**). Results are robust to alternative control group definitions, including excluding beneficiaries with PD and/or stroke (**eFigure 7)** and using a broader set of non-ADRD conditions as controls **(eFigure 8).**

In **eFigure 9**, we re-estimated associations using alternative negative control groups—beneficiaries without ADRD but with stroke/brain hemorrhage, hypertension, myocardial infarction, cancer, or osteoarthritis, respectively. Most coefficients were near zero and statistically insignificant, indicating no spurious associations between the revised payment model and care experience measures. In **eFigure 10**, we compared FFS beneficiaries with ADRD to FFS beneficiaries without ADRD but with stroke, paralysis, or Parkinson's disease, finding no significant associations. These placebo results suggest that our main findings are unlikely driven by unobserved confounding differences across diseases.

Stratification analyses by beneficiaries' characteristics are presented in **eFigure 11**. Among beneficiaries with incomes above 200% of the federal poverty level (FPL), the revised payment model was significantly associated with reduced trouble getting needed care (coefficient, -0.096; 95% CI, -0.19 to -0.001), while those below 200% FPL experienced reductions in both trouble getting needed care (coefficient, -0.084; 95% CI, -0.148 to -0.021) and financial burdens (coefficient, -0.131; 95% CI, -0.219 to -0.044). Non-White beneficiaries had a greater reduction in financial burden (coefficient, -0.142; 95% CI, -0.259 to -0.024), whereas White beneficiaries showed a modest reduction in trouble getting needed care (coefficient, -0.056; 95% CI, -0.114 to 0.002).

By educational attainment, beneficiaries with at least a high school degree experienced significant reductions in trouble accessing care (coefficient, -0.103; 95% CI, -0.195 to -0.011) and financial burdens (coefficient, -0.138; 95% CI, -0.279 to 0.003), whereas no significant associations were detected among those with lower education. Lastly, beneficiaries residing in metropolitan areas experienced a notable reduction in trouble getting needed care (coefficient, -0.065; 95% CI, -0.114 to -0.016) and greater satisfaction with specialist access (coefficient, 0.06; 95% CI, 0.012 to 0.109), while no significant associations were observed for non-metropolitan residents, though the direction of estimates suggest potential benefits.

Results in **eFigures 12** and **13** show no broad, systematic compositional change around 2019-2020, and no consistent patterns of compositional change post-2020 for most beneficiary characteristics, albeit a relative increase in Hispanic share and married share in the treatment group after 2020.

4. Discussion

Failing to account for complexity of high-need populations, the risk-adjusted payment model may under-reimburse the high costs associated with managing these conditions,[3,5,9,18], rendering financial disincentives for plans to invest in comprehensive care for affected beneficiaries, for instance, dropping high-cost beneficiaries,[3,18] providing a narrow provider network,[19,20] and requiring prior-authorization.[21,22] Consequently, existing studies using data prior to 2020 have found large health gaps between beneficiaries with ADRD in MA and FFS.[6,7,23] They find that compared to FFS, the diagnosed dementia rates in MA are notably lower,[24] suggesting a potential under-diagnosis of ADRD in MA. This underdiagnosis further delays in access to appropriate interventions, exacerbating gaps in care quality and outcomes. Moreover, beneficiaries with ADRD enrolled in MA have a substantially high rate of leaving MA and joining FFS, especially for those experiencing a great demand for post-acute hospitalization, home care, and long-term nursing home care in preceding years.[2-5,7] High-cost MA beneficiaries, including ADRD patients, also have a larger chance of entering into low-quality nursing homes compared to their FFS counterparts.[23]

Since 2004, CMS has periodically revised the HCC risk-adjustment model to improve payment fairness and sustainability. Although previous studies show that risk-adjusted payments can manage overall medical costs,[18,25,26] less is known about how a condition-specific change in an HCC-based risk adjustment model, especially for care-intensive conditions, incentivizes appropriate care delivery.

Our study finds that the 2020 reintroduction of ADRD HCC into the payment model was associated with improved care access and reduced financial strain among MA beneficiaries with ADRD. These improvements suggest that updating the risk adjustment model to better reflect the costs of chronic and complex conditions can help realign MA plan incentives with the needs of vulnerable populations. These findings provide a timely assessment of this condition-specific risk adjustment change and inform CMS's ongoing refinement of risk-adjusted payment models.

Our study also identifies several areas of concern. For instance, the improvements in specialist access and care quality are limited after the reintroduction of ADRD into risk adjustment, and benefits are more pronounced among urban and highly educated populations than among rural or less-educated groups. These gaps indicate that while the policy change represents progress, it does not fully overcome systemic barriers to high-quality and comprehensive care for all beneficiaries with ADRD. Policymakers should consider complementary strategies - such as enhanced care coordination, expanded provider networks, and ADRD-specific quality metrics (e.g., caregiver support and dementia care training) - to further incentivize high-quality care, specifically for beneficiaries in under-served contexts.

We note several caveats when interpreting our results. First, existing studies have shown an increase in MA enrollment[27] or an increasing rate of dementia diagnoses in MA beneficiaries who are Hispanic or non-Hispanic Black, dual-eligible, or received low-income subsidies following the 2020 payment model change.[8,10] Because these groups are more likely to face access and payment challenges, their increased representation in the post-2020 treatment group may attenuate our estimates. Our compositional tests suggest that the relative increase in Hispanic share likely

attenuates our estimated improvements in care experiences, while the increase in married share may lead to over-estimation.

Moreover, caution should be warranted when interpreting care experience measures. First, the self-reported measures may be subject to response bias. Second, perceived access and affordability do not directly measure the amount, type, or appropriateness of care received; thus, findings should be interpreted as changes in patient experiences rather than definitive changes in utilization or clinical outcomes. Patient experience measures nevertheless have important policy relevance and are widely used in Medicare research and CMS quality monitoring. [6,28-30]

We acknowledge the need to monitor the unintended consequences of risk adjustment reforms. It is essential to ensure that this adjustment does not inadvertently lead to cost-shifting or restricted benefits in other areas. Policymakers should consider periodic reviews of risk adjustment models to avoid up-coding and over-diagnosis,[8,10,26] ensuring a balance of financial sustainability and equity in care delivery.

Limitations

The MCBS uses a rotating panel design, where each beneficiary can participate for up to four years. Our analysis relies on MCBS PUF, a cross-sectional dataset, which does not permit longitudinal linkage of the same individuals across years. Given this data constraint, this study has several limitations. First, we cannot directly observe enrollment and diagnosis timing in MCBS PUF, which limits our ability to address the policy-induced compositional changes in the treatment group. Second, because MCBS PUF lacks comprehensive claims/encounter linkages, we cannot

assess whether reported improvements correspond to changes in objective utilization; future studies using linked claims could evaluate changes in realized care and spending. Third, our ADRD and other conditions measures are based on self-reported physician diagnosis rather than claims data, which may introduce misclassification and likely attenuate associations toward the null. Additionally, our estimates represent average associations across beneficiaries with heterogeneous disease severity. Finally, we do not account for the potential cost of overdiagnosis, a possible consequence of the risk-adjusted payment model change.[8] As such, our study may not fully capture the broader impacts of risk adjustment on care access, quality, and overall welfare.

5. Conclusions

Our study underscores the value of refining risk adjustment models to better capture clinical complexities of the growing aging population. Expanding the scope of risk adjustment to consider social determinants of health, such as caregiver burden, socioeconomic status, or access to community resources, may help reduce disparities and promote more equitable care.

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Statements and Declarations

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. The IZA Discussion Paper Series serves as a preprint server to deposit research for early feedback.

References

1. 2024 Alzheimer's disease facts and figures. *Alzheimers Dement*. May 2024;20(5):3708–3821. doi:10.1002/alz.13809

2. James HO, Trivedi AN, Meyers DJ. Medicare Advantage Enrollment and Disenrollment Among Persons With Alzheimer Disease and Related Dementias. *JAMA Health Forum*. Sep 1 2023;4(9):e233080. doi:10.1001/jamahealthforum.2023.3080

3. Rahman M, Keohane L, Trivedi AN, Mor V. High-Cost Patients Had Substantial Rates Of Leaving Medicare Advantage And Joining Traditional Medicare. *Health Aff (Millwood)*. Oct 2015;34(10):1675–81. doi:10.1377/hlthaff.2015.0272

4. Jutkowitz E, Bynum JPW, Mitchell SL, et al. Diagnosed prevalence of Alzheimer's disease and related dementias in Medicare Advantage plans. *Alzheimers Dement (Amst)*. 2020;12(1):e12048. doi:10.1002/dad2.12048

5. Meyers DJ, Rahman M, Rivera-Hernandez M, Trivedi AN, Mor V. Plan switching among Medicare Advantage beneficiaries with Alzheimer's disease and other dementias. *Alzheimers Dement (N Y)*. 2021;7(1):e12150. doi:10.1002/trc2.12150

6. Meyers DJ, Rivera-Hernandez M, Kim D, Keohane LM, Mor V, Trivedi AN. Comparing the care experiences of Medicare Advantage beneficiaries with and without Alzheimer's disease and related dementias. *J Am Geriatr Soc*. Aug 2022;70(8):2344–2353. doi:10.1111/jgs.17817

7. Kim D, Meyers DJ, Keohane LM, Varma H, Achola EM, Trivedi AN. Medicare Advantage enrollment and outcomes of post-acute nursing home care among patients with dementia. *Health Aff Sch*. Jun 2024;2(6):qxae084. doi:10.1093/haschl/qxae084

8. Festa N, Price M, Weiss M, et al. Evaluating The Accuracy Of Medicare Risk Adjustment For Alzheimer's Disease And Related Dementias. *Health Aff (Millwood)*. Sep 2022;41(9):1324–1332. doi:10.1377/hlthaff.2022.00185

9. Meyers DJ, Belanger E, Joyce N, McHugh J, Rahman M, Mor V. Analysis of Drivers of Disenrollment and Plan Switching Among Medicare Advantage Beneficiaries. *JAMA Intern Med*. Apr 1 2019;179(4):524–532. doi:10.1001/jamainternmed.2018.7639

10. Haye S, Jacobson M, Joyce G, Zissimopoulos JM. After Risk-Adjustment Change, Dementia Diagnoses Increased In Medicare Advantage Relative To Traditional Medicare. *Health Aff (Millwood)*. Jan 2025;44(1):81–89. doi:10.1377/hlthaff.2024.00723

11. Weber E, Kim H, Ng A, Howell FM, Fox A, Janevic T. Medicaid Eligibility Gaps and Pandemic-Era Postpartum Insurance Rates. *Jama-Health Forum*. Mar 21 2025;6(3)doi:ARTN e250109

10.1001/jamahealthforum.2025.0109

12. Tucher EL, Meyers DJ, Trivedi AN, Gottlieb LM, Thomas KS. New Supplemental Benefits and Plan Ratings Among Medicare Advantage Enrollees. *Jama Netw Open*. Jun 5 2024;7(6)doi:ARTN e2415058

10.1001/jamanetworkopen.2024.15058

13. Huckfeldt PJ, Shier V, Escarce JJ, et al. Postacute Care for Medicare Advantage Enrollees Who Switched to Traditional Medicare Compared With Those Who Remained in Medicare Advantage. *Jama-Health Forum*. Feb 16 2024;5(2)doi:ARTN e235325

10.1001/jamahealthforum.2023.5325

14. Roy I, Hutchins F, Rose L, et al. Postacute Care Use and Outcomes Among Medicare Advantage vs Traditional Medicare Beneficiaries. *Jama Netw Open*. Oct 29 2025;8(10)doi:ARTN e2540347

10.1001/jamanetworkopen.2025.40347

15. Yasenov VI, Lawrence D, Mendoza FS, Hainmueller J. Public Health Insurance Expansion for Immigrant Children and Interstate Migration of Low-Income Immigrants. *Jama Pediatr*. Jan 2020;174(1):22–28. doi:10.1001/jamapediatrics.2019.4241

16. Jiang HJ, Fingar KR, Liang L, Henke RM, Gibson TP. Quality of Care Before and After Mergers and Acquisitions of Rural Hospitals. *Jama Netw Open*. Sep 20 2021;4(9)doi:ARTN e2124662

10.1001/jamanetworkopen.2021.24662

17. Friedberg MW, Rosenthal MB, Werner RM, Volpp KG, Schneider EC. Effects of a Medical Home and Shared Savings Intervention on Quality and Utilization of Care. *Jama Intern Med*. Aug 2015;175(8):1362–1368. doi:10.1001/jamainternmed.2015.2047

18. Brown J, Duggan M, Kuziemko I, Woolston W. How Does Risk Selection Respond to Risk Adjustment? New Evidence from the Medicare Advantage Program. *Am Econ Rev*. Oct 2014;104(10):3335–64. doi:10.1257/aer.104.10.3335

19. Meyers DJ, Rahman M, Trivedi AN. Narrow Primary Care Networks in Medicare Advantage. *J Gen Intern Med*. Feb 2022;37(2):488–491. doi:10.1007/s11606-020-06534-2

20. Zhu JM, Meiselbach MK, Drake C, Polsky D. Psychiatrist Networks In Medicare Advantage Plans Are Substantially Narrower Than In Medicaid And ACA Markets. *Health Aff (Millwood)*. Jul 2023;42(7):909–918. doi:10.1377/hlthaff.2022.01547

21. Gupta R, Fein J, Newhouse JP, Schwartz AL. Comparison of prior authorization across insurers: cross sectional evidence from Medicare Advantage. *BMJ*. Mar 7 2024;384:e077797. doi:10.1136/bmj-2023-077797

22. Neprash HT, Mulcahy JF, Golberstein E. The extent and growth of prior authorization in Medicare Advantage. *Am J Manag Care*. Mar 1 2024;30(3):e85–e92. doi:10.37765/ajmc.2024.89519

23. Meyers DJ, Mor V, Rahman M. Medicare Advantage Enrollees More Likely To Enter Lower-Quality Nursing Homes Compared To Fee-For-Service Enrollees. *Health Aff (Millwood)*. Jan 2018;37(1):78–85. doi:10.1377/hlthaff.2017.0714

24. Haye S, Thunell J, Joyce G, et al. Estimates of diagnosed dementia prevalence and incidence among diverse beneficiaries in traditional Medicare and Medicare Advantage. *Alzheimers Dement (Amst)*. Jul–Sep 2023;15(3):e12472. doi:10.1002/dad2.12472

25. Curto V, Einav L, Finkelstein A, Levin J, Bhattacharya J. Health Care Spending and Utilization in Public and Private Medicare. *Am Econ J Appl Econ*. Apr 2019;11(2):302–332. doi:10.1257/app.20170295

26. Geruso M, Timothy l. Upcoding Evidence from Medicare on Squishy Risk Adjustment. *Journal of Political Economy*. 2020;

27. Zissimopoulos JM, Joyce GF, Jacobson M. Trends in Incident Dementia Diagnosis Before and After Medicare Risk Adjustment. *JAMA Netw Open*. Dec 1 2023;6(12):e2347708. doi:10.1001/jamanetworkopen.2023.47708

28. Park S, White L, Fishman P, Larson EB, Coe NB. Health Care Utilization, Care Satisfaction, and Health Status for Medicare Advantage and Traditional Medicare Beneficiaries With and Without Alzheimer Disease and Related Dementias. *Jama Netw Open*. Mar 2 2020;3(3):e201809. doi:10.1001/jamanetworkopen.2020.1809

29. Landon BE, Zaslavsky AM, Anderson TS, Souza J, Curto V, Ayanian JZ. Differences In Use Of Services And Quality Of Care In Medicare Advantage And Traditional Medicare, 2010 And 2017. *Health Aff (Millwood)*. Apr 2023;42(4):459–469. doi:10.1377/hlthaff.2022.00891

30. Bejarano G, Ryan A, Trivedi A, Meyers DJ. Vertical Integration and Care Experiences Among Medicare Advantage Beneficiaries. *JAMA Netw Open*. Oct 1 2024;7(10):e2438994. doi:10.1001/jamanetworkopen.2024.38994

Table 1. Summary Statistics for Analytical Sample

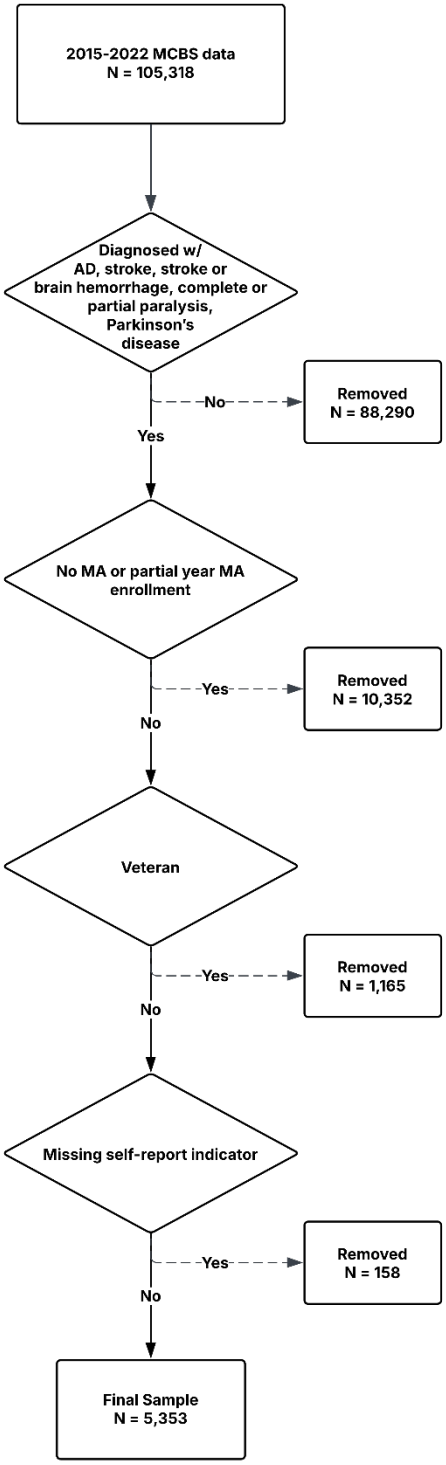
	All	ADRD	Stroke/Paralysis/ Parkinson's Disease
	N (%)	N (%)	N (%)
Observations	5,353 (100%)	1,629 (100.0%)	3,724 (100.0%)
Dependent Vars:			
Any Troubles Getting Needed Care			
Yes	536 (10.0%)	142 (8.7%)	394 (10.6%)
No	4,803 (90.0%)	1,482 (91.3%)	3,321 (89.4%)
Any Medical Financial Burden			
Yes	975 (23.4%)	235 (19.3%)	740 (25.1%)
No	3,197 (76.6%)	985 (80.7%)	2,212 (74.9%)
Satisfaction with Specialist Access			
No	398 (7.9%)	140 (9.2%)	258 (7.3%)
Yes	4,651 (92.1%)	1,384 (90.8%)	3,267 (92.7%)
Satisfaction with Quality of Care			
No	371 (7.0%)	116 (7.2%)	255 (7.0%)
Yes	4,909 (93.0%)	1,495 (92.8%)	3,414 (93.0%)
Demographics:			
Age Group <65	987 (18.4%)	113 (6.9%)	874 (23.5%)
Age Group 65 to 75	1,239 (23.1%)	224 (13.8%)	1,015 (27.3%)
Age Group 75+	3,127 (58.4%)	1,292 (79.3%)	1,835 (49.3%)
Non-Hispanic black	840 (15.7%)	217 (13.3%)	623 (16.7%)
Hispanic	887 (16.6%)	394 (24.2%)	493 (13.2%)
Non-Hispanic white	3,304 (61.7%)	920 (56.5%)	2,384 (64.0%)
Other Races	322 (6.0%)	98 (6.0%)	224 (6.0%)
Male	1,785 (33.3%)	443 (27.2%)	1,342 (36.0%)
Not Married	2,793 (52.2%)	892 (54.8%)	1,901 (51.0%)
Married	1,776 (33.2%)	521 (32.0%)	1,255 (33.7%)
Married: missing	784 (14.6%)	216 (13.3%)	568 (15.3%)
High school or less	2,898 (54.1%)	991 (60.8%)	1,907 (51.2%)
High School above	1,629 (30.4%)	401 (24.6%)	1,228 (33.0%)
Education missing	826 (15.4%)	237 (14.5%)	589 (15.8%)
Self-respondent	3,923 (73.3%)	635 (39.0%)	3,288 (88.3%)
Proxy respondent	1,430 (26.7%)	994 (61.0%)	436 (11.7%)
Household Size: 1	1,669 (31.2%)	373 (22.9%)	1,296 (34.8%)
Household Size: 2	2,318 (43.3%)	749 (46.0%)	1,569 (42.1%)
Household Size: 3+	1,366 (25.5%)	507 (31.1%)	859 (23.1%)
Health Conditions			
Underweight/healthy (<25)	1,806 (33.7%)	702 (43.1%)	1,104 (29.6%)
Overweight (25-30)	1,768 (33.0%)	475 (29.2%)	1,293 (34.7%)
Obese/high-risk obese (>=30)	1,615 (30.2%)	379 (23.3%)	1,236 (33.2%)

BMI missing	164 (3.1%)	73 (4.5%)	91 (2.4%)
IADLs or ADLs: 0	1,462 (27.3%)	212 (13.0%)	1,250 (33.6%)
IADLs: 1	926 (17.3%)	348 (21.4%)	578 (15.5%)
ADLs: 1-2	1,516 (28.3%)	410 (25.2%)	1,106 (29.7%)
ADLs: 3-4	774 (14.5%)	296 (18.2%)	478 (12.8%)
ADLs: 5-6	675 (12.6%)	363 (22.3%)	312 (8.4%)
Chronic Conditions (except ADRD): 0	39 (0.7%)	39 (2.4%)	0 (0%)
Chronic Conditions (except ADRD): 1	208 (3.9%)	124 (7.6%)	84 (2.3%)
Chronic Conditions (except ADRD): 2	416 (7.8%)	182 (11.2%)	234 (6.3%)
Chronic Conditions (except ADRD): 3-4	1,621 (30.3%)	520 (31.9%)	1,101 (29.6%)
Chronic Conditions (except ADRD): 5-6	1,722 (32.2%)	452 (27.7%)	1,270 (34.1%)
Chronic Conditions (except ADRD): 7-10	1,226 (22.9%)	281 (17.2%)	945 (25.4%)
Chronic Conditions (except ADRD): 11+	121 (2.3%)	31 (1.9%)	90 (2.4%)

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. Race and ethnicity were self-reported by beneficiaries. The "Other races" category includes all racial groups other than non-Hispanic White, non-Hispanic Black, or Hispanic. For dependent variables, the number of observations varies due to missing values. For each dependent variable, we calculated the percentage with respect to the number of observations with non-missing values. For any medical financial burden, it is not available in 2015 and 2016 MCBS data.

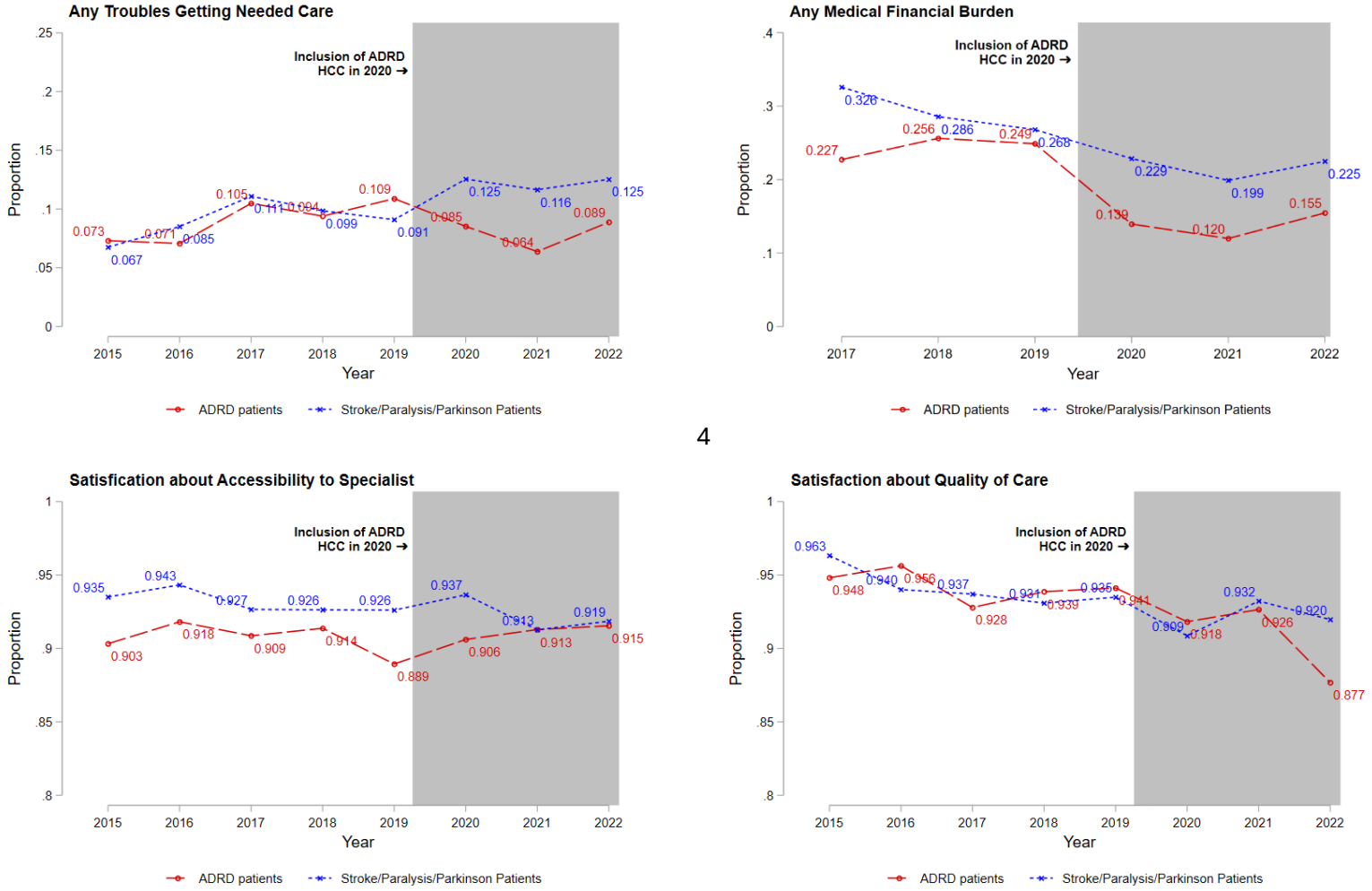
FIGURE LEGENDS

Figure 1. Data Process Flow



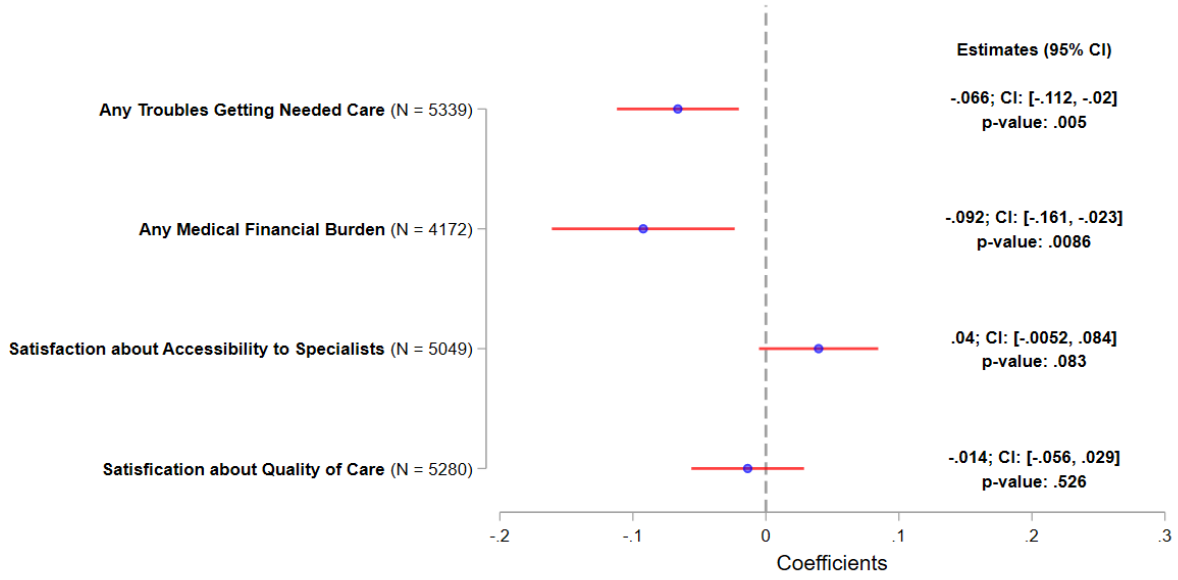
Notes: The figure shows our sample selection process. Our main sample included beneficiaries enrolled in any MA plan.

Figure 2. Pattern of Care Experiences Over Time



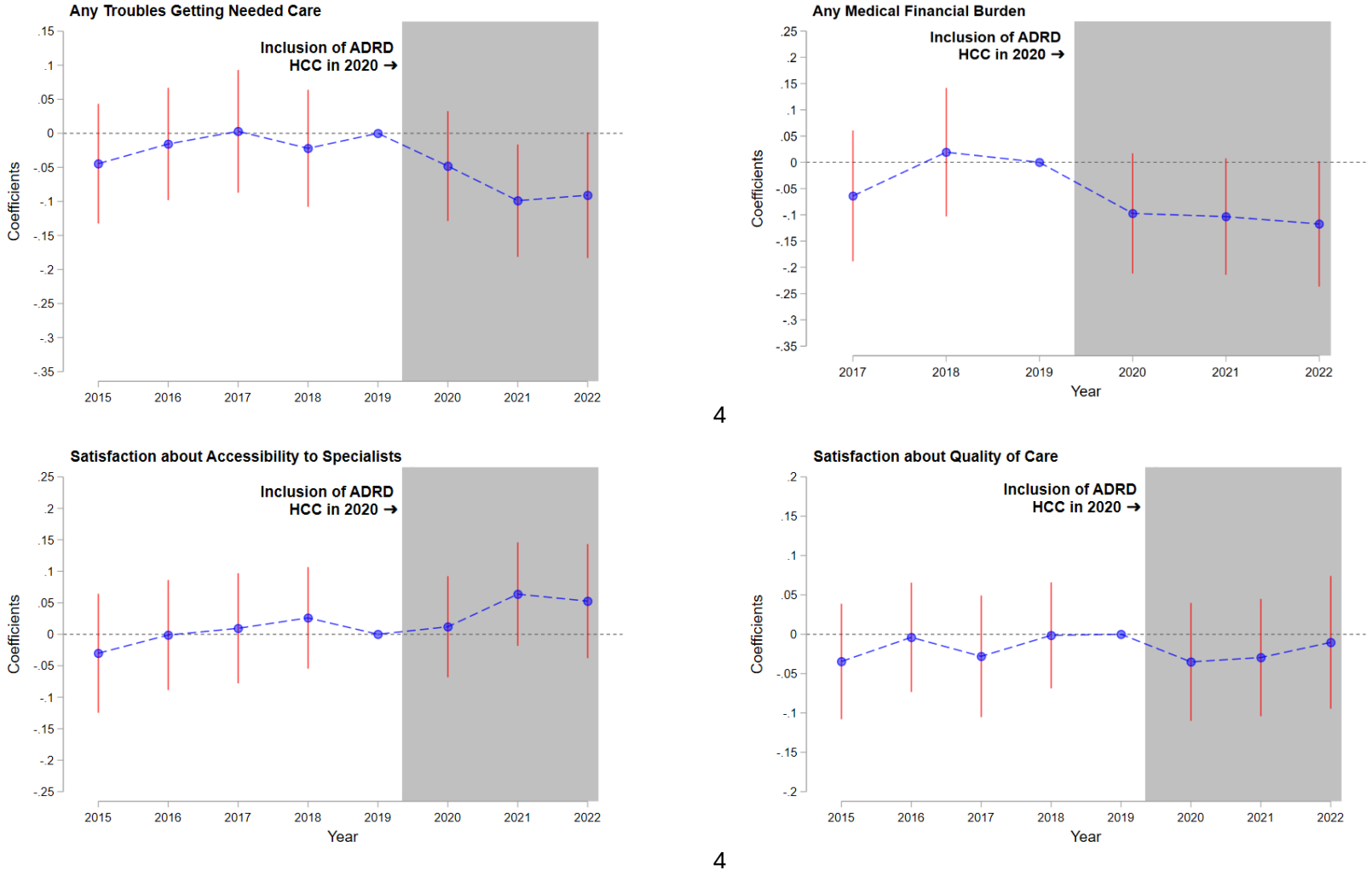
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded.

Figure 3. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences



Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

Figure 4. Dynamic Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences



Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. Each figure presents results from an event study model,

with the dependent variable specified above. The plotted estimates represent the coefficients for the interaction term between treated indicator and year indicators. In each estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The associated 95% CIs are also plotted. Robust standard errors are applied.

Supplementary Material

Risk Adjustment for ADRD in Medicare Advantage and Health Care Experiences

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- eMethods 2: Event Study Model
- eMethods 3: Robustness Checks
- eMethods 4: Placebo Test
- eMethods 5: Compositional Change Test

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Supplementary eMethods

eMethods 1: Difference-in-Differences Model

We employ a DID model to exploit the inclusion of ADRD HCCs in the risk adjustment model for MA plans in 2020 as a quasi-natural experiment. This model compares care experiences between a treatment and a control group before and after the 2020 policy change.

The treated group is defined as MA enrollees who reported having ever been told they have symptoms of ADRD. To construct a comparable control group, we select MA enrollees who: (1) had never been diagnosed with ADRD, and (2) had been diagnosed with conditions such as stroke or brain hemorrhage, complete or partial paralysis, or Parkinson's disease. The selection criteria are grounded in the rationale that patients with these conditions are also likely to see neurologists like those with ADRD. This parallel in healthcare pathways allows for a more equitable comparison, ensuring that differences observed can be more confidently attributed to the effects of the ADRD HCCs integration into the risk adjustment model.

Formally, we build a regression model as outlined in Equation (S.1) below.

$$y_{it} = \beta_0 + \beta_1 treated_{it} \times post_t + \beta_2 treated_{it} + \gamma X'_{it} + \alpha_t + \epsilon_{it}, \quad \text{(S.1)}$$

where y_{it} represents the care experience measure for beneficiary i in year t. The binary variable $treated_{it}$ indicates whether individual i is classified as treated, as defined above. The binary variable $post_t$ takes the value of one for the years following the policy change (2020 and later), and zero otherwise. In a DID framework, the coefficient of the interaction term $treated_{it} \times post_t$, β_1, captures the association between the inclusion of ADRD HCCs in the risk adjusted payment model and the care experience of MA beneficiaries with ADRD. A positive β_1 implies a position association. We apply robust standard errors in the analysis.

To reassure the estimated $\hat{\beta}_1$ unbiasedly measures the association of interest, rather than confounded by other unobserved factors, a critical assumption is that, in the absence of the payment model change, the evolution of the outcomes of interest for the control and treatment groups would have followed a similar trajectory over time. This assumption, commonly known as the parallel-trends assumption, is fundamental to the validity of the DID design. It enables the use of the control group's outcomes as a reliable counterfactual for the treated group.

A notable threat to the parallel-trends assumption is the possibility that the estimated $\hat{\beta}_1$ may pick up confounding effects from some concurrent events, such as the onset of the COVID-19 pandemic in early 2020. To address this concern, we undertake several methodological adjustments. First, we include year fixed effects (α_t) to absorb national-level shocks and contemporary events. Additionally, to account for

potential heterogeneous pandemic impacts across subpopulations, we incorporate several interaction terms in X'_{it}. These include:

(1) interactions between demographic covariates and year indicators, where the demographic covariates encompass age categories, marital status, race/ethnicity, sex, educational attainment, and household size.

(2) the interactions between each health measure and each year indicator, where the health measures include number of functional limitations, number of chronic conditions, and BMI categories.

Our model with these interactions provides greater non-parametric flexibility in accounting for potential heterogeneous exposure to the pandemic, thereby enhancing the robustness of our estimates.

Another potential concern is measurement error arising from proxy reporting, as approximately 27% of the study sample comprises proxy respondents (Table 1). To mitigate the effects of such measurement errors, we include interactions between the self-respondent indicator and all previously described covariates, as well as each time indicator. These interactions allow for a more flexible adjustment, accounting for potential heterogeneity in the patterns and accuracy of proxy reporting.

Moreover, we conduct an event study model, detailed in **Supplementary eMthods 2** to provide suggestive evidence for the parallel-trends assumption.

eMethods 2: Event Study Model

We conduct an event study analysis using Equation (S.2) to provide suggestive evidence for the parallel-trends assumption underlying Equation (S.1). All variables in Equation (S.2) are defined consistently as those in Equation (S.1).

$$y_{it} = \beta_0'' + \sum_{j=2015, j\neq 2019}^{2022} \zeta_j treated_{it} \times \mathbb{I}\{t = j\} + \beta_2'' treated_{it} + \gamma'' X'_{it} + \alpha_t + \epsilon''_{it} \quad \text{(S.2)}$$

In the equation above, $\mathbb{I}\{t = j\}$ $(2015 \leq j \leq 2022, j \neq 2019)$ is an indicator function. For instance, $\mathbb{I}\{t = 2020\}$ takes the value of one if year is 2020 and otherwise zero. We interact the treatment group indicator, $treated_{it}$, with each year indicator, $\mathbb{I}\{t = j\}$. The year 2019, the last year before the implementation of the new risk-adjusted payment model in 2020, serves as the reference year. The coefficient ζ_j measures the association between the 2020 revised risk adjusted payment model with MA beneficiary's care experience in year j.

This analysis serves two primary purposes. First, if $\hat{\zeta}_j$ ($j \leq 2018$) is statistically insignificant, it provides suggestive evidence supporting the parallel-trends assumption, meaning that in the absence of the 2020 payment model revision, the evolution of care experience among MA beneficiaries with ADRD would

follow a parallel trajectory to that of the control group after 2019. Second, if $\hat{\zeta}_j$ ($j \geq 2020$) is statistically significant, it indicates the dynamics of the association between the revised payment model and care experience in the post-revision period. In Figure 4, the $\hat{\zeta}_j$s are plotted with their associated 95% CIs.

eMethods 3: Robustness Tests

We performed multiple robustness tests. In **eFigure 1**, we excluded self-respondents with ADRD; the estimates were unchanged, showing that our results are less confounded by self-reporting bias among MA beneficiaries with ADRD. Our results are robust to the exclusion of MA beneficiaries under 65 in **eFigure 2**, and the adjustment of dual-eligible status in covariates in **eFigure 3**. Our results are also robust to alternative standard error calculations using balanced repeated replications in **eFigure 4**.

Robustness Test: Addressing Plan-Switching Behavior

We are also concerned about the plan-switching between MA and FFS potentially driven by risk adjustment. On one hand, the care-experience questions in MCBS reference experiences over the prior year; limiting to full-year MA enrollees ensures that reported access and affordability correspond to a stable and well-defined MA exposure window, rather than a mix of MA and traditional Medicare plans within the reporting period. Though our baseline sample requires beneficiaries enrolling in current MA plan for at least one full year, as a robustness check in **eFigure 5**, we restricted the sample to beneficiaries continuously enrolled in MA plans for at least 3 years, again yielding consistent results.

One the other hand, enrollment in MA is not random, and prior evidence has suggested an increasing rate of dementia diagnoses in MA beneficiaries who are Hispanic or Black, dual-eligible, or received low-income subsidies following the 2020 payment model change. Thus, restricting the analytic sample to full-year MA enrollees could therefore introduce selection if enrollment is correlated with care experiences, differs by ADRD status, or changes around the 2020 policy implementation. To address this concern, in **eFigure 6**, we expanded our sample by including MA beneficiaries who are enrolling in their current MA plan for less than one year. In this expanded sample, we continue to observe a statistically significant reduction in any trouble getting needed care. Estimates for the remaining outcomes are attenuated and less precisely estimated. This attenuation pattern could be due to heterogeneity in treatment classification brought by the partial-year MA covered beneficiaries. To be more specific, partial-year MA enrollees experiences both MA and FFS plans within the same survey period. Mid-year switching can mechanically change beneficiary's exposure to benefit design, provider networks, cost-sharing, and care management intensity during the survey reference period. Thus, beneficiaries' reported care experience reflects both a mixture of both plan environment. For instance, with partial-year MA, a beneficiary may spend part of the year in MA and part in FFS (or vice versa). These groups are more heterogeneous because of different timing of plan switching, different exposure to MA plans, different reasons for switching, etc. This

heterogeneity likely weakens statistical power and the mapping between policy-relevant MA exposure and patient-reported experiences, which tends to pull our estimates toward the null.

Sensitivity Test: Alternative Control Group Constructions

We perform various tests to assess the sensitivity of our results to alternative control group constructions. Among the 3,715 MA beneficiaries in the baseline control group, 47 have Parkinson disease (PD), 1,039 have complete/partial paralysis, and 3,071 have stroke/brain hemorrhage (these categories are not mutually exclusive, so counts do not sum to the total). Conceptually, PD is neurodegenerative and shares some common clinical features with ADRD, However, in our sample PD constitutes a very small share of the control group (47 individuals), making it unlikely to drive baseline differences or the DID estimates.

In practice, we note that MA beneficiaries with stroke are our preferred neurological control group for MA beneficiaries with ADRD for the following reasons. (1) Beneficiaries with stroke/brain hemorrhage represent the largest component of the control group in our analytical sample. (2) Biologically, existing literature has linked cerebrovascular disease and clinical stroke to cognitive impairment and dementia and highlights the shared vascular pathways contributing to later-life cognitive decline between stroke and AD (Snyder et al., 2015; Anderle et al., 2025). Clinically, stroke survivals also have intensive and longitudinal healthcare needs (Hong et al., 2019) and frequently engage in ongoing specialist follow-up and chronic disease management (and often have cognitive sequelae), which makes their access-to-care and care-experience patterns more likely to move with MA network management and referral processes in ways that are comparable to ADRD-related care needs.

To test if our results are sensitive to the composition of our control group, we re-estimated our DID and event study models using alternative control group definitions and report results in **eFigure 7**.

- *Dropping PD from the control group:* Results are substantively unchanged. The DID estimates remain negative and statistically significant for (i) any trouble getting needed care ($\beta = -0.068$, 95% CI −0.113 to −0.022, $p = 0.004$) and (ii) any medical financial burden ($\beta = -0.092$, 95% CI −0.161 to −0.023, $p = 0.0086$). Estimates for satisfaction outcomes are similar in direction and remain statistically indistinguishable from zero (specialist access: $\beta = 0.040$, 95% CI −0.0053 to 0.085, $p = 0.084$; quality of care: $\beta = -0.013$, 95% CI −0.056 to 0.029, $p = 0.544$). This indicates the primary findings are not driven by PD beneficiaries.
- *Stroke/brain hemorrhage control group.* Results remain qualitatively consistent with the main findings. We continue to observe a negative association between the 2020 payment model change and (i) any trouble getting needed care ($\beta = -0.055$, 95% CI −0.102 to −0.009, $p = 0.020$) and (ii) any medical financial burden ($\beta = -0.093$, 95% CI −0.163 to −0.022, $p = 0.0101$), respectively. The associations for satisfaction outcomes remain imprecisely estimated (specialist access: $\beta =$

0.028, 95% CI −0.0183 to 0.074, p = 0.239; quality of care: β = −0.025, 95% CI −0.069 to 0.018, p = 0.259). These estimates are close to the baseline results, supporting robustness to using stroke as a cleaner comparison group.

- *Complete/Partial paralysis control group.* Estimates are directionally similar for trouble getting needed care (–0.114; 95% CI, –0.185 to –0.043; p=0.002), but are generally less precise for the other outcomes (e.g., medical financial burden becomes statistically insignificant), likely reflecting the smaller sample size and greater heterogeneity in the paralysis group. We therefore view paralysis-only as a less preferred standalone control group and present it as an additional robustness check rather than the primary control group.

Moreover, we also replicated our analysis using a broader control group. This expanded control group includes MA beneficiaries without ADRD but with a broader set of conditions, not just limited to PD, Stroke/brain hemorrhage, and Complete/Partial paralysis. Our results remain robust in **eFigure 8**.

Overall, these checks indicate that our conclusions—particularly for measures of perceived access barriers and financial burden—are not driven by PD inclusion (which represents a very small fraction of controls) nor by the broader mix of neurological control diagnoses.

eMethods 4: Placebo Tests

We also conduct a series of placebo tests as alternative approaches to support the parallel trends assumption and address the measurement errors described above. The design of these placebo tests involves comparing a group of Medicare Advantage beneficiaries who are not expected to be affected by the inclusion of the ADRD HCC in the risk-adjusted payment model with another group of MA beneficiaries who likewise should not be impacted by the new payment model. Formally, we estimate the following DID model specified in Equation (S.3):

$$y_{it} = \beta_0' + \beta_1' negativeControl_{it} \times post_t + \beta_2' negativeControl_{it} + \gamma' X_{it}' + \alpha_t + \epsilon_{it}' \qquad \text{(S.3)}$$

Equation (S.3) mirrors Equation (S.1), with the primary difference being the definition of the negative control group, denoted as $negativeControl_{it}$. For instance, one illustrative placebo test designates a negative control group, consisting of MA enrollees diagnosed with diabetes/high blood sugar but not ADRD, and a comparison group comprising MA enrollees without either diabetes/high blood sugar or ADRD. Since individuals with diabetes and without ADRD are not the primary target of the policy integrating ADRD HCC into the risk adjustment model, we expect to observe a statistically insignificant $\hat{\beta}_1'$ in this placebo test. This would imply that the 2020 revisions to the risk-adjusted payment model are not statistically associated with improved care experiences for non-ADRD MA beneficiaries with diabetes/high blood sugar. Conversely, if we observe a significant $\hat{\beta}_1'$, it suggests that our benchmark analysis using Equation (S.1)

likely picks up confounding bias from concurrent events such as the onset of the COVID-19 pandemic in 2020 or any potential proxy-response bias.

This approach is then extended to a series of placebo tests, with each negative control group focusing on a distinct health condition, including hypertension or high blood pressure, myocardial infarction (MI)/heart attack, stroke or brain hemorrhage, osteoarthritis or soft bones, congestive heart failure, emphysema/asthma/COPD, and complete or partial paralysis. The full list of chronic conditions serving as placebo-treatment groups is displayed along the horizontal axis in **eFigure 9**. In this figure, each coefficient of association, along with its corresponding 95% confidence interval, is derived from the results of a specific placebo test. Most coefficients were near zero and statistically insignificant, indicating no spurious associations between the revised payment model and care experience measures.

We replicated the baseline DID design in an FFS sample as another placebo test, using FFS beneficiaries with ADRD as the negative control group and FFS beneficiaries with other neurological conditions (stroke, paralysis, Parkinson's) but not ADRD as the comparison group. In **eFigure 10**, we compared FFS beneficiaries with ADRD to FFS beneficiaries without ADRD but with stroke, paralysis, or Parkinson's disease, finding no significant associations. These placebo results suggest that our main findings are unlikely to be driven by unobserved confounding differences across diseases.

eMethods 5: Compositional Change Test

A central challenge in our study is distinguishing changes attributable to the 2020 payment policy from compositional change in MA beneficiaries with ADRD around the time of policy implementation. For instance, if the 2020 risk-adjusted payment model policy induced people with severe disease burden to switch to MA plans, this compositional change is likely to undermine the interpretation of our estimation.

In direct response to this concern, we have also performed a series of robustness tests on compositional change using the same DID and event study designs as in our primary analysis. The treatment group consisted of MA enrollees with ADRD, while the control group comprised MA enrollees without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases.

Specifically, we re-estimated our models treating beneficiary demographic and health-status characteristics as outcomes and tested whether they changed differentially over time for MA beneficiaries with ADRD relative to our control group. The list of characteristics we tested includes age group, sex, race/ethnicity, education, marital status, BMI category, IADL/ADL limitations, and number of chronic conditions. We summarized all DID estimates in **eFigure 12**, in which the plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. We also present dynamic event study

estimates (relative to year 2019) in **eFigure 13**, where the plotted estimates represent the coefficients for the interaction term between treated indicator and year indicators.

Demographics. **eFigure 12** indicates that for most demographic characteristics, including age categories, sex, education, and racial groups (non-Hispanic white, black), the DID estimates are close to zero and statistically indistinguishable from zero with the 95% CI overlapping zero, suggesting limited evidence of broad demographic compositional change in MA beneficiaries with ADRD relative to the control group following the inclusion of ADRD HCC in the payment model. Importantly, the event studies in **eFigure 13** show no anticipatory jump or fall from 2019 to 2020 for these characteristics, directly addressing the reviewer's concern that diagnostic changes may have occurred in the year before the payment model took effect. Moreover, for these characteristics, the post-2020 coefficients are not statistically significant and do not show a consistent pattern indicating a systematic compositional change in our treatment group after the payment model change.

Nevertheless, we do observe statistically significant and positive DID estimates in **eFigure 12** and post-2020 coefficients in event studies in **eFigure 13** for married share and Hispanic share, suggesting that following the inclusion of ADRD HCC in 2020, there is an increase in married and Hispanic population in the treatment group relative to the control group. Except for these two characteristics, overall demographic profile of our treatment group remains broadly stable across dimensions over years. At the end of this response, we will provide a discussion on these increases in married and Hispanic share bias our interpretation.

Health status and severity proxies. For BMI and IADL/ADL limitation categories, the DID estimates in **eFigure 12** are generally small and not statistically significant; **eFigure 13** similarly shows no sharp shift from 2019 to 2020 and no systematic post-2020 discontinuity in these measures. These findings are reassuring because functional limitations (ADL/IADL) are particularly salient proxies for severity in this setting.

For comorbidity burden, proxied by number of chronic conditions, **eFigure 12** shows modest changes in selected bins (i.e, increase in # chronic conditions: 3-4 and decrease in # chronic conditions: 1), but the pattern is not monotonic across the burden distribution and does not indicate a coherent shift toward uniformly "healthier" or "sicker" beneficiaries after 2020. In the event study, the plots in **eFigure 13** do not show a sharp anticipatory change from 2019 to 2020 nor a sudden discontinuity in 2020 for most of the chronic-condition groups. We do notice that for chronic-condition groups such as chronic condition group 2, 5-6, and 7-10, the post-2020 coefficients fluctuate modestly over time and do not follow a particular pattern. We also need to be cautious that there is a gradually increasing pattern for chronic condition groups 3-4 and 11+, and a decreasing pattern for chronic group 1. Taken patterns across all chronic-condition

groups together, the comorbidity results do not jointly support a systematic compositional change of observed health status in our treatment group after 2020.

These empirical diagnostics show no broad, systematic compositional break around 2019–2020, and significant patterns of compositional change post-2020 for majority of individual's characteristics. We report these tests in the revised Supplement and summarize them in the Results. We kindly invite the reviewer to refer to these sections for more details.

Implications for bias. We further discussed how significance changes, particularly in married and Hispanic population affect the bias of our estimation.

First, the relative increase in Hispanic share in our treatment group following the new payment model in 2020 likely attenuate our estimated improvements in care experiences. Hispanic beneficiaries often face greater structural barriers to care (e.g., language, navigation, access constraints). Mechanically, a treated group that becomes more disadvantaged would tend to report worse access/affordability in care delivery post 2020; therefore, this compositional change would tend to attenuate our DID and post-2020 coefficients in event study to zero. Therefore, we are likely to under-estimate the association between improved care experience and the inclusion of ADRD HCC in risk-adjusted payment model in MA.

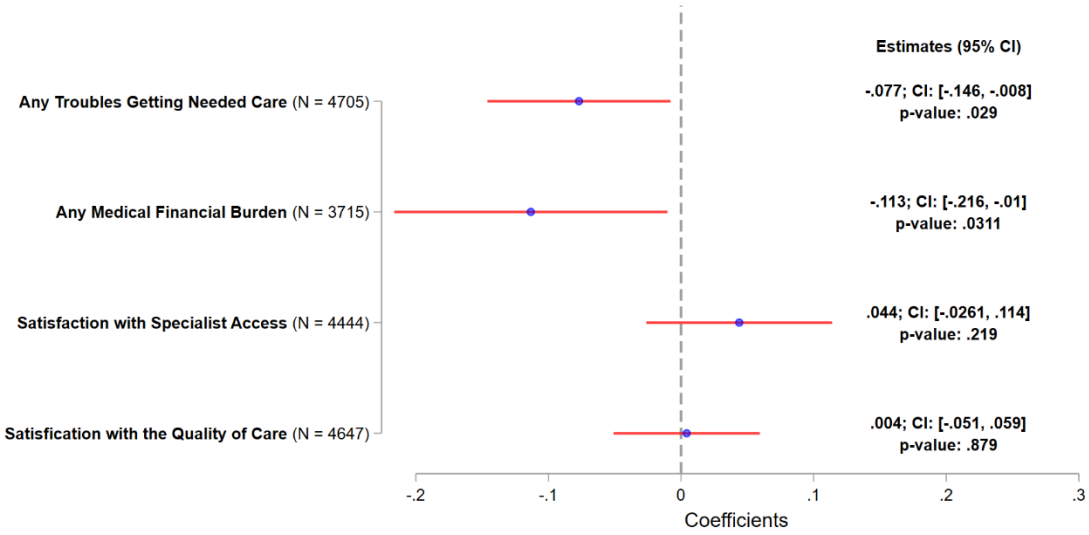
Second, increase in the married share in our treatment group after 2020 could lead to over-estimation of improvement in care experience. Marriage can proxy for greater informal caregiving and support in navigating care. If the treatment group became more likely to have a spouse post-2020, this would tend to move reported experiences toward better access/satisfaction and lower burden independent of plan behavior, which would bias estimates away from the null.

Lastly, if the treatment group shifted towards higher comorbidity burden after 2020, the expected direction would be attenuated because higher need generally increases the probability of access problems and cost concerns. However, in our analysis, changes across comorbidity bins are not monotonic and do not indicate a uniform movement toward lower or higher burden; accordingly, any compositional bias from comorbidity shifts is likely limited and not consistently directional.

Overall, while some subgroup-specific shifts merit acknowledgment, the absence of a broad, coherent compositional change post 2020 and particularly the lack of a discrete shift from 2019 to 2020 across most measured characteristics reduce our concern that our primary findings are driven by large observed compositional change. We nevertheless treat residual compositional change, particularly in unobserved severity and diagnosis timing, as an important limitation and interpret results as changes in reported care experiences rather than definitive changes in utilization.

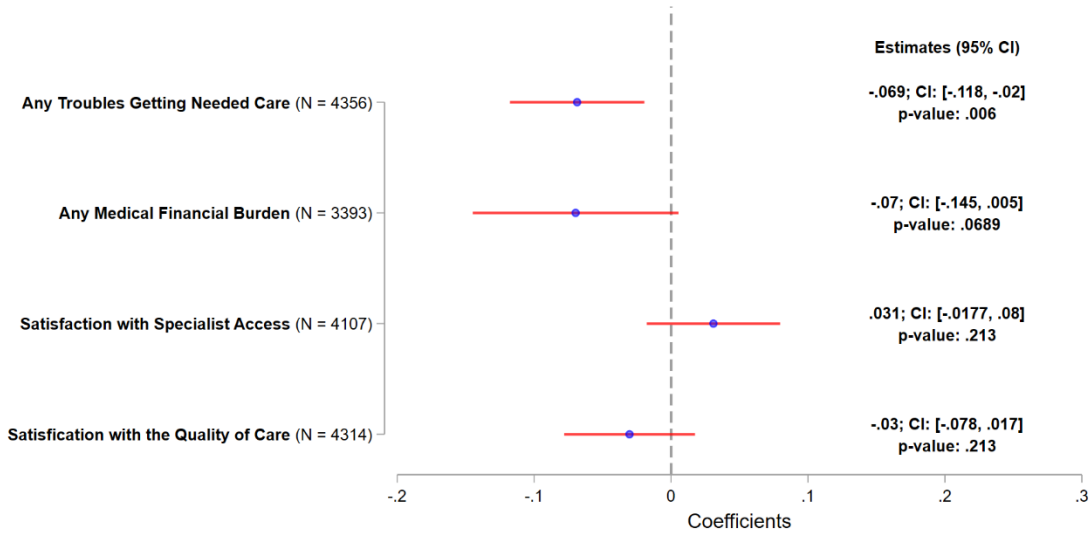
Supplementary eFigures and eTables

eFigure 1. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences – Exclude MA ADRD Beneficiaries with Self-Response



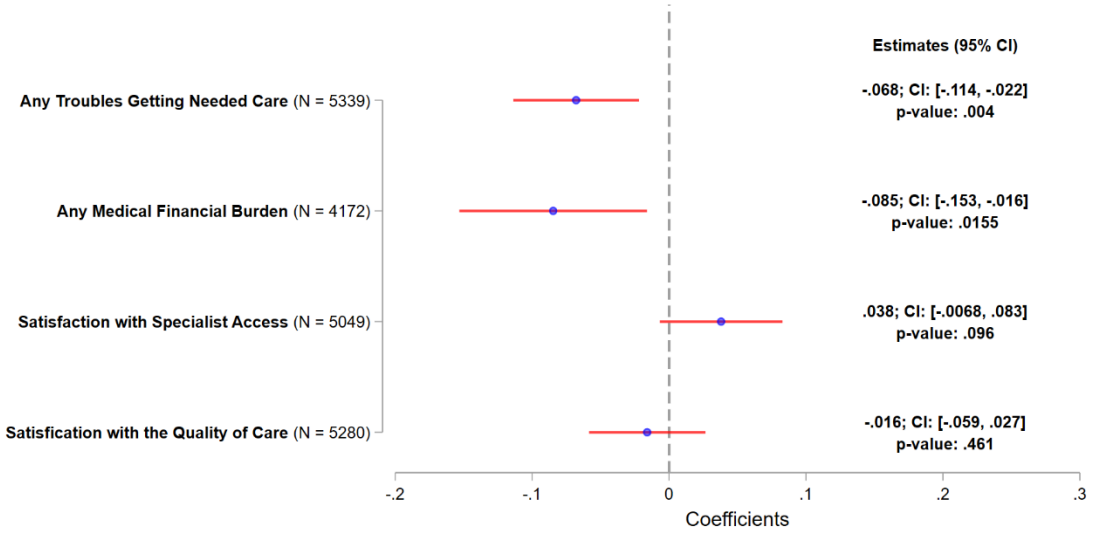
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. MA ADRD beneficiaries with self-response in the survey are also removed. The plotted estimates represent the coefficients for interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 2. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences – Exclude MA Beneficiaries Under 65



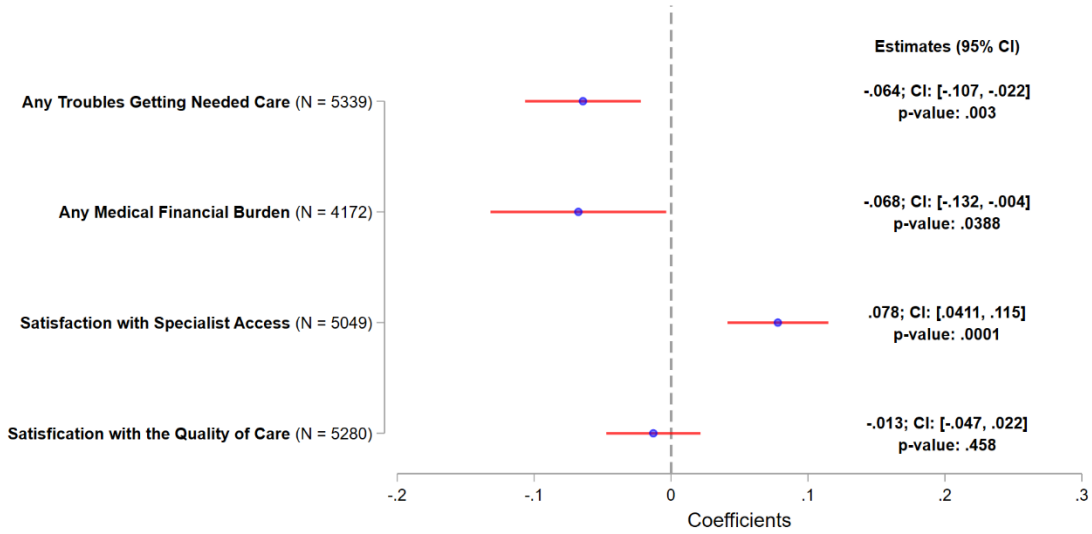
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. MA beneficiaries less than 65 years old at the time of the survey are also removed. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treated group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 3. Association between the Inclusion of ADRD HCCs in Payment Model and Beneficiaries' Characteristics – Adjust for Dual-Eligible Status



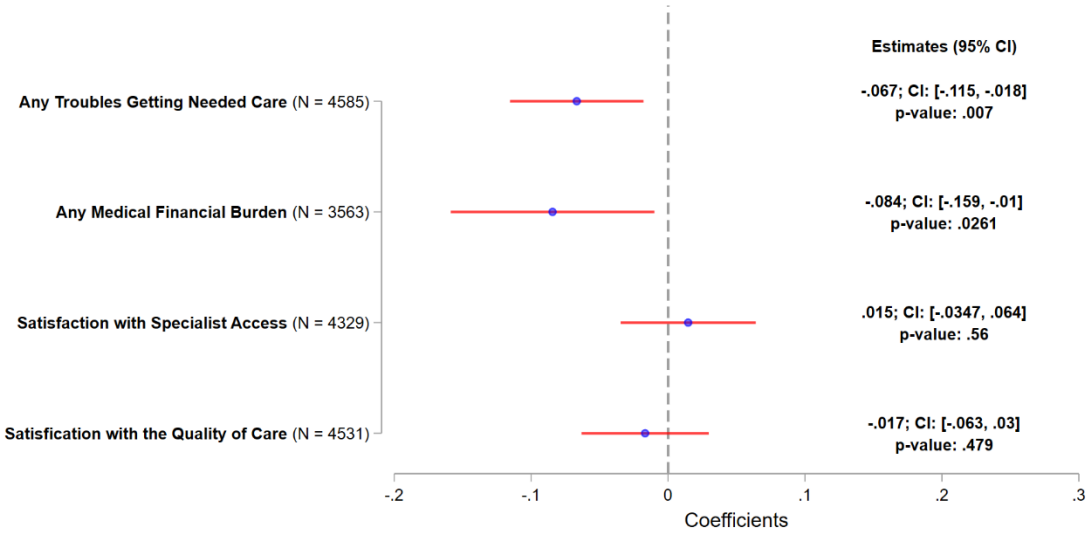
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 4. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences using Balanced Repeated Replications Method



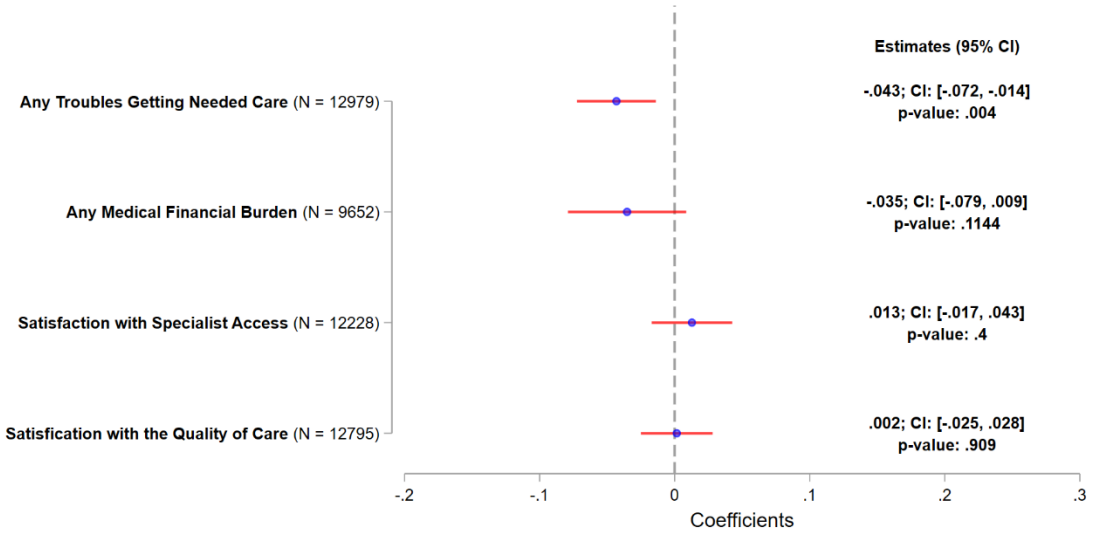
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Balanced repeated replications (BRR) for standard errors are applied.

eFigure 5. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences – Exclude Beneficiaries in Current MA Plan for Less than 3 Years



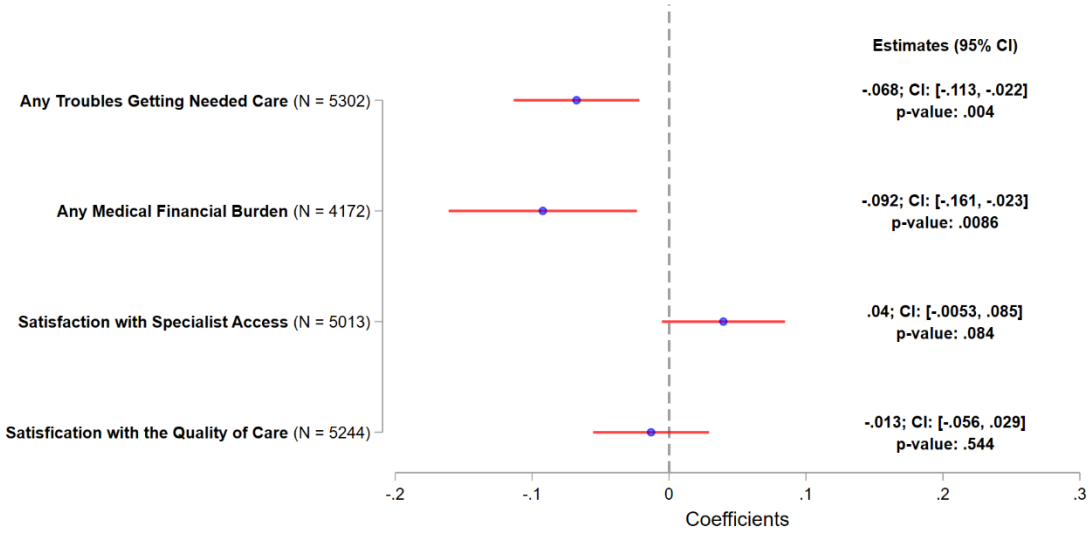
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. MA beneficiaries who have been in current MA plans for less than 3 years at the time of the survey are also removed. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 6. Association between the Inclusion of ADRD HCCs in Payment Model and Beneficiaries' Characteristics – Including Partially Covered MA Beneficiaries

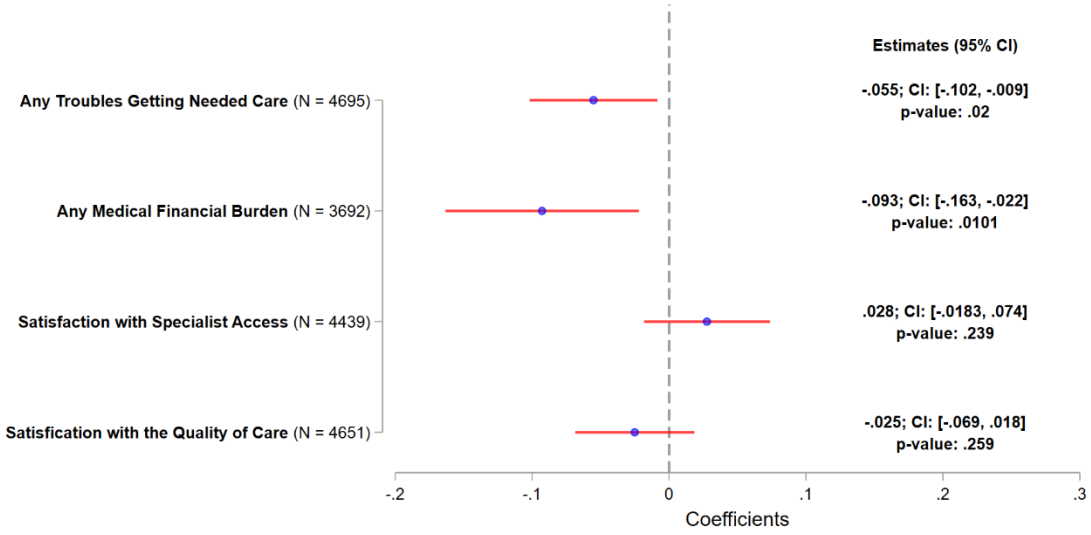


Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with full-year MA coverage or with MA coverage for less than one year during the past year at the time of the survey are both included. Veterans are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

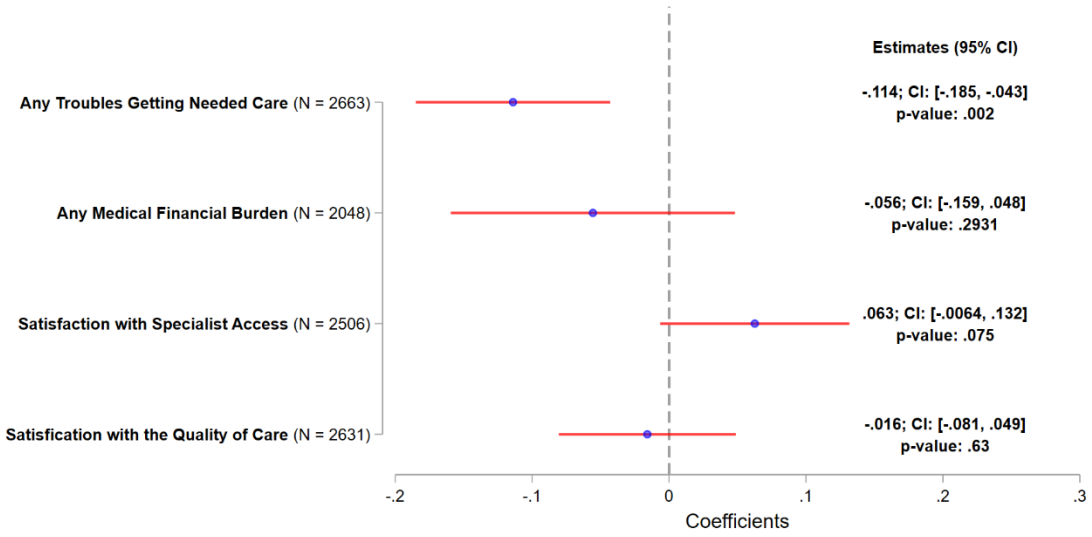
eFigure 7. Association between the Inclusion of ADRD HCCs in Payment Model and Beneficiaries' Characteristics – Sensitivity Test to Alternative Control Group



A. Dropping PD from Control Group



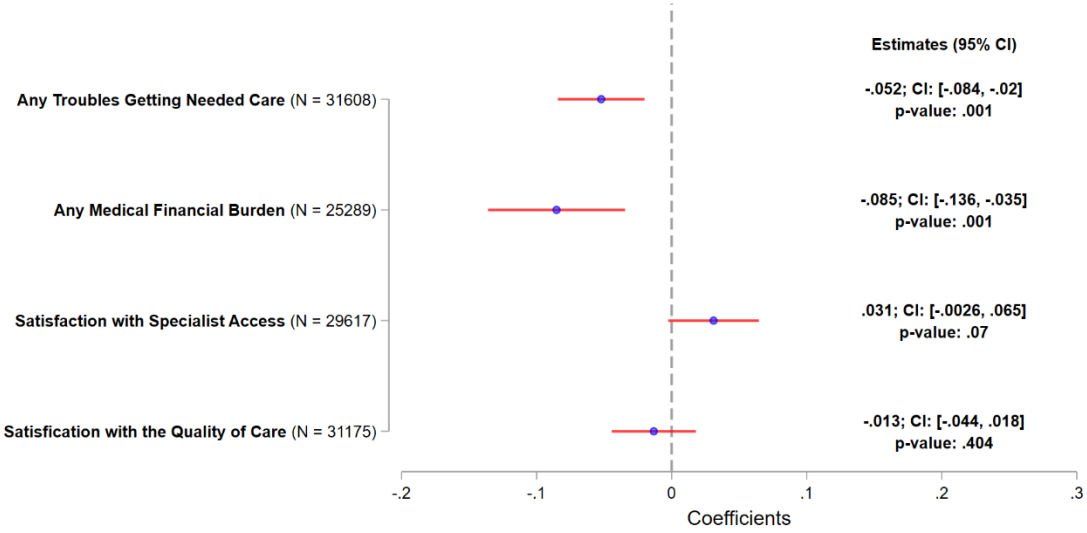
B. Using MA Beneficiaries with Stroke/brain hemorrhage as Control Group



C. Using MA Beneficiaries with Complete/Partial paralysis as Control Group

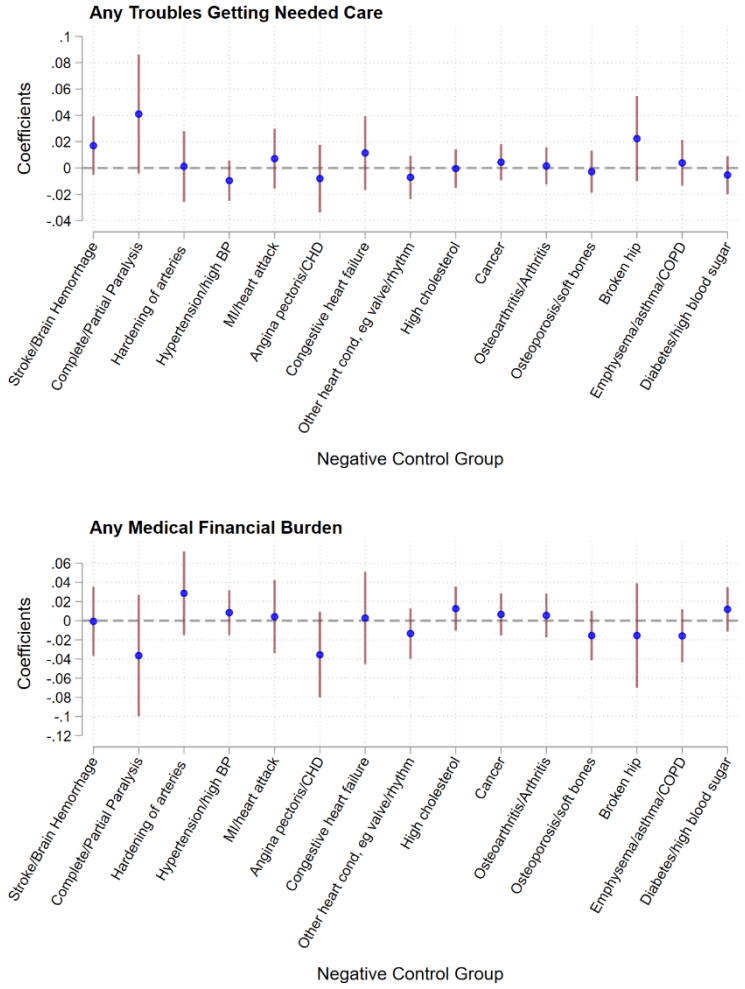
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD. The control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, or complete/partial paralysis in Panel A, MA beneficiaries without ADRD but with stroke/brain hemorrhage in Panel B, and MA beneficiaries without ADRD but with complete/partial paralysis in Panel C. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 8. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences – Using MA Beneficiaries with All non-ADRD Conditions as Control Group

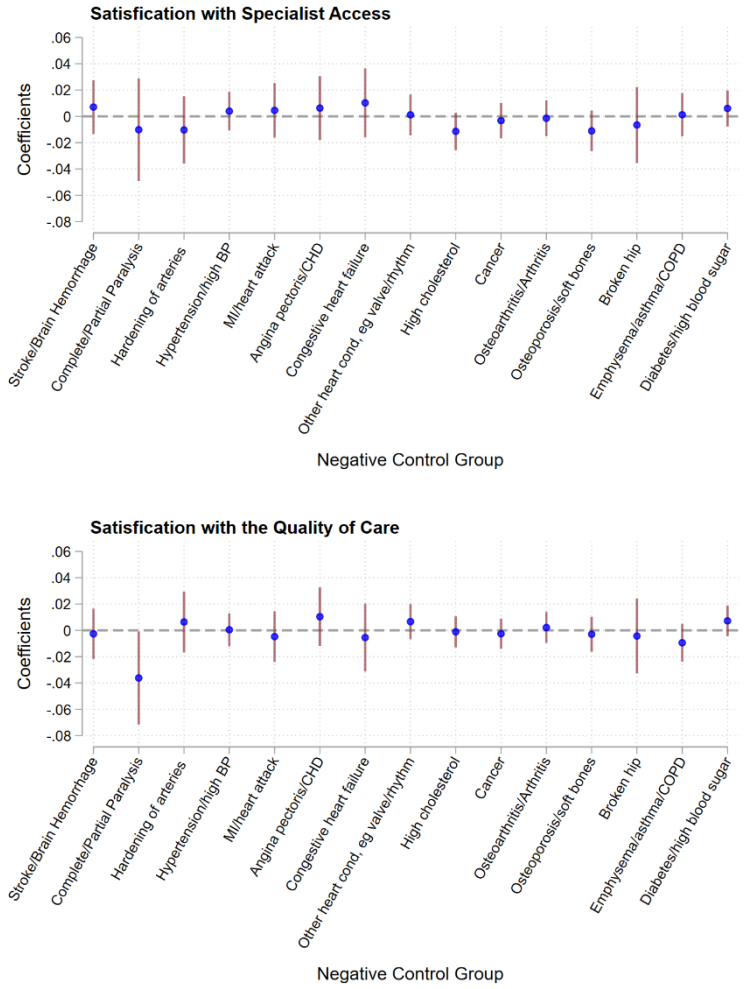


Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. MA ADRD beneficiaries with self-response in the survey are also removed. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with other conditions, including but not limited to stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 9. Placebo Tests Using Other Conditions as Negative Control Group

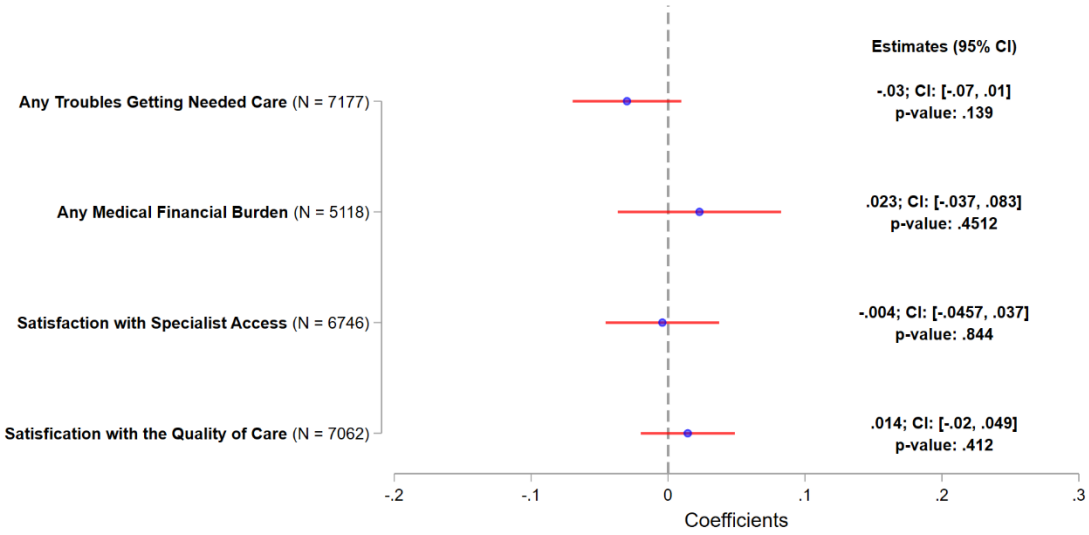


eFigure 9 (Cont.). Placebo Tests Using Other Conditions as Negative Control Group



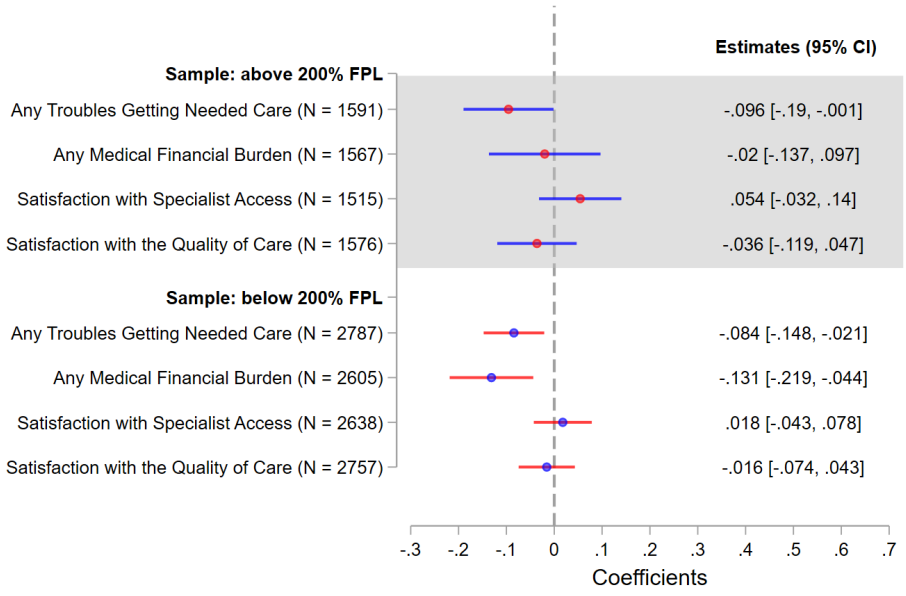
Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. The plotted estimates represent the coefficients for the interaction term between the negative control indicator (listed in the horizontal axis) and the post indicator from a DID estimation, with the dependent variable indicated in each panel title. In each DID estimation, the negative control group consists of non-ADRD MA beneficiaries with the disease specified in the x-axis, and the comparison group consists of non-ADRD MA beneficiaries without the disease specified in the x-axis. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 10. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences – Using Fee-For-Service (FFS) Beneficiaries

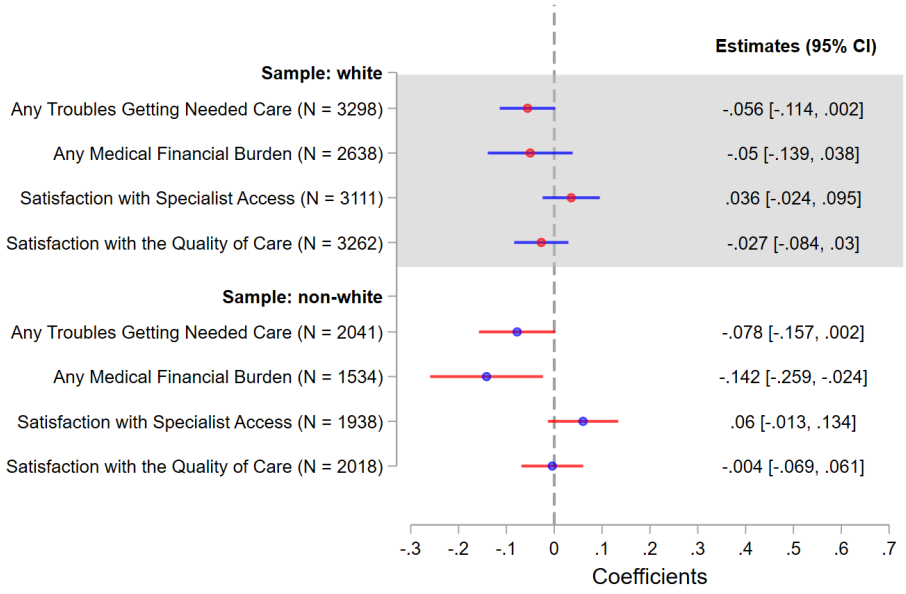


Notes: The working sample consists of TM beneficiaries from 2015-2022 MCBS. Veteran beneficiaries are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of FFS beneficiaries with ADRD, and the control group consists of FFS beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 11. Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences – Stratification Analysis

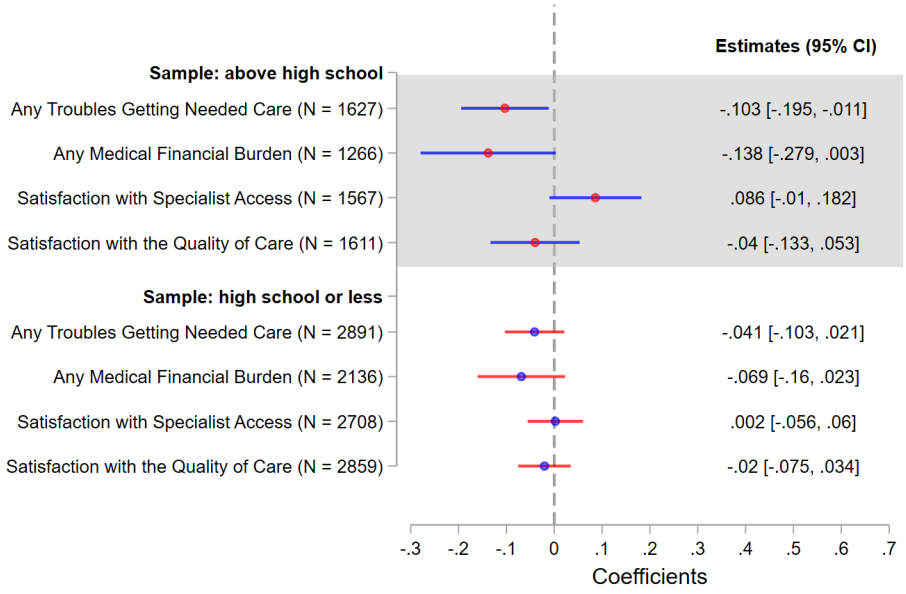


A. By Income Level

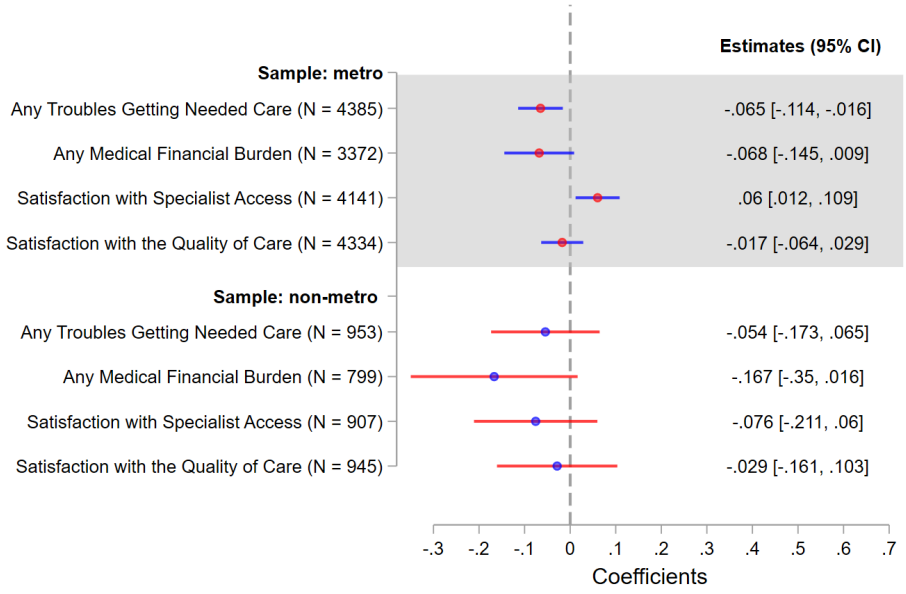


B. By Race/Ethnicity

eFigure 11. (Cont.) Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences – Stratification Analysis



C. By Education Level

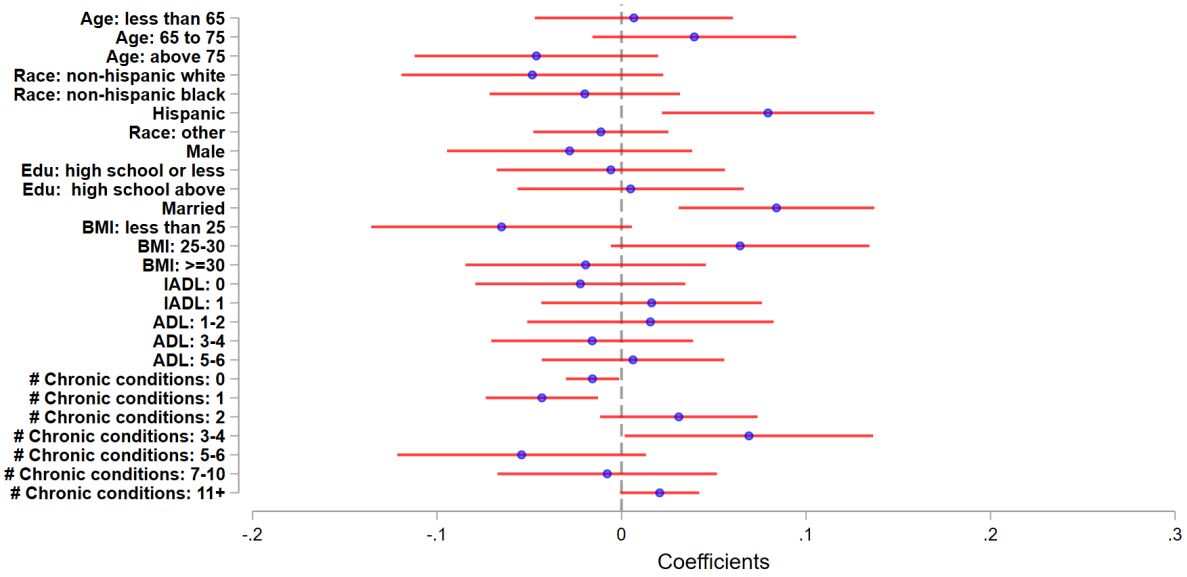


D. By Metropolitan Status

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage,

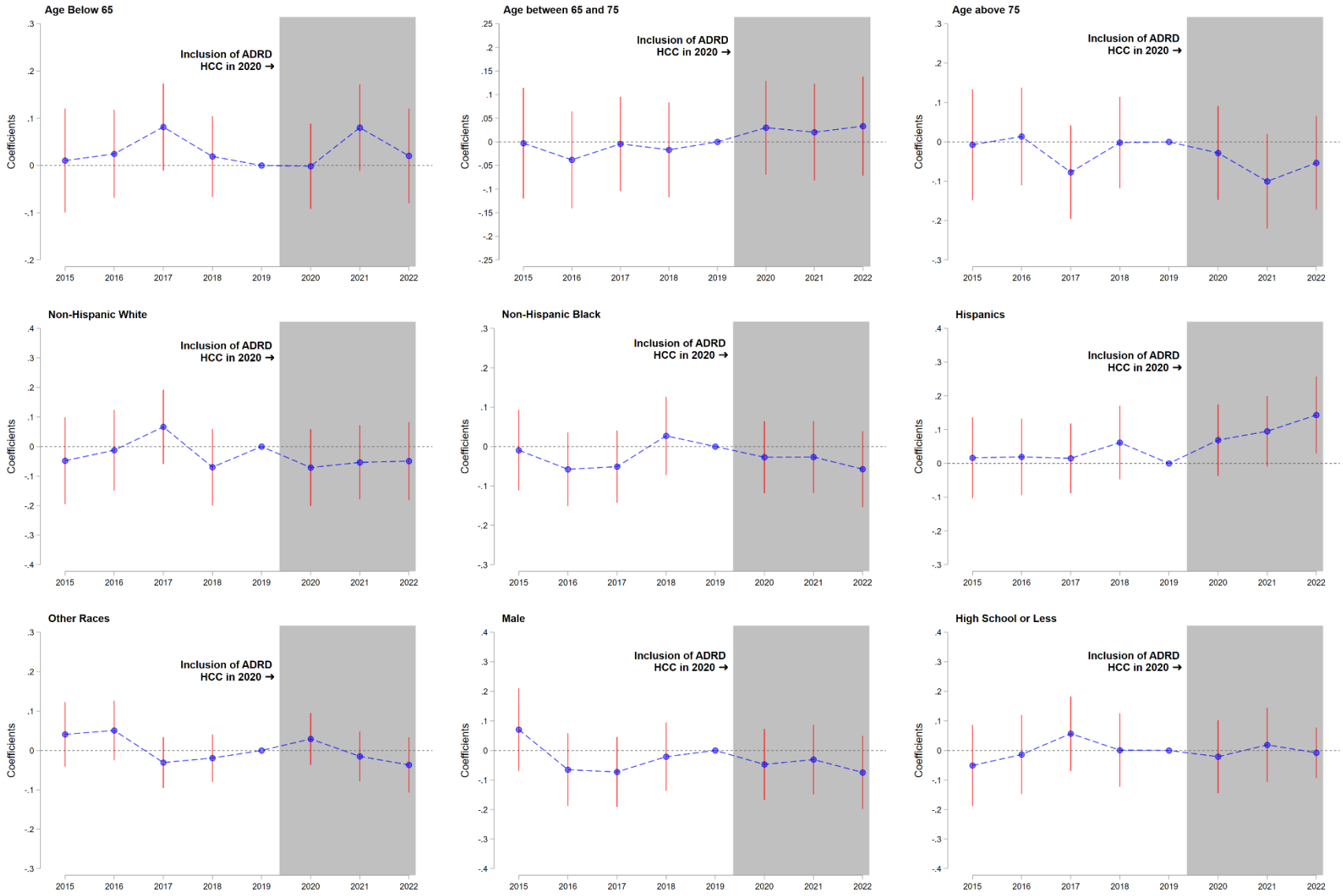
complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The associated 95% CIs are plotted. Robust standard errors are applied.

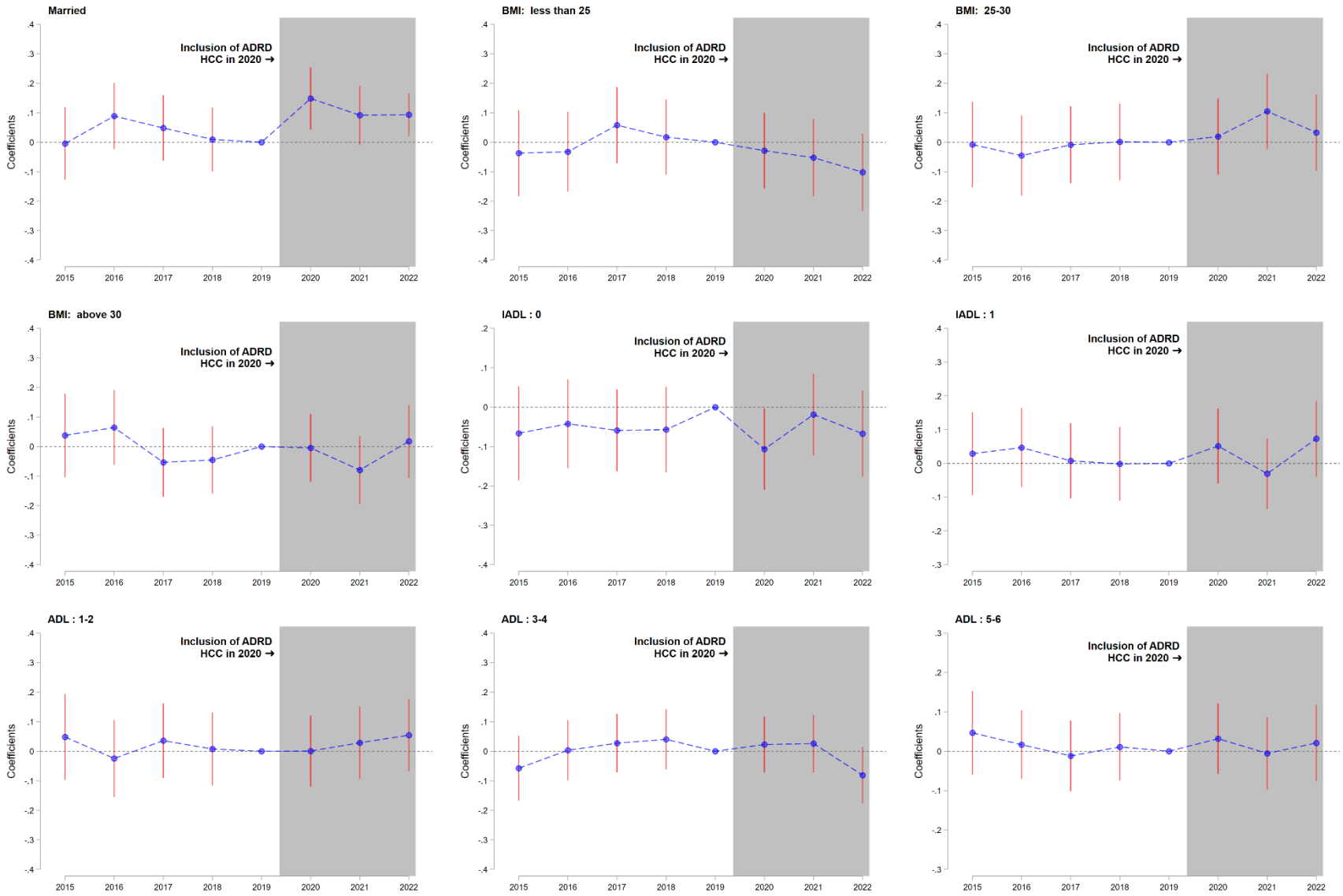
eFigure 12. Association between the Inclusion of ADRD HCCs in Payment Model and Beneficiaries' Characteristics – Test for Compositional Change

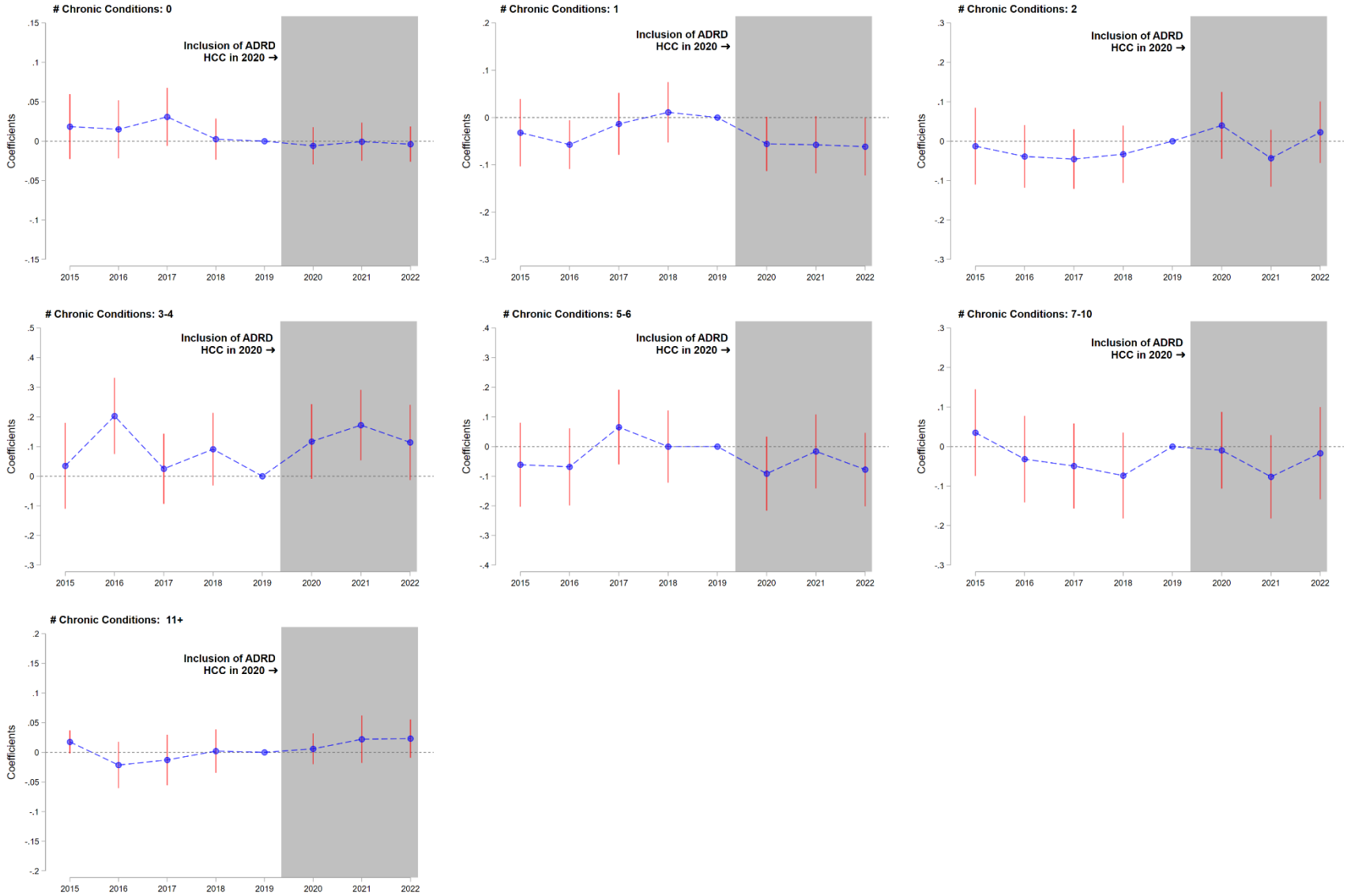


Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. The plotted estimates represent the coefficients for the interaction term between the treatment indicator and the post indicator from a DID estimation, with the dependent variable indicated on the y-axis. In each DID estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The post indicator takes the value of one if 2020 or afterwards, and zero otherwise. The number of chronic conditions excludes ADRD. The associated 95% CIs are plotted. Robust standard errors are applied.

eFigure 13. Dynamic Association between the Inclusion of ADRD HCCs in Payment Model and Beneficiaries' Characteristics – Test for Compositional Change




Married
BMI: less than 25
BMI: 25-30
BMI: above 30
IADL : 0
IADL : 1
ADL : 1-2
ADL : 3-4
ADL : 5-6
Inclusion of ADRD HCC in 2020 →
Coefficients
2015
2016
2017
2018
2019
2020
2021
2022



Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. Each figure presents results from an event study model, with the dependent variable specified above. The plotted estimates represent the coefficients for the interaction term between treated indicator and year indicators. In each estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD

but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The number of chronic conditions excludes ADRD. The associated 95% CIs are also plotted. Robust standard errors are applied.

eTable 1: Summary of Care Experiences by Treatment and Over Time

Year	Any Troubles Getting Needed Care		Any Medical Financial Burden		Satisfaction with Specialist Access		Satisfaction with Quality of Care	
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
Panel A: Control Group: MA beneficiaries with Stroke/Paralysis/PD and no ADRD								
2015	0.067	0.251	NA	NA	0.935	0.247	0.963	0.188
2016	0.085	0.279	NA	NA	0.943	0.232	0.940	0.238
2017	0.111	0.314	0.326	0.469	0.927	0.261	0.937	0.243
2018	0.099	0.298	0.286	0.452	0.926	0.262	0.931	0.254
2019	0.091	0.288	0.268	0.443	0.926	0.262	0.935	0.247
2020	0.125	0.332	0.229	0.420	0.937	0.244	0.909	0.288
2021	0.116	0.321	0.199	0.400	0.913	0.282	0.932	0.252
2022	0.125	0.331	0.225	0.418	0.919	0.274	0.920	0.272
Panel B: Treatment Group: MA beneficiaries with ADRD								
2015	0.073	0.261	NA	NA	0.903	0.297	0.948	0.223
2016	0.071	0.257	NA	NA	0.918	0.275	0.956	0.205
2017	0.105	0.307	0.227	0.420	0.909	0.289	0.928	0.259
2018	0.094	0.292	0.256	0.438	0.914	0.282	0.939	0.240
2019	0.109	0.312	0.249	0.433	0.889	0.314	0.941	0.236
2020	0.085	0.280	0.139	0.347	0.906	0.292	0.918	0.275
2021	0.064	0.245	0.120	0.326	0.913	0.283	0.926	0.262
2022	0.089	0.285	0.155	0.362	0.915	0.279	0.877	0.329

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded.

eTable 2. Summary of Care Experiences by Treatment and Year

	Treatment	Control
Panel A: Any Troubles Getting Needed Care		
Before 2020	0.093 (0.290)	0.093 (0.290)
2020 and post	0.08 (0.271)	0.122 (0.328)
Panel B: Any Medical Finance Burden		
Before 2020	0.244 (0.430)	0.291 (0.455)
2020 and post	0.138 (0.345)	0.217 (0.413)
Panel C: Satisfaction with Specialist Access		
Before 2020	0.906 (0.292)	0.931 (0.254)
2020 and post	0.911 (0.285)	0.922 (0.268)
Panel D: Satisfaction with Quality of Care		
Before 2020	0.942 (0.235)	0.939 (0.240)
2020 and post	0.907 (0.291)	0.92 (0.271)

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. The standard deviations are reported in parentheses

eTable 3. Dynamic Association between the Inclusion of ADRD HCCs in Payment Model and Care Experiences (Event Study)

variable	Coef.	Standard Error	P value	95% CI: lower	95% CI: upper
Outcome: Any Trouble Getting Needed Care (N = 5,339)					
ADRD × 2015	-0.0446	0.0448	0.3199	-0.1325	-0.0433
ADRD × 2016	-0.0156	0.0421	0.7100	-0.0981	0.0668
ADRD × 2017	0.0029	0.0460	0.9492	-0.0872	0.0930
ADRD × 2018	-0.0221	0.0438	0.6148	-0.1080	0.0639
ADRD × 2020	-0.0481	0.0411	0.2422	-0.1288	0.0325
ADRD × 2021	-0.0989	0.0421	0.0188	-0.1814	-0.0164
ADRD × 2022	-0.0909	0.0471	0.0536	-0.1833	0.0014
Outcome: Any Medical Financial Burden (N = 4,172)					
ADRD × 2017	-0.0639	0.0636	0.3148	-0.1886	0.0608
ADRD × 2018	0.0193	0.0624	0.7573	-0.1031	0.1417
ADRD × 2020	-0.0974	0.0584	0.0953	-0.2118	0.0171
ADRD × 2021	-0.1034	0.0565	0.0672	-0.2141	0.0073
ADRD × 2022	-0.1174	0.0609	0.0542	-0.2368	0.0021
Outcome: Satisfaction with Specialists Access (N = 5,049)					
ADRD × 2015	-0.0301	0.0482	0.5319	-0.1246	0.0644
ADRD × 2016	-0.0012	0.0446	0.9784	-0.0886	0.0862
ADRD × 2017	0.0094	0.0446	0.8323	-0.0780	0.0969
ADRD × 2018	0.0261	0.0411	0.5260	-0.0545	0.1067
ADRD × 2020	0.0119	0.0410	0.7711	-0.0684	0.0923
ADRD × 2021	0.0637	0.0419	0.1283	-0.0184	0.1459
ADRD × 2022	0.0526	0.0462	0.2548	-0.0380	0.1432
Outcome: Satisfaction with Quality of Care (N = 5,280)					
ADRD × 2015	-0.0346	0.0374	0.3554	-0.1079	0.0388
ADRD × 2016	-0.0039	0.0354	0.9123	-0.0734	0.0656
ADRD × 2017	-0.0281	0.0394	0.4766	-0.1053	0.0492
ADRD × 2018	-0.0014	0.0344	0.9678	-0.0687	0.0660
ADRD × 2020	-0.0351	0.0382	0.3587	-0.1100	0.0398
ADRD × 2021	-0.0295	0.0380	0.4368	-0.1040	0.0449
ADRD × 2022	-0.0103	0.0430	0.8102	-0.0946	0.0740

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veteran are excluded. In each estimation, the treatment group consists of MA beneficiaries with ADRD, and the control group consists of MA beneficiaries without ADRD but with stroke/brain hemorrhage, complete/partial paralysis, or Parkinson's diseases. The event study is specified in Appendix B.3. The year of 2019 is selected as the reference year. Robust standard errors are applied.

eTable 4. Summary Statistics: using All non-ADRD Conditions as Control Group

	(1) All			(2) ADRD			(3) All non-ADRD		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.079	0.269	31608	0.087	0.283	1624	0.078	0.268	29984
Any Medical Financial Burden	0.187	0.390	25289	0.193	0.395	1220	0.187	0.390	24069
Satisfaction with Access to Specialist	0.933	0.249	29617	0.908	0.289	1524	0.935	0.247	28093
Satisfaction with Quality of Care	0.951	0.217	31175	0.928	0.259	1611	0.952	0.214	29564
No ADRD	0.949	0.221	31663	0.000	0.000	1629	1.000	0.000	30034
ADRD	0.051	0.221	31663	1.000	0.000	1629	0.000	0.000	30034
Age Group <65	0.153	0.360	31663	0.069	0.254	1629	0.158	0.364	30034
Age Group 65 to 75	0.342	0.474	31663	0.138	0.344	1629	0.353	0.478	30034
Age Group 75+	0.505	0.500	31663	0.793	0.405	1629	0.490	0.500	30034
Non-Hispanic white	0.650	0.477	31663	0.565	0.496	1629	0.655	0.475	30034
Non-Hispanic black	0.128	0.335	31663	0.133	0.340	1629	0.128	0.334	30034
Hispanic	0.163	0.369	31663	0.242	0.428	1629	0.159	0.365	30034
Other	0.058	0.234	31663	0.060	0.238	1629	0.058	0.234	30034
Male	0.326	0.469	31663	0.272	0.445	1629	0.329	0.470	30034
Female	0.674	0.469	31663	0.728	0.445	1629	0.671	0.470	30034
Not Married	0.473	0.499	31663	0.548	0.498	1629	0.469	0.499	30034
Married	0.368	0.482	31663	0.320	0.467	1629	0.370	0.483	30034
Married: missing	0.159	0.366	31663	0.133	0.339	1629	0.161	0.367	30034
High school or less	0.483	0.500	31663	0.608	0.488	1629	0.477	0.499	30034
High School above	0.354	0.478	31663	0.246	0.431	1629	0.360	0.480	30034
Education missing	0.163	0.369	31663	0.145	0.353	1629	0.164	0.370	30034
Self-respondent	0.897	0.304	31663	0.390	0.488	1629	0.925	0.264	30034
Proxy respondent	0.103	0.304	31663	0.610	0.488	1629	0.075	0.264	30034
Household Size: 1	0.331	0.471	31663	0.229	0.420	1629	0.337	0.473	30034
Household Size: 2	0.452	0.498	31663	0.460	0.499	1629	0.452	0.498	30034
Household Size: 3+	0.216	0.412	31663	0.311	0.463	1629	0.211	0.408	30034
Underweight/healthy (<25)	0.305	0.460	31663	0.431	0.495	1629	0.298	0.457	30034
Overweight (25-30)	0.338	0.473	31663	0.292	0.455	1629	0.340	0.474	30034
Obese/high-risk obese (>=30)	0.330	0.470	31663	0.233	0.423	1629	0.336	0.472	30034
BMI missing	0.027	0.163	31663	0.045	0.207	1629	0.026	0.160	30034
IADLs or ADLs: 0	0.519	0.500	31663	0.130	0.337	1629	0.540	0.498	30034
IADLs: 1	0.157	0.364	31663	0.214	0.410	1629	0.154	0.361	30034
ADLs: 1-2	0.209	0.406	31663	0.252	0.434	1629	0.206	0.405	30034
ADLs: 3-4	0.074	0.261	31663	0.182	0.386	1629	0.068	0.252	30034
ADLs: 5-6	0.041	0.199	31663	0.223	0.416	1629	0.032	0.175	30034
Chronic Conditions (except ADRD): 0	0.001	0.035	31663	0.024	0.153	1629	0.000	0.000	30034
Chronic Conditions (except ADRD): 1	0.112	0.315	31663	0.076	0.265	1629	0.114	0.317	30034
Chronic Conditions (except ADRD): 2	0.173	0.378	31663	0.112	0.315	1629	0.176	0.381	30034

Chronic Conditions (except ADRD): 3-4	0.386	0.487	31663	0.319	0.466	1629	0.390	0.488	30034
Chronic Conditions (except ADRD): 5-6	0.221	0.415	31663	0.277	0.448	1629	0.218	0.413	30034
Chronic Conditions (except ADRD): 7-10	0.101	0.302	31663	0.172	0.378	1629	0.098	0.297	30034
Chronic Conditions (except ADRD): 11+	0.006	0.074	31663	0.019	0.137	1629	0.005	0.069	30034

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded.

eTable 5. Summary Statistics: Negative Control Group: Stroke/Brain Hemorrhage (non-ADRD), Comparison Group: non Stroke/Brain Hemorrhage (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	31608	0.092	0.290	3071	0.076	0.264	28537
Any Medical Financial Burden	0.184	0.387	25321	0.242	0.428	2472	0.177	0.382	22849
Satisfaction with Access to Specialist	0.935	0.247	29416	0.931	0.253	2915	0.935	0.246	26501
Satisfaction with Quality of Care	0.952	0.214	31022	0.933	0.250	3040	0.954	0.209	27982
Comparison	0.903	0.296	31657	0.000	0.000	3080	1.000	0.000	28577
Negative Control	0.097	0.296	31657	1.000	0.000	3080	0.000	0.000	28577
Age Group <65	0.169	0.374	31657	0.193	0.394	3080	0.166	0.372	28577
Age Group 65 to 75	0.352	0.478	31657	0.276	0.447	3080	0.360	0.480	28577
Age Group 75+	0.480	0.500	31657	0.532	0.499	3080	0.474	0.499	28577
Non-Hispanic white	0.655	0.475	31657	0.636	0.481	3080	0.657	0.475	28577
Non-Hispanic black	0.129	0.335	31657	0.182	0.386	3080	0.123	0.329	28577
Hispanic	0.158	0.365	31657	0.121	0.327	3080	0.162	0.368	28577
Other	0.058	0.234	31657	0.060	0.238	3080	0.058	0.234	28577
Male	0.334	0.472	31657	0.344	0.475	3080	0.333	0.471	28577
Female	0.666	0.472	31657	0.656	0.475	3080	0.667	0.471	28577
Not Married	0.473	0.499	31657	0.507	0.500	3080	0.469	0.499	28577
Married	0.367	0.482	31657	0.342	0.474	3080	0.370	0.483	28577
Married: missing	0.160	0.367	31657	0.151	0.358	3080	0.161	0.368	28577
High school or less	0.477	0.499	31657	0.538	0.499	3080	0.470	0.499	28577
High School above	0.360	0.480	31657	0.304	0.460	3080	0.366	0.482	28577
Education missing	0.163	0.370	31657	0.158	0.365	3080	0.164	0.370	28577
Self-respondent	0.920	0.271	31657	0.878	0.327	3080	0.925	0.264	28577
Proxy respondent	0.080	0.271	31657	0.122	0.327	3080	0.075	0.264	28577
Household Size: 1	0.335	0.472	31657	0.351	0.477	3080	0.333	0.471	28577
Household Size: 2	0.450	0.498	31657	0.426	0.495	3080	0.453	0.498	28577
Household Size: 3+	0.215	0.411	31657	0.223	0.417	3080	0.214	0.410	28577
Underweight/healthy (<25)	0.304	0.460	31657	0.300	0.458	3080	0.304	0.460	28577
Overweight (25-30)	0.340	0.474	31657	0.361	0.480	3080	0.337	0.473	28577
Obese/high-risk obese (>=30)	0.329	0.470	31657	0.314	0.464	3080	0.331	0.471	28577
BMI missing	0.027	0.162	31657	0.025	0.156	3080	0.027	0.163	28577
IADLs or ADLs: 0	0.547	0.498	31657	0.356	0.479	3080	0.568	0.495	28577
IADLs: 1	0.155	0.362	31657	0.160	0.367	3080	0.155	0.362	28577
ADLs: 1-2	0.201	0.401	31657	0.297	0.457	3080	0.191	0.393	28577
ADLs: 3-4	0.066	0.248	31657	0.118	0.322	3080	0.060	0.238	28577
ADLs: 5-6	0.031	0.173	31657	0.070	0.255	3080	0.027	0.162	28577
Chronic Conditions (except ADRD): 0	0.052	0.222	31657	0.000	0.000	3080	0.058	0.233	28577

Chronic Conditions (except ADRD): 1	0.108	0.310	31657	0.014	0.119	3080	0.118	0.322	28577
Chronic Conditions (except ADRD): 2	0.167	0.373	31657	0.050	0.219	3080	0.179	0.384	28577
Chronic Conditions (except ADRD): 3-4	0.370	0.483	31657	0.287	0.453	3080	0.379	0.485	28577
Chronic Conditions (except ADRD): 5-6	0.207	0.405	31657	0.351	0.477	3080	0.191	0.393	28577
Chronic Conditions (except ADRD): 7-10	0.093	0.290	31657	0.271	0.445	3080	0.073	0.261	28577
Chronic Conditions (except ADRD): 11+	0.005	0.068	31657	0.026	0.160	3080	0.002	0.047	28577

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 6. Summary Statistics: Negative Control Group: Complete/Partial Paralysis (non-ADRD), Comparison Group: non Complete/Partial Paralysis (non ADRD)

	(1)			(2)			(3)		
	Negative Control + Comparison			Negative Control			Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	31589	0.158	0.365	1037	0.074	0.263	30552
Any Medical Financial Burden	0.184	0.387	25309	0.298	0.458	826	0.180	0.384	24483
Satisfaction with Access to Specialist	0.935	0.247	29399	0.897	0.304	980	0.936	0.245	28419
Satisfaction with Quality of Care	0.952	0.214	31004	0.917	0.277	1018	0.953	0.211	29986
Comparison	0.967	0.178	31638	0.000	0.000	1041	1.000	0.000	30597
Negative Control	0.033	0.178	31638	1.000	0.000	1041	0.000	0.000	30597
Age Group <65	0.168	0.374	31638	0.419	0.494	1041	0.160	0.367	30597
Age Group 65 to 75	0.352	0.478	31638	0.269	0.444	1041	0.355	0.478	30597
Age Group 75+	0.480	0.500	31638	0.312	0.464	1041	0.485	0.500	30597
Non-Hispanic white	0.655	0.475	31638	0.652	0.476	1041	0.655	0.475	30597
Non-Hispanic black	0.129	0.335	31638	0.112	0.316	1041	0.130	0.336	30597
Hispanic	0.158	0.365	31638	0.183	0.386	1041	0.157	0.364	30597
Other	0.058	0.234	31638	0.053	0.224	1041	0.058	0.235	30597
Male	0.334	0.472	31638	0.404	0.491	1041	0.332	0.471	30597
Female	0.666	0.472	31638	0.596	0.491	1041	0.668	0.471	30597
Not Married	0.473	0.499	31638	0.533	0.499	1041	0.471	0.499	30597
Married	0.367	0.482	31638	0.308	0.462	1041	0.369	0.483	30597
Married: missing	0.160	0.367	31638	0.159	0.365	1041	0.160	0.367	30597
High school or less	0.477	0.499	31638	0.414	0.493	1041	0.479	0.500	30597
High School above	0.360	0.480	31638	0.425	0.495	1041	0.358	0.479	30597
Education missing	0.163	0.370	31638	0.161	0.368	1041	0.163	0.370	30597
Self-respondent	0.920	0.271	31638	0.886	0.318	1041	0.922	0.269	30597
Proxy respondent	0.080	0.271	31638	0.114	0.318	1041	0.078	0.269	30597
Household Size: 1	0.335	0.472	31638	0.330	0.471	1041	0.335	0.472	30597
Household Size: 2	0.450	0.498	31638	0.378	0.485	1041	0.453	0.498	30597
Household Size: 3+	0.215	0.411	31638	0.292	0.455	1041	0.212	0.409	30597
Underweight/healthy (<25)	0.304	0.460	31638	0.286	0.452	1041	0.304	0.460	30597
Overweight (25-30)	0.340	0.474	31638	0.287	0.453	1041	0.341	0.474	30597
Obese/high-risk obese (>=30)	0.329	0.470	31638	0.403	0.491	1041	0.327	0.469	30597
BMI missing	0.027	0.163	31638	0.023	0.150	1041	0.027	0.163	30597
IADLs or ADLs: 0	0.547	0.498	31638	0.224	0.417	1041	0.558	0.497	30597
IADLs: 1	0.155	0.362	31638	0.137	0.344	1041	0.156	0.363	30597
ADLs: 1-2	0.201	0.401	31638	0.284	0.451	1041	0.198	0.399	30597
ADLs: 3-4	0.066	0.248	31638	0.197	0.398	1041	0.061	0.240	30597
ADLs: 5-6	0.031	0.173	31638	0.158	0.364	1041	0.027	0.161	30597
Chronic Conditions (except ADRD): 0	0.052	0.222	31638	0.000	0.000	1041	0.054	0.226	30597
Chronic Conditions (except ADRD): 1	0.108	0.310	31638	0.037	0.188	1041	0.110	0.313	30597

Chronic Conditions (except ADRD): 2	0.167	0.373	31638	0.086	0.281	1041	0.170	0.375	30597
Chronic Conditions (except ADRD): 3-4	0.370	0.483	31638	0.271	0.445	1041	0.373	0.484	30597
Chronic Conditions (except ADRD): 5-6	0.207	0.405	31638	0.327	0.469	1041	0.202	0.402	30597
Chronic Conditions (except ADRD): 7-10	0.092	0.290	31638	0.250	0.433	1041	0.087	0.282	30597
Chronic Conditions (except ADRD): 11+	0.005	0.068	31638	0.030	0.170	1041	0.004	0.061	30597

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 7. Summary Statistics: Negative Control Group: Hardening of arteries (non-ADRD), Comparison Group: non Hardening of arteries (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	31465	0.085	0.279	2089	0.076	0.266	29376
Any Medical Financial Burden	0.183	0.387	25216	0.225	0.418	1645	0.180	0.385	23571
Satisfaction with Access to Specialist	0.935	0.247	29288	0.931	0.253	2019	0.935	0.246	27269
Satisfaction with Quality of Care	0.952	0.214	30884	0.937	0.243	2076	0.953	0.212	28808
Comparison	0.933	0.249	31514	0.000	0.000	2096	1.000	0.000	29418
Negative Control	0.067	0.249	31514	1.000	0.000	2096	0.000	0.000	29418
Age Group <65	0.168	0.374	31514	0.106	0.308	2096	0.173	0.378	29418
Age Group 65 to 75	0.352	0.478	31514	0.312	0.464	2096	0.355	0.479	29418
Age Group 75+	0.479	0.500	31514	0.582	0.493	2096	0.472	0.499	29418
Non-Hispanic white	0.656	0.475	31514	0.669	0.471	2096	0.655	0.475	29418
Non-Hispanic black	0.129	0.335	31514	0.081	0.272	2096	0.132	0.339	29418
Hispanic	0.158	0.364	31514	0.183	0.387	2096	0.156	0.363	29418
Other	0.058	0.233	31514	0.067	0.251	2096	0.057	0.232	29418
Male	0.334	0.472	31514	0.415	0.493	2096	0.328	0.470	29418
Female	0.666	0.472	31514	0.585	0.493	2096	0.672	0.470	29418
Not Married	0.473	0.499	31514	0.469	0.499	2096	0.473	0.499	29418
Married	0.367	0.482	31514	0.386	0.487	2096	0.366	0.482	29418
Married: missing	0.160	0.367	31514	0.145	0.352	2096	0.161	0.368	29418
High school or less	0.477	0.499	31514	0.439	0.496	2096	0.479	0.500	29418
High School above	0.360	0.480	31514	0.415	0.493	2096	0.356	0.479	29418
Education missing	0.163	0.369	31514	0.146	0.354	2096	0.164	0.370	29418
Self-respondent	0.921	0.270	31514	0.912	0.283	2096	0.921	0.269	29418
Proxy respondent	0.079	0.270	31514	0.088	0.283	2096	0.079	0.269	29418
Household Size: 1	0.335	0.472	31514	0.317	0.466	2096	0.336	0.472	29418
Household Size: 2	0.450	0.498	31514	0.462	0.499	2096	0.450	0.497	29418
Household Size: 3+	0.215	0.411	31514	0.221	0.415	2096	0.214	0.410	29418
Underweight/healthy (<25)	0.304	0.460	31514	0.306	0.461	2096	0.304	0.460	29418
Overweight (25-30)	0.340	0.474	31514	0.375	0.484	2096	0.337	0.473	29418
Obese/high-risk obese (>=30)	0.330	0.470	31514	0.301	0.459	2096	0.332	0.471	29418
BMI missing	0.027	0.162	31514	0.018	0.133	2096	0.028	0.164	29418
IADLs or ADLs: 0	0.548	0.498	31514	0.433	0.496	2096	0.556	0.497	29418
IADLs: 1	0.155	0.362	31514	0.162	0.368	2096	0.155	0.362	29418
ADLs: 1-2	0.201	0.400	31514	0.260	0.438	2096	0.196	0.397	29418
ADLs: 3-4	0.065	0.247	31514	0.098	0.298	2096	0.063	0.243	29418
ADLs: 5-6	0.031	0.173	31514	0.048	0.213	2096	0.030	0.169	29418
Chronic Conditions (except ADRD): 0	0.052	0.222	31514	0.000	0.000	2096	0.056	0.230	29418
Chronic Conditions (except ADRD): 1	0.108	0.310	31514	0.004	0.062	2096	0.115	0.320	29418

Chronic Conditions (except ADRD): 2	0.167	0.373	31514	0.017	0.130	2096	0.178	0.382	29418
Chronic Conditions (except ADRD): 3-4	0.370	0.483	31514	0.145	0.352	2096	0.386	0.487	29418
Chronic Conditions (except ADRD): 5-6	0.206	0.405	31514	0.331	0.471	2096	0.197	0.398	29418
Chronic Conditions (except ADRD): 7-10	0.092	0.289	31514	0.452	0.498	2096	0.067	0.249	29418
Chronic Conditions (except ADRD): 11+	0.005	0.067	31514	0.051	0.219	2096	0.001	0.035	29418

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 8. Summary Statistics: Negative Control Group: Hypertension/high BP (non-ADRD), Comparison Group: non Hypertension/high BP (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	31422	0.074	0.263	20751	0.082	0.274	10671
Any Medical Financial Burden	0.183	0.387	25184	0.191	0.393	16576	0.169	0.374	8608
Satisfaction with Access to Specialist	0.935	0.247	29250	0.938	0.242	19567	0.929	0.256	9683
Satisfaction with Quality of Care	0.952	0.214	30843	0.954	0.209	20548	0.948	0.223	10295
Comparison	0.340	0.474	31471	0.000	0.000	20786	1.000	0.000	10685
Negative Control	0.660	0.474	31471	1.000	0.000	20786	0.000	0.000	10685
Age Group <65	0.168	0.374	31471	0.139	0.346	20786	0.225	0.417	10685
Age Group 65 to 75	0.353	0.478	31471	0.338	0.473	20786	0.380	0.485	10685
Age Group 75+	0.479	0.500	31471	0.522	0.500	20786	0.395	0.489	10685
Non-Hispanic white	0.656	0.475	31471	0.620	0.486	20786	0.726	0.446	10685
Non-Hispanic black	0.129	0.335	31471	0.154	0.361	20786	0.079	0.269	10685
Hispanic	0.158	0.364	31471	0.167	0.373	20786	0.140	0.347	10685
Other	0.058	0.233	31471	0.059	0.236	20786	0.055	0.229	10685
Male	0.334	0.472	31471	0.328	0.469	20786	0.346	0.476	10685
Female	0.666	0.472	31471	0.672	0.469	20786	0.654	0.476	10685
Not Married	0.473	0.499	31471	0.485	0.500	20786	0.449	0.497	10685
Married	0.367	0.482	31471	0.357	0.479	20786	0.386	0.487	10685
Married: missing	0.160	0.367	31471	0.158	0.364	20786	0.165	0.371	10685
High school or less	0.476	0.499	31471	0.504	0.500	20786	0.423	0.494	10685
High School above	0.361	0.480	31471	0.336	0.472	20786	0.409	0.492	10685
Education missing	0.163	0.369	31471	0.161	0.367	20786	0.168	0.374	10685
Self-respondent	0.921	0.270	31471	0.923	0.266	20786	0.915	0.279	10685
Proxy respondent	0.079	0.270	31471	0.077	0.266	20786	0.085	0.279	10685
Household Size: 1	0.335	0.472	31471	0.347	0.476	20786	0.310	0.463	10685
Household Size: 2	0.450	0.498	31471	0.438	0.496	20786	0.475	0.499	10685
Household Size: 3+	0.215	0.411	31471	0.215	0.411	20786	0.214	0.410	10685
Underweight/healthy (<25)	0.304	0.460	31471	0.255	0.436	20786	0.400	0.490	10685
Overweight (25-30)	0.340	0.474	31471	0.341	0.474	20786	0.337	0.473	10685
Obese/high-risk obese (>=30)	0.330	0.470	31471	0.378	0.485	20786	0.235	0.424	10685
BMI missing	0.027	0.162	31471	0.027	0.161	20786	0.028	0.164	10685
IADLs or ADLs: 0	0.548	0.498	31471	0.514	0.500	20786	0.616	0.486	10685
IADLs: 1	0.155	0.362	31471	0.155	0.362	20786	0.156	0.363	10685
ADLs: 1-2	0.201	0.400	31471	0.224	0.417	20786	0.154	0.361	10685
ADLs: 3-4	0.065	0.247	31471	0.074	0.261	20786	0.049	0.215	10685
ADLs: 5-6	0.031	0.173	31471	0.034	0.180	20786	0.025	0.156	10685
Chronic Conditions (except ADRD): 0	0.052	0.222	31471	0.000	0.000	20786	0.154	0.361	10685
Chronic Conditions (except ADRD): 1	0.108	0.310	31471	0.041	0.198	20786	0.238	0.426	10685

Chronic Conditions (except ADRD): 2	0.167	0.373	31471	0.133	0.340	20786	0.232	0.422	10685
Chronic Conditions (except ADRD): 3-4	0.370	0.483	31471	0.419	0.493	20786	0.274	0.446	10685
Chronic Conditions (except ADRD): 5-6	0.206	0.405	31471	0.269	0.444	20786	0.084	0.277	10685
Chronic Conditions (except ADRD): 7-10	0.092	0.290	31471	0.131	0.337	20786	0.018	0.131	10685
Chronic Conditions (except ADRD): 11+	0.005	0.067	31471	0.007	0.082	20786	0.000	0.017	10685

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 9. Summary Statistics: Negative Control Group: MI/heart attack (non-ADRD), Comparison Group: non MI/heart attack (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.266	31387	0.080	0.272	2989	0.077	0.266	28398
Any Medical Financial Burden	0.183	0.387	25156	0.260	0.439	2350	0.175	0.380	22806
Satisfaction with Access to Specialist	0.935	0.247	29216	0.941	0.235	2887	0.934	0.248	26329
Satisfaction with Quality of Care	0.952	0.214	30810	0.941	0.235	2966	0.953	0.211	27844
Comparison	0.905	0.294	31436	0.000	0.000	2998	1.000	0.000	28438
Negative Control	0.095	0.294	31436	1.000	0.000	2998	0.000	0.000	28438
Age Group <65	0.168	0.374	31436	0.142	0.349	2998	0.171	0.377	28438
Age Group 65 to 75	0.353	0.478	31436	0.296	0.457	2998	0.358	0.480	28438
Age Group 75+	0.479	0.500	31436	0.562	0.496	2998	0.470	0.499	28438
Non-Hispanic white	0.656	0.475	31436	0.653	0.476	2998	0.656	0.475	28438
Non-Hispanic black	0.129	0.335	31436	0.121	0.326	2998	0.130	0.336	28438
Hispanic	0.158	0.364	31436	0.174	0.379	2998	0.156	0.363	28438
Other	0.058	0.233	31436	0.052	0.223	2998	0.058	0.234	28438
Male	0.334	0.472	31436	0.469	0.499	2998	0.320	0.466	28438
Female	0.666	0.472	31436	0.531	0.499	2998	0.680	0.466	28438
Not Married	0.473	0.499	31436	0.473	0.499	2998	0.473	0.499	28438
Married	0.367	0.482	31436	0.385	0.487	2998	0.365	0.482	28438
Married: missing	0.160	0.367	31436	0.142	0.350	2998	0.162	0.368	28438
High school or less	0.476	0.499	31436	0.548	0.498	2998	0.469	0.499	28438
High School above	0.361	0.480	31436	0.309	0.462	2998	0.366	0.482	28438
Education missing	0.163	0.369	31436	0.144	0.351	2998	0.165	0.371	28438
Self-respondent	0.921	0.270	31436	0.900	0.300	2998	0.923	0.267	28438
Proxy respondent	0.079	0.270	31436	0.100	0.300	2998	0.077	0.267	28438
Household Size: 1	0.335	0.472	31436	0.321	0.467	2998	0.336	0.472	28438
Household Size: 2	0.450	0.498	31436	0.434	0.496	2998	0.452	0.498	28438
Household Size: 3+	0.215	0.411	31436	0.245	0.430	2998	0.212	0.408	28438
Underweight/healthy (<25)	0.304	0.460	31436	0.279	0.448	2998	0.307	0.461	28438
Overweight (25-30)	0.340	0.474	31436	0.355	0.479	2998	0.338	0.473	28438
Obese/high-risk obese (>=30)	0.329	0.470	31436	0.341	0.474	2998	0.328	0.470	28438
BMI missing	0.027	0.162	31436	0.026	0.159	2998	0.027	0.162	28438
IADLs or ADLs: 0	0.549	0.498	31436	0.441	0.497	2998	0.560	0.496	28438
IADLs: 1	0.155	0.362	31436	0.152	0.359	2998	0.155	0.362	28438
ADLs: 1-2	0.200	0.400	31436	0.257	0.437	2998	0.194	0.396	28438
ADLs: 3-4	0.065	0.247	31436	0.100	0.301	2998	0.062	0.240	28438
ADLs: 5-6	0.031	0.172	31436	0.049	0.217	2998	0.029	0.167	28438
Chronic Conditions (except ADRD): 0	0.052	0.222	31436	0.000	0.000	2998	0.058	0.233	28438
Chronic Conditions (except ADRD): 1	0.108	0.310	31436	0.009	0.093	2998	0.118	0.323	28438

Chronic Conditions (except ADRD): 2	0.167	0.373	31436	0.029	0.167	2998	0.182	0.385	28438
Chronic Conditions (except ADRD): 3-4	0.370	0.483	31436	0.201	0.401	2998	0.388	0.487	28438
Chronic Conditions (except ADRD): 5-6	0.206	0.405	31436	0.346	0.476	2998	0.191	0.393	28438
Chronic Conditions (except ADRD): 7-10	0.092	0.289	31436	0.383	0.486	2998	0.062	0.241	28438
Chronic Conditions (except ADRD): 11+	0.005	0.067	31436	0.033	0.179	2998	0.002	0.039	28438

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 10. Summary Statistics: Negative Control Group: Angina pectoris/CHD (non-ADRD), Comparison Group: non Angina pectoris/CHD (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.266	31254	0.083	0.276	2406	0.076	0.266	28848
Any Medical Financial Burden	0.183	0.386	25047	0.277	0.447	1894	0.175	0.380	23153
Satisfaction with Access to Specialist	0.935	0.247	29088	0.930	0.256	2351	0.935	0.246	26737
Satisfaction with Quality of Care	0.952	0.214	30678	0.940	0.237	2394	0.953	0.212	28284
Comparison	0.923	0.267	31302	0.000	0.000	2411	1.000	0.000	28891
Negative Control	0.077	0.267	31302	1.000	0.000	2411	0.000	0.000	28891
Age Group <65	0.168	0.374	31302	0.133	0.340	2411	0.171	0.377	28891
Age Group 65 to 75	0.353	0.478	31302	0.325	0.468	2411	0.355	0.479	28891
Age Group 75+	0.478	0.500	31302	0.542	0.498	2411	0.473	0.499	28891
Non-Hispanic white	0.656	0.475	31302	0.689	0.463	2411	0.653	0.476	28891
Non-Hispanic black	0.129	0.335	31302	0.105	0.307	2411	0.131	0.337	28891
Hispanic	0.158	0.365	31302	0.152	0.359	2411	0.158	0.365	28891
Other	0.058	0.233	31302	0.053	0.224	2411	0.058	0.234	28891
Male	0.334	0.472	31302	0.450	0.498	2411	0.324	0.468	28891
Female	0.666	0.472	31302	0.550	0.498	2411	0.676	0.468	28891
Not Married	0.473	0.499	31302	0.470	0.499	2411	0.473	0.499	28891
Married	0.367	0.482	31302	0.389	0.488	2411	0.365	0.482	28891
Married: missing	0.160	0.366	31302	0.141	0.348	2411	0.161	0.368	28891
High school or less	0.476	0.499	31302	0.491	0.500	2411	0.475	0.499	28891
High School above	0.361	0.480	31302	0.367	0.482	2411	0.361	0.480	28891
Education missing	0.163	0.369	31302	0.142	0.349	2411	0.165	0.371	28891
Self-respondent	0.921	0.270	31302	0.916	0.277	2411	0.921	0.270	28891
Proxy respondent	0.079	0.270	31302	0.084	0.277	2411	0.079	0.270	28891
Household Size: 1	0.335	0.472	31302	0.312	0.464	2411	0.337	0.473	28891
Household Size: 2	0.450	0.498	31302	0.474	0.499	2411	0.448	0.497	28891
Household Size: 3+	0.215	0.411	31302	0.214	0.410	2411	0.215	0.411	28891
Underweight/healthy (<25)	0.304	0.460	31302	0.233	0.423	2411	0.310	0.463	28891
Overweight (25-30)	0.340	0.474	31302	0.379	0.485	2411	0.336	0.472	28891
Obese/high-risk obese (>=30)	0.329	0.470	31302	0.369	0.483	2411	0.326	0.469	28891
BMI missing	0.027	0.162	31302	0.019	0.137	2411	0.028	0.164	28891
IADLs or ADLs: 0	0.550	0.498	31302	0.415	0.493	2411	0.561	0.496	28891
IADLs: 1	0.155	0.362	31302	0.173	0.379	2411	0.153	0.360	28891
ADLs: 1-2	0.200	0.400	31302	0.259	0.438	2411	0.195	0.396	28891
ADLs: 3-4	0.065	0.246	31302	0.100	0.301	2411	0.062	0.241	28891
ADLs: 5-6	0.031	0.172	31302	0.052	0.223	2411	0.029	0.167	28891
Chronic Conditions (except ADRD): 0	0.052	0.223	31302	0.000	0.000	2411	0.057	0.231	28891
Chronic Conditions (except ADRD): 1	0.108	0.311	31302	0.001	0.029	2411	0.117	0.322	28891

Chronic Conditions (except ADRD): 2	0.167	0.373	31302	0.011	0.103	2411	0.180	0.384	28891
Chronic Conditions (except ADRD): 3-4	0.370	0.483	31302	0.139	0.346	2411	0.389	0.488	28891
Chronic Conditions (except ADRD): 5-6	0.205	0.404	31302	0.339	0.473	2411	0.194	0.396	28891
Chronic Conditions (except ADRD): 7-10	0.092	0.289	31302	0.460	0.499	2411	0.061	0.240	28891
Chronic Conditions (except ADRD): 11+	0.005	0.067	31302	0.050	0.218	2411	0.001	0.027	28891

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 11. Summary Statistics: Negative Control Group: Congestive heart failure (non-ADRD), Comparison Group: non Congestive heart failure (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.266	31205	0.094	0.292	1934	0.076	0.265	29271
Any Medical Financial Burden	0.182	0.386	25014	0.305	0.460	1550	0.174	0.379	23464
Satisfaction with Access to Specialist	0.935	0.247	29039	0.928	0.258	1886	0.935	0.246	27153
Satisfaction with Quality of Care	0.952	0.214	30629	0.926	0.262	1923	0.954	0.210	28706
Comparison	0.938	0.241	31253	0.000	0.000	1941	1.000	0.000	29312
Negative Control	0.062	0.241	31253	1.000	0.000	1941	0.000	0.000	29312
Age Group <65	0.169	0.375	31253	0.190	0.392	1941	0.167	0.373	29312
Age Group 65 to 75	0.353	0.478	31253	0.251	0.434	1941	0.360	0.480	29312
Age Group 75+	0.478	0.500	31253	0.559	0.497	1941	0.473	0.499	29312
Non-Hispanic white	0.656	0.475	31253	0.639	0.480	1941	0.657	0.475	29312
Non-Hispanic black	0.129	0.335	31253	0.185	0.389	1941	0.125	0.331	29312
Hispanic	0.158	0.364	31253	0.123	0.329	1941	0.160	0.367	29312
Other	0.058	0.233	31253	0.052	0.222	1941	0.058	0.234	29312
Male	0.334	0.472	31253	0.351	0.478	1941	0.333	0.471	29312
Female	0.666	0.472	31253	0.649	0.478	1941	0.667	0.471	29312
Not Married	0.473	0.499	31253	0.545	0.498	1941	0.468	0.499	29312
Married	0.367	0.482	31253	0.302	0.459	1941	0.372	0.483	29312
Married: missing	0.160	0.367	31253	0.153	0.360	1941	0.160	0.367	29312
High school or less	0.476	0.499	31253	0.546	0.498	1941	0.471	0.499	29312
High School above	0.361	0.480	31253	0.300	0.458	1941	0.365	0.482	29312
Education missing	0.163	0.369	31253	0.155	0.362	1941	0.164	0.370	29312
Self-respondent	0.921	0.270	31253	0.887	0.316	1941	0.923	0.267	29312
Proxy respondent	0.079	0.270	31253	0.113	0.316	1941	0.077	0.267	29312
Household Size: 1	0.334	0.472	31253	0.388	0.487	1941	0.331	0.471	29312
Household Size: 2	0.450	0.498	31253	0.380	0.485	1941	0.455	0.498	29312
Household Size: 3+	0.215	0.411	31253	0.232	0.422	1941	0.214	0.410	29312
Underweight/healthy (<25)	0.304	0.460	31253	0.230	0.421	1941	0.309	0.462	29312
Overweight (25-30)	0.340	0.474	31253	0.308	0.462	1941	0.342	0.474	29312
Obese/high-risk obese (>=30)	0.329	0.470	31253	0.439	0.496	1941	0.322	0.467	29312
BMI missing	0.027	0.162	31253	0.022	0.147	1941	0.027	0.163	29312
IADLs or ADLs: 0	0.550	0.497	31253	0.303	0.460	1941	0.567	0.496	29312
IADLs: 1	0.155	0.362	31253	0.174	0.379	1941	0.154	0.361	29312
ADLs: 1-2	0.200	0.400	31253	0.332	0.471	1941	0.191	0.393	29312
ADLs: 3-4	0.065	0.246	31253	0.122	0.327	1941	0.061	0.239	29312
ADLs: 5-6	0.030	0.172	31253	0.068	0.252	1941	0.028	0.165	29312
Chronic Conditions (except ADRD): 0	0.052	0.223	31253	0.000	0.000	1941	0.056	0.230	29312
Chronic Conditions (except ADRD): 1	0.108	0.311	31253	0.001	0.032	1941	0.116	0.320	29312

Chronic Conditions (except ADRD): 2	0.167	0.373	31253	0.025	0.155	1941	0.177	0.382	29312
Chronic Conditions (except ADRD): 3-4	0.370	0.483	31253	0.159	0.366	1941	0.384	0.486	29312
Chronic Conditions (except ADRD): 5-6	0.205	0.404	31253	0.301	0.459	1941	0.199	0.399	29312
Chronic Conditions (except ADRD): 7-10	0.092	0.289	31253	0.457	0.498	1941	0.067	0.251	29312
Chronic Conditions (except ADRD): 11+	0.005	0.067	31253	0.057	0.231	1941	0.001	0.033	29312

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 12. Summary Statistics: Negative Control Group: Other heart cond, eg valve/rhythm (non-ADRD), Comparison Group: non Other heart cond, eg valve/rhythm (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.078	0.268	29258	0.083	0.276	6106	0.076	0.266	23152
Any Medical Financial Burden	0.182	0.386	24981	0.230	0.421	5175	0.170	0.376	19806
Satisfaction with Access to Specialist	0.934	0.248	27325	0.927	0.260	5902	0.936	0.245	21423
Satisfaction with Quality of Care	0.951	0.215	28790	0.947	0.224	6051	0.953	0.213	22739
Comparison	0.791	0.406	29306	0.000	0.000	6115	1.000	0.000	23191
Negative Control	0.209	0.406	29306	1.000	0.000	6115	0.000	0.000	23191
Age Group <65	0.170	0.375	29306	0.141	0.348	6115	0.177	0.382	23191
Age Group 65 to 75	0.351	0.477	29306	0.292	0.455	6115	0.367	0.482	23191
Age Group 75+	0.479	0.500	29306	0.567	0.496	6115	0.456	0.498	23191
Non-Hispanic white	0.656	0.475	29306	0.738	0.440	6115	0.634	0.482	23191
Non-Hispanic black	0.130	0.336	29306	0.099	0.298	6115	0.138	0.345	23191
Hispanic	0.157	0.363	29306	0.105	0.306	6115	0.170	0.376	23191
Other	0.058	0.233	29306	0.059	0.235	6115	0.058	0.233	23191
Male	0.336	0.472	29306	0.331	0.471	6115	0.337	0.473	23191
Female	0.664	0.472	29306	0.669	0.471	6115	0.663	0.473	23191
Not Married	0.468	0.499	29306	0.463	0.499	6115	0.469	0.499	23191
Married	0.362	0.481	29306	0.372	0.483	6115	0.359	0.480	23191
Married: missing	0.170	0.376	29306	0.165	0.372	6115	0.172	0.377	23191
High school or less	0.466	0.499	29306	0.449	0.497	6115	0.471	0.499	23191
High School above	0.360	0.480	29306	0.384	0.486	6115	0.354	0.478	23191
Education missing	0.173	0.378	29306	0.167	0.373	6115	0.175	0.380	23191
Self-respondent	0.920	0.271	29306	0.929	0.257	6115	0.918	0.274	23191
Proxy respondent	0.080	0.271	29306	0.071	0.257	6115	0.082	0.274	23191
Household Size: 1	0.334	0.472	29306	0.339	0.473	6115	0.332	0.471	23191
Household Size: 2	0.450	0.498	29306	0.459	0.498	6115	0.448	0.497	23191
Household Size: 3+	0.216	0.412	29306	0.203	0.402	6115	0.220	0.414	23191
Underweight/healthy (<25)	0.304	0.460	29306	0.280	0.449	6115	0.310	0.463	23191
Overweight (25-30)	0.339	0.473	29306	0.348	0.476	6115	0.336	0.472	23191
Obese/high-risk obese (>=30)	0.330	0.470	29306	0.353	0.478	6115	0.324	0.468	23191
BMI missing	0.027	0.163	29306	0.019	0.138	6115	0.030	0.169	23191
IADLs or ADLs: 0	0.553	0.497	29306	0.464	0.499	6115	0.576	0.494	23191
IADLs: 1	0.156	0.363	29306	0.168	0.374	6115	0.153	0.360	23191
ADLs: 1-2	0.196	0.397	29306	0.248	0.432	6115	0.182	0.386	23191
ADLs: 3-4	0.065	0.246	29306	0.084	0.278	6115	0.060	0.237	23191
ADLs: 5-6	0.031	0.172	29306	0.036	0.185	6115	0.029	0.168	23191
Chronic Conditions (except ADRD): 0	0.053	0.223	29306	0.000	0.000	6115	0.067	0.249	23191

Chronic Conditions (except ADRD): 1	0.107	0.309	29306	0.022	0.146	6115	0.130	0.336	23191
Chronic Conditions (except ADRD): 2	0.167	0.373	29306	0.061	0.239	6115	0.194	0.396	23191
Chronic Conditions (except ADRD): 3-4	0.367	0.482	29306	0.313	0.464	6115	0.382	0.486	23191
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29306	0.338	0.473	6115	0.173	0.378	23191
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29306	0.247	0.431	6115	0.054	0.226	23191
Chronic Conditions (except ADRD): 11+	0.005	0.069	29306	0.019	0.138	6115	0.001	0.031	23191

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 13. Summary Statistics: Negative Control Group: High cholesterol (non-ADRD), Comparison Group: non High cholesterol (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.078	0.268	29172	0.077	0.266	18768	0.079	0.270	10404
Any Medical Financial Burden	0.182	0.386	24912	0.188	0.391	16059	0.171	0.376	8853
Satisfaction with Access to Specialist	0.934	0.248	27254	0.936	0.244	17776	0.930	0.255	9478
Satisfaction with Quality of Care	0.952	0.214	28710	0.952	0.215	18616	0.952	0.214	10094
Comparison	0.357	0.479	29219	0.000	0.000	18798	1.000	0.000	10421
Negative Control	0.643	0.479	29219	1.000	0.000	18798	0.000	0.000	10421
Age Group <65	0.170	0.375	29219	0.140	0.347	18798	0.223	0.417	10421
Age Group 65 to 75	0.352	0.477	29219	0.359	0.480	18798	0.339	0.473	10421
Age Group 75+	0.479	0.500	29219	0.501	0.500	18798	0.438	0.496	10421
Non-Hispanic white	0.656	0.475	29219	0.644	0.479	18798	0.676	0.468	10421
Non-Hispanic black	0.130	0.336	29219	0.130	0.336	18798	0.129	0.335	10421
Hispanic	0.157	0.364	29219	0.170	0.375	18798	0.134	0.341	10421
Other	0.058	0.233	29219	0.056	0.230	18798	0.061	0.239	10421
Male	0.336	0.472	29219	0.329	0.470	18798	0.349	0.477	10421
Female	0.664	0.472	29219	0.671	0.470	18798	0.651	0.477	10421
Not Married	0.468	0.499	29219	0.461	0.498	18798	0.479	0.500	10421
Married	0.362	0.481	29219	0.371	0.483	18798	0.346	0.476	10421
Married: missing	0.170	0.376	29219	0.168	0.374	18798	0.174	0.380	10421
High school or less	0.466	0.499	29219	0.484	0.500	18798	0.434	0.496	10421
High School above	0.361	0.480	29219	0.345	0.475	18798	0.388	0.487	10421
Education missing	0.173	0.378	29219	0.170	0.376	18798	0.178	0.382	10421
Self-respondent	0.921	0.270	29219	0.926	0.262	18798	0.911	0.285	10421
Proxy respondent	0.079	0.270	29219	0.074	0.262	18798	0.089	0.285	10421
Household Size: 1	0.333	0.471	29219	0.331	0.471	18798	0.336	0.473	10421
Household Size: 2	0.450	0.498	29219	0.455	0.498	18798	0.442	0.497	10421
Household Size: 3+	0.216	0.412	29219	0.214	0.410	18798	0.221	0.415	10421
Underweight/healthy (<25)	0.304	0.460	29219	0.270	0.444	18798	0.366	0.482	10421
Overweight (25-30)	0.339	0.473	29219	0.356	0.479	18798	0.308	0.462	10421
Obese/high-risk obese (>=30)	0.330	0.470	29219	0.351	0.477	18798	0.294	0.455	10421
BMI missing	0.027	0.163	29219	0.024	0.153	18798	0.033	0.179	10421
IADLs or ADLs: 0	0.554	0.497	29219	0.542	0.498	18798	0.574	0.495	10421
IADLs: 1	0.156	0.363	29219	0.156	0.363	18798	0.156	0.363	10421
ADLs: 1-2	0.195	0.396	29219	0.204	0.403	18798	0.180	0.384	10421
ADLs: 3-4	0.065	0.246	29219	0.069	0.254	18798	0.056	0.231	10421
ADLs: 5-6	0.030	0.172	29219	0.029	0.167	18798	0.034	0.180	10421
Chronic Conditions (except ADRD): 0	0.052	0.223	29219	0.000	0.000	18798	0.147	0.354	10421
Chronic Conditions (except ADRD): 1	0.107	0.309	29219	0.040	0.195	18798	0.228	0.420	10421

Chronic Conditions (except ADRD): 2	0.166	0.373	29219	0.127	0.333	18798	0.237	0.425	10421
Chronic Conditions (except ADRD): 3-4	0.368	0.482	29219	0.416	0.493	18798	0.281	0.449	10421
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29219	0.275	0.446	18798	0.086	0.280	10421
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29219	0.135	0.342	18798	0.020	0.142	10421
Chronic Conditions (except ADRD): 11+	0.005	0.069	29219	0.007	0.084	18798	0.001	0.024	10421

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 14. Summary Statistics: Negative Control Group: Cancer (non-ADRD), Comparison Group: non Cancer (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.078	0.268	29172	0.074	0.262	9066	0.079	0.270	20106
Any Medical Financial Burden	0.182	0.386	24912	0.178	0.382	7948	0.184	0.387	16964
Satisfaction with Access to Specialist	0.934	0.248	27254	0.937	0.243	8669	0.933	0.250	18585
Satisfaction with Quality of Care	0.952	0.214	28710	0.954	0.210	8991	0.951	0.217	19719
Comparison	0.689	0.463	29219	0.000	0.000	9074	1.000	0.000	20145
Negative Control	0.311	0.463	29219	1.000	0.000	9074	0.000	0.000	20145
Age Group <65	0.170	0.375	29219	0.081	0.273	9074	0.210	0.407	20145
Age Group 65 to 75	0.352	0.477	29219	0.328	0.469	9074	0.362	0.481	20145
Age Group 75+	0.479	0.500	29219	0.591	0.492	9074	0.428	0.495	20145
Non-Hispanic white	0.656	0.475	29219	0.810	0.392	9074	0.586	0.492	20145
Non-Hispanic black	0.130	0.336	29219	0.057	0.232	9074	0.162	0.369	20145
Hispanic	0.157	0.364	29219	0.087	0.282	9074	0.188	0.391	20145
Other	0.058	0.233	29219	0.046	0.209	9074	0.063	0.243	20145
Male	0.336	0.472	29219	0.331	0.471	9074	0.338	0.473	20145
Female	0.664	0.472	29219	0.669	0.471	9074	0.662	0.473	20145
Not Married	0.468	0.499	29219	0.423	0.494	9074	0.487	0.500	20145
Married	0.362	0.481	29219	0.406	0.491	9074	0.343	0.475	20145
Married: missing	0.170	0.376	29219	0.171	0.376	9074	0.170	0.375	20145
High school or less	0.466	0.499	29219	0.401	0.490	9074	0.495	0.500	20145
High School above	0.361	0.480	29219	0.425	0.494	9074	0.332	0.471	20145
Education missing	0.173	0.378	29219	0.173	0.378	9074	0.173	0.378	20145
Self-respondent	0.921	0.270	29219	0.941	0.235	9074	0.911	0.284	20145
Proxy respondent	0.079	0.270	29219	0.059	0.235	9074	0.089	0.284	20145
Household Size: 1	0.333	0.471	29219	0.340	0.474	9074	0.330	0.470	20145
Household Size: 2	0.450	0.498	29219	0.495	0.500	9074	0.430	0.495	20145
Household Size: 3+	0.216	0.412	29219	0.165	0.371	9074	0.240	0.427	20145
Underweight/healthy (<25)	0.304	0.460	29219	0.333	0.471	9074	0.291	0.454	20145
Overweight (25-30)	0.339	0.473	29219	0.350	0.477	9074	0.334	0.472	20145
Obese/high-risk obese (>=30)	0.330	0.470	29219	0.298	0.457	9074	0.345	0.475	20145
BMI missing	0.027	0.163	29219	0.019	0.137	9074	0.031	0.173	20145
IADLs or ADLs: 0	0.554	0.497	29219	0.573	0.495	9074	0.545	0.498	20145
IADLs: 1	0.156	0.363	29219	0.145	0.352	9074	0.161	0.368	20145
ADLs: 1-2	0.195	0.396	29219	0.198	0.399	9074	0.194	0.395	20145
ADLs: 3-4	0.065	0.246	29219	0.060	0.237	9074	0.067	0.250	20145
ADLs: 5-6	0.030	0.172	29219	0.025	0.157	9074	0.033	0.178	20145
Chronic Conditions (except ADRD): 0	0.052	0.223	29219	0.000	0.000	9074	0.076	0.265	20145
Chronic Conditions (except ADRD): 1	0.107	0.309	29219	0.041	0.199	9074	0.136	0.343	20145

Chronic Conditions (except ADRD): 2	0.166	0.373	29219	0.105	0.307	9074	0.194	0.396	20145
Chronic Conditions (except ADRD): 3-4	0.368	0.482	29219	0.379	0.485	9074	0.363	0.481	20145
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29219	0.306	0.461	9074	0.163	0.369	20145
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29219	0.160	0.367	9074	0.065	0.246	20145
Chronic Conditions (except ADRD): 11+	0.005	0.069	29219	0.008	0.089	9074	0.003	0.058	20145

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 15. Summary Statistics: Negative Control Group: Osteoarthritis/Arthritis (non-ADRD), Comparison Group: non Osteoarthritis/Arthritis (non ADRD)

	(1)			(2)			(3)		
	Negative Control + Comparison			Negative Control			Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.078	0.268	29172	0.091	0.288	12501	0.067	0.251	16671
Any Medical Financial Burden	0.182	0.386	24912	0.218	0.413	10490	0.156	0.363	14422
Satisfaction with Access to Specialist	0.934	0.248	27254	0.922	0.269	11917	0.944	0.230	15337
Satisfaction with Quality of Care	0.952	0.214	28710	0.943	0.232	12410	0.958	0.200	16300
Comparison	0.571	0.495	29219	0.000	0.000	12525	1.000	0.000	16694
Negative Control	0.429	0.495	29219	1.000	0.000	12525	0.000	0.000	16694
Age Group <65	0.170	0.375	29219	0.159	0.366	12525	0.178	0.382	16694
Age Group 65 to 75	0.352	0.477	29219	0.330	0.470	12525	0.368	0.482	16694
Age Group 75+	0.479	0.500	29219	0.511	0.500	12525	0.454	0.498	16694
Non-Hispanic white	0.656	0.475	29219	0.642	0.480	12525	0.666	0.472	16694
Non-Hispanic black	0.130	0.336	29219	0.139	0.346	12525	0.122	0.327	16694
Hispanic	0.157	0.364	29219	0.163	0.369	12525	0.153	0.360	16694
Other	0.058	0.233	29219	0.056	0.230	12525	0.059	0.235	16694
Male	0.336	0.472	29219	0.260	0.439	12525	0.393	0.488	16694
Female	0.664	0.472	29219	0.740	0.439	12525	0.607	0.488	16694
Not Married	0.468	0.499	29219	0.456	0.498	12525	0.476	0.499	16694
Married	0.362	0.481	29219	0.325	0.469	12525	0.390	0.488	16694
Married: missing	0.170	0.376	29219	0.219	0.414	12525	0.133	0.340	16694
High school or less	0.466	0.499	29219	0.468	0.499	12525	0.465	0.499	16694
High School above	0.361	0.480	29219	0.311	0.463	12525	0.398	0.490	16694
Education missing	0.173	0.378	29219	0.221	0.415	12525	0.137	0.344	16694
Self-respondent	0.921	0.270	29219	0.932	0.251	12525	0.912	0.283	16694
Proxy respondent	0.079	0.270	29219	0.068	0.251	12525	0.088	0.283	16694
Household Size: 1	0.333	0.471	29219	0.355	0.478	12525	0.317	0.465	16694
Household Size: 2	0.450	0.498	29219	0.438	0.496	12525	0.460	0.498	16694
Household Size: 3+	0.216	0.412	29219	0.208	0.406	12525	0.223	0.416	16694
Underweight/healthy (<25)	0.304	0.460	29219	0.262	0.440	12525	0.335	0.472	16694
Overweight (25-30)	0.339	0.473	29219	0.329	0.470	12525	0.346	0.476	16694
Obese/high-risk obese (>=30)	0.330	0.470	29219	0.383	0.486	12525	0.291	0.454	16694
BMI missing	0.027	0.163	29219	0.026	0.159	12525	0.028	0.166	16694
IADLs or ADLs: 0	0.554	0.497	29219	0.447	0.497	12525	0.634	0.482	16694
IADLs: 1	0.156	0.363	29219	0.166	0.372	12525	0.149	0.356	16694
ADLs: 1-2	0.195	0.396	29219	0.256	0.437	12525	0.149	0.356	16694
ADLs: 3-4	0.065	0.246	29219	0.092	0.289	12525	0.045	0.206	16694
ADLs: 5-6	0.030	0.172	29219	0.040	0.196	12525	0.023	0.151	16694
Chronic Conditions (except ADRD): 0	0.052	0.223	29219	0.000	0.000	12525	0.092	0.289	16694
Chronic Conditions (except ADRD): 1	0.107	0.309	29219	0.030	0.171	12525	0.164	0.371	16694

Chronic Conditions (except ADRD): 2	0.166	0.373	29219	0.090	0.286	12525	0.224	0.417	16694
Chronic Conditions (except ADRD): 3-4	0.368	0.482	29219	0.371	0.483	12525	0.365	0.482	16694
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29219	0.322	0.467	12525	0.121	0.326	16694
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29219	0.175	0.380	12525	0.033	0.180	16694
Chronic Conditions (except ADRD): 11+	0.005	0.069	29219	0.011	0.105	12525	0.000	0.008	16694

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 16. Summary Statistics: Negative Control Group: Osteoporosis/soft bones (non-ADRD), Comparison Group: non Osteoporosis/soft bones (non ADRD)

	(1)			(2)			(3)		
	Negative Control + Comparison			Negative Control			Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	29079	0.081	0.273	5974	0.077	0.266	23105
Any Medical Financial Burden	0.182	0.385	24830	0.187	0.390	5076	0.180	0.384	19754
Satisfaction with Access to Specialist	0.934	0.248	27173	0.929	0.257	5665	0.936	0.245	21508
Satisfaction with Quality of Care	0.952	0.214	28622	0.946	0.226	5909	0.954	0.210	22713
Comparison	0.795	0.404	29126	0.000	0.000	5982	1.000	0.000	23144
Negative Control	0.205	0.404	29126	1.000	0.000	5982	0.000	0.000	23144
Age Group <65	0.170	0.375	29126	0.102	0.302	5982	0.187	0.390	23144
Age Group 65 to 75	0.352	0.478	29126	0.335	0.472	5982	0.356	0.479	23144
Age Group 75+	0.479	0.500	29126	0.563	0.496	5982	0.457	0.498	23144
Non-Hispanic white	0.656	0.475	29126	0.704	0.457	5982	0.643	0.479	23144
Non-Hispanic black	0.130	0.336	29126	0.081	0.272	5982	0.142	0.349	23144
Hispanic	0.157	0.364	29126	0.165	0.372	5982	0.155	0.362	23144
Other	0.058	0.233	29126	0.050	0.218	5982	0.060	0.237	23144
Male	0.336	0.472	29126	0.081	0.272	5982	0.402	0.490	23144
Female	0.664	0.472	29126	0.919	0.272	5982	0.598	0.490	23144
Not Married	0.468	0.499	29126	0.511	0.500	5982	0.456	0.498	23144
Married	0.363	0.481	29126	0.318	0.466	5982	0.374	0.484	23144
Married: missing	0.170	0.375	29126	0.171	0.377	5982	0.169	0.375	23144
High school or less	0.466	0.499	29126	0.469	0.499	5982	0.466	0.499	23144
High School above	0.361	0.480	29126	0.358	0.480	5982	0.362	0.480	23144
Education missing	0.173	0.378	29126	0.172	0.378	5982	0.173	0.378	23144
Self-respondent	0.921	0.270	29126	0.936	0.244	5982	0.917	0.276	23144
Proxy respondent	0.079	0.270	29126	0.064	0.244	5982	0.083	0.276	23144
Household Size: 1	0.333	0.471	29126	0.391	0.488	5982	0.318	0.466	23144
Household Size: 2	0.451	0.498	29126	0.410	0.492	5982	0.461	0.499	23144
Household Size: 3+	0.217	0.412	29126	0.200	0.400	5982	0.221	0.415	23144
Underweight/healthy (<25)	0.304	0.460	29126	0.404	0.491	5982	0.278	0.448	23144
Overweight (25-30)	0.338	0.473	29126	0.301	0.459	5982	0.348	0.476	23144
Obese/high-risk obese (>=30)	0.330	0.470	29126	0.269	0.444	5982	0.346	0.476	23144
BMI missing	0.027	0.162	29126	0.025	0.156	5982	0.028	0.164	23144
IADLs or ADLs: 0	0.554	0.497	29126	0.474	0.499	5982	0.575	0.494	23144
IADLs: 1	0.156	0.363	29126	0.172	0.377	5982	0.152	0.359	23144
ADLs: 1-2	0.195	0.396	29126	0.232	0.422	5982	0.185	0.389	23144
ADLs: 3-4	0.065	0.246	29126	0.084	0.278	5982	0.060	0.237	23144
ADLs: 5-6	0.030	0.171	29126	0.038	0.191	5982	0.028	0.165	23144
Chronic Conditions (except ADRD): 0	0.052	0.223	29126	0.000	0.000	5982	0.066	0.248	23144
Chronic Conditions (except ADRD): 1	0.107	0.309	29126	0.030	0.169	5982	0.127	0.333	23144

Chronic Conditions (except ADRD): 2	0.166	0.373	29126	0.093	0.290	5982	0.185	0.389	23144
Chronic Conditions (except ADRD): 3-4	0.368	0.482	29126	0.335	0.472	5982	0.376	0.484	23144
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29126	0.323	0.468	5982	0.177	0.382	23144
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29126	0.202	0.402	5982	0.066	0.249	23144
Chronic Conditions (except ADRD): 11+	0.005	0.069	29126	0.017	0.129	5982	0.002	0.040	23144

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 17. Summary Statistics: Negative Control Group: Broken hip (non-ADRD), Comparison Group: non Broken hip (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	29072	0.075	0.263	1094	0.078	0.267	27978
Any Medical Financial Burden	0.182	0.385	24824	0.224	0.417	899	0.180	0.384	23925
Satisfaction with Access to Specialist	0.934	0.248	27166	0.945	0.227	1025	0.934	0.248	26141
Satisfaction with Quality of Care	0.952	0.214	28615	0.946	0.226	1080	0.952	0.213	27535
Comparison	0.962	0.190	29119	0.000	0.000	1096	1.000	0.000	28023
Negative Control	0.038	0.190	29119	1.000	0.000	1096	0.000	0.000	28023
Age Group <65	0.170	0.375	29119	0.140	0.347	1096	0.171	0.376	28023
Age Group 65 to 75	0.352	0.478	29119	0.206	0.405	1096	0.358	0.479	28023
Age Group 75+	0.479	0.500	29119	0.654	0.476	1096	0.472	0.499	28023
Non-Hispanic white	0.656	0.475	29119	0.685	0.465	1096	0.655	0.476	28023
Non-Hispanic black	0.130	0.336	29119	0.112	0.316	1096	0.130	0.337	28023
Hispanic	0.157	0.364	29119	0.153	0.360	1096	0.157	0.364	28023
Other	0.058	0.233	29119	0.049	0.217	1096	0.058	0.234	28023
Male	0.336	0.472	29119	0.297	0.457	1096	0.338	0.473	28023
Female	0.664	0.472	29119	0.703	0.457	1096	0.662	0.473	28023
Not Married	0.468	0.499	29119	0.573	0.495	1096	0.463	0.499	28023
Married	0.363	0.481	29119	0.279	0.449	1096	0.366	0.482	28023
Married: missing	0.170	0.375	29119	0.148	0.355	1096	0.171	0.376	28023
High school or less	0.466	0.499	29119	0.523	0.500	1096	0.464	0.499	28023
High School above	0.361	0.480	29119	0.329	0.470	1096	0.362	0.481	28023
Education missing	0.173	0.378	29119	0.148	0.355	1096	0.174	0.379	28023
Self-respondent	0.921	0.270	29119	0.896	0.305	1096	0.922	0.269	28023
Proxy respondent	0.079	0.270	29119	0.104	0.305	1096	0.078	0.269	28023
Household Size: 1	0.333	0.471	29119	0.400	0.490	1096	0.330	0.470	28023
Household Size: 2	0.451	0.498	29119	0.404	0.491	1096	0.453	0.498	28023
Household Size: 3+	0.217	0.412	29119	0.196	0.397	1096	0.217	0.412	28023
Underweight/healthy (<25)	0.304	0.460	29119	0.446	0.497	1096	0.298	0.458	28023
Overweight (25-30)	0.339	0.473	29119	0.302	0.459	1096	0.340	0.474	28023
Obese/high-risk obese (>=30)	0.330	0.470	29119	0.227	0.419	1096	0.335	0.472	28023
BMI missing	0.027	0.162	29119	0.025	0.155	1096	0.027	0.163	28023
IADLs or ADLs: 0	0.554	0.497	29119	0.347	0.476	1096	0.563	0.496	28023
IADLs: 1	0.156	0.363	29119	0.121	0.327	1096	0.157	0.364	28023
ADLs: 1-2	0.195	0.396	29119	0.306	0.461	1096	0.191	0.393	28023
ADLs: 3-4	0.065	0.246	29119	0.150	0.357	1096	0.061	0.240	28023
ADLs: 5-6	0.030	0.171	29119	0.077	0.266	1096	0.028	0.166	28023
Chronic Conditions (except ADRD): 0	0.052	0.223	29119	0.000	0.000	1096	0.055	0.227	28023
Chronic Conditions (except ADRD): 1	0.107	0.309	29119	0.038	0.192	1096	0.110	0.312	28023

Chronic Conditions (except ADRD): 2	0.166	0.372	29119	0.091	0.288	1096	0.169	0.375	28023
Chronic Conditions (except ADRD): 3-4	0.368	0.482	29119	0.284	0.451	1096	0.371	0.483	28023
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29119	0.314	0.464	1096	0.203	0.402	28023
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29119	0.256	0.437	1096	0.088	0.283	28023
Chronic Conditions (except ADRD): 11+	0.005	0.069	29119	0.016	0.127	1096	0.004	0.066	28023

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 18. Summary Statistics: Negative Control Group: Emphysema/asthma/COPD (non-ADRD), Comparison Group: non Emphysema/asthma/COPD (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	29052	0.108	0.310	5799	0.070	0.255	23253
Any Medical Financial Burden	0.181	0.385	24809	0.267	0.442	4963	0.160	0.367	19846
Satisfaction with Access to Specialist	0.934	0.248	27148	0.911	0.284	5558	0.940	0.237	21590
Satisfaction with Quality of Care	0.952	0.214	28595	0.929	0.257	5741	0.958	0.201	22854
Comparison	0.800	0.400	29099	0.000	0.000	5810	1.000	0.000	23289
Negative Control	0.200	0.400	29099	1.000	0.000	5810	0.000	0.000	23289
Age Group <65	0.170	0.375	29099	0.254	0.435	5810	0.149	0.356	23289
Age Group 65 to 75	0.352	0.478	29099	0.325	0.468	5810	0.359	0.480	23289
Age Group 75+	0.478	0.500	29099	0.421	0.494	5810	0.493	0.500	23289
Non-Hispanic white	0.656	0.475	29099	0.671	0.470	5810	0.652	0.476	23289
Non-Hispanic black	0.130	0.336	29099	0.135	0.342	5810	0.128	0.335	23289
Hispanic	0.157	0.364	29099	0.130	0.336	5810	0.164	0.370	23289
Other	0.058	0.233	29099	0.064	0.245	5810	0.056	0.230	23289
Male	0.336	0.472	29099	0.298	0.457	5810	0.346	0.476	23289
Female	0.664	0.472	29099	0.702	0.457	5810	0.654	0.476	23289
Not Married	0.468	0.499	29099	0.521	0.500	5810	0.454	0.498	23289
Married	0.363	0.481	29099	0.307	0.461	5810	0.376	0.485	23289
Married: missing	0.170	0.375	29099	0.172	0.377	5810	0.169	0.375	23289
High school or less	0.466	0.499	29099	0.506	0.500	5810	0.456	0.498	23289
High School above	0.361	0.480	29099	0.320	0.467	5810	0.371	0.483	23289
Education missing	0.173	0.378	29099	0.174	0.379	5810	0.172	0.378	23289
Self-respondent	0.921	0.270	29099	0.929	0.257	5810	0.919	0.273	23289
Proxy respondent	0.079	0.270	29099	0.071	0.257	5810	0.081	0.273	23289
Household Size: 1	0.333	0.471	29099	0.348	0.476	5810	0.329	0.470	23289
Household Size: 2	0.451	0.498	29099	0.413	0.492	5810	0.460	0.498	23289
Household Size: 3+	0.217	0.412	29099	0.239	0.426	5810	0.211	0.408	23289
Underweight/healthy (<25)	0.304	0.460	29099	0.278	0.448	5810	0.310	0.463	23289
Overweight (25-30)	0.339	0.473	29099	0.285	0.451	5810	0.352	0.478	23289
Obese/high-risk obese (>=30)	0.330	0.470	29099	0.412	0.492	5810	0.310	0.463	23289
BMI missing	0.027	0.162	29099	0.025	0.155	5810	0.028	0.164	23289
IADLs or ADLs: 0	0.554	0.497	29099	0.388	0.487	5810	0.596	0.491	23289
IADLs: 1	0.156	0.363	29099	0.184	0.388	5810	0.149	0.356	23289
ADLs: 1-2	0.195	0.396	29099	0.278	0.448	5810	0.174	0.379	23289
ADLs: 3-4	0.065	0.246	29099	0.105	0.306	5810	0.055	0.227	23289
ADLs: 5-6	0.030	0.171	29099	0.045	0.207	5810	0.026	0.161	23289
Chronic Conditions (except ADRD): 0	0.052	0.223	29099	0.000	0.000	5810	0.066	0.248	23289
Chronic Conditions (except ADRD): 1	0.107	0.309	29099	0.035	0.185	5810	0.125	0.330	23289

Chronic Conditions (except ADRD): 2	0.166	0.372	29099	0.080	0.271	5810	0.188	0.391	23289
Chronic Conditions (except ADRD): 3-4	0.368	0.482	29099	0.317	0.465	5810	0.380	0.486	23289
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29099	0.323	0.467	5810	0.179	0.383	23289
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29099	0.227	0.419	5810	0.061	0.240	23289
Chronic Conditions (except ADRD): 11+	0.005	0.069	29099	0.018	0.132	5810	0.002	0.040	23289

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 19. Summary Statistics: Negative Control Group: Diabetes/high blood sugar (non-ADRD), Comparison Group: non Diabetes/high blood sugar (non ADRD)

	(1) Negative Control + Comparison			(2) Negative Control			(3) Comparison		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.077	0.267	29007	0.089	0.285	9899	0.072	0.258	19108
Any Medical Financial Burden	0.181	0.385	24770	0.226	0.418	8454	0.159	0.365	16316
Satisfaction with Access to Specialist	0.934	0.247	27108	0.931	0.253	9440	0.936	0.244	17668
Satisfaction with Quality of Care	0.952	0.214	28552	0.948	0.222	9835	0.954	0.209	18717
Comparison	0.659	0.474	29053	0.000	0.000	9913	1.000	0.000	19140
Negative Control	0.341	0.474	29053	1.000	0.000	9913	0.000	0.000	19140
Age Group <65	0.170	0.375	29053	0.184	0.388	9913	0.162	0.369	19140
Age Group 65 to 75	0.352	0.477	29053	0.369	0.483	9913	0.343	0.475	19140
Age Group 75+	0.479	0.500	29053	0.447	0.497	9913	0.495	0.500	19140
Non-Hispanic white	0.656	0.475	29053	0.544	0.498	9913	0.714	0.452	19140
Non-Hispanic black	0.130	0.336	29053	0.168	0.374	9913	0.110	0.312	19140
Hispanic	0.157	0.364	29053	0.214	0.410	9913	0.127	0.333	19140
Other	0.058	0.233	29053	0.074	0.261	9913	0.049	0.217	19140
Male	0.336	0.472	29053	0.359	0.480	9913	0.325	0.468	19140
Female	0.664	0.472	29053	0.641	0.480	9913	0.675	0.468	19140
Not Married	0.467	0.499	29053	0.470	0.499	9913	0.466	0.499	19140
Married	0.363	0.481	29053	0.359	0.480	9913	0.365	0.481	19140
Married: missing	0.170	0.375	29053	0.171	0.377	9913	0.169	0.375	19140
High school or less	0.466	0.499	29053	0.498	0.500	9913	0.450	0.497	19140
High School above	0.361	0.480	29053	0.328	0.469	9913	0.378	0.485	19140
Education missing	0.173	0.378	29053	0.174	0.379	9913	0.172	0.377	19140
Self-respondent	0.921	0.270	29053	0.921	0.270	9913	0.921	0.270	19140
Proxy respondent	0.079	0.270	29053	0.079	0.270	9913	0.079	0.270	19140
Household Size: 1	0.332	0.471	29053	0.319	0.466	9913	0.339	0.474	19140
Household Size: 2	0.451	0.498	29053	0.431	0.495	9913	0.461	0.498	19140
Household Size: 3+	0.217	0.412	29053	0.250	0.433	9913	0.200	0.400	19140
Underweight/healthy (<25)	0.304	0.460	29053	0.191	0.393	9913	0.363	0.481	19140
Overweight (25-30)	0.338	0.473	29053	0.331	0.470	9913	0.342	0.474	19140
Obese/high-risk obese (>=30)	0.331	0.470	29053	0.451	0.498	9913	0.269	0.443	19140
BMI missing	0.027	0.162	29053	0.028	0.165	9913	0.026	0.161	19140
IADLs or ADLs: 0	0.555	0.497	29053	0.471	0.499	9913	0.598	0.490	19140
IADLs: 1	0.156	0.363	29053	0.165	0.371	9913	0.151	0.358	19140
ADLs: 1-2	0.195	0.396	29053	0.238	0.426	9913	0.173	0.378	19140
ADLs: 3-4	0.065	0.246	29053	0.088	0.283	9913	0.053	0.223	19140
ADLs: 5-6	0.030	0.171	29053	0.039	0.194	9913	0.026	0.158	19140
Chronic Conditions (except ADRD): 0	0.053	0.223	29053	0.000	0.000	9913	0.080	0.271	19140
Chronic Conditions (except ADRD): 1	0.107	0.309	29053	0.018	0.134	9913	0.152	0.359	19140

Chronic Conditions (except ADRD): 2	0.166	0.372	29053	0.076	0.264	9913	0.213	0.409	19140
Chronic Conditions (except ADRD): 3-4	0.368	0.482	29053	0.391	0.488	9913	0.356	0.479	19140
Chronic Conditions (except ADRD): 5-6	0.207	0.405	29053	0.320	0.466	9913	0.149	0.356	19140
Chronic Conditions (except ADRD): 7-10	0.094	0.292	29053	0.184	0.388	9913	0.048	0.213	19140
Chronic Conditions (except ADRD): 11+	0.005	0.069	29053	0.011	0.104	9913	0.002	0.040	19140

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. Beneficiaries with only partial enrollment in an MA plan during the past year at the time of the survey and veterans are excluded. We also exclude beneficiaries with ADRD.

eTable 20. Summary Statistics: using FFS Beneficiaries

	(1)			(2)			(3)		
	All			ADRD			Stroke/Paralysis/ Parkinson's Disease		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Any Troubles Getting Needed Care	0.102	0.303	7177	0.085	0.279	1921	0.109	0.311	5256
Any Medical Financial Burden	0.235	0.424	5118	0.184	0.388	1350	0.253	0.435	3768
Satisfaction with Access to Specialist	0.908	0.289	6746	0.918	0.275	1785	0.904	0.294	4961
Satisfaction with Quality of Care	0.935	0.246	7062	0.940	0.237	1894	0.933	0.250	5168
No ADRD	0.732	0.443	7206	0.000	0.000	1931	1.000	0.000	5275
ADRD	0.268	0.443	7206	1.000	0.000	1931	0.000	0.000	5275
Age Group <65	0.233	0.423	7206	0.094	0.292	1931	0.284	0.451	5275
Age Group 65 to 75	0.222	0.416	7206	0.135	0.342	1931	0.254	0.435	5275
Age Group 75+	0.545	0.498	7206	0.771	0.421	1931	0.462	0.499	5275
Non-Hispanic white	0.742	0.438	7206	0.692	0.462	1931	0.760	0.427	5275
Non-Hispanic black	0.099	0.299	7206	0.097	0.296	1931	0.100	0.300	5275
Hispanic	0.093	0.290	7206	0.133	0.340	1931	0.078	0.268	5275
Other	0.066	0.248	7206	0.078	0.268	1931	0.062	0.241	5275
Male	0.338	0.473	7206	0.242	0.428	1931	0.373	0.484	5275
Female	0.662	0.473	7206	0.758	0.428	1931	0.627	0.484	5275
Not Married	0.553	0.497	7206	0.579	0.494	1931	0.543	0.498	5275
Married	0.353	0.478	7206	0.335	0.472	1931	0.359	0.480	5275
Married: missing	0.094	0.292	7206	0.086	0.280	1931	0.097	0.297	5275
High school or less	0.524	0.499	7206	0.597	0.491	1931	0.498	0.500	5275
High School above	0.375	0.484	7206	0.303	0.460	1931	0.401	0.490	5275
Education missing	0.101	0.301	7206	0.099	0.299	1931	0.101	0.301	5275
Self-respondent	0.721	0.449	7206	0.379	0.485	1931	0.846	0.361	5275
Proxy respondent	0.279	0.449	7206	0.621	0.485	1931	0.154	0.361	5275
Household Size: 1	0.309	0.462	7206	0.245	0.430	1931	0.333	0.471	5275
Household Size: 2	0.438	0.496	7206	0.455	0.498	1931	0.432	0.495	5275
Household Size: 3+	0.252	0.434	7206	0.299	0.458	1931	0.235	0.424	5275
Underweight/healthy (<25)	0.367	0.482	7206	0.455	0.498	1931	0.335	0.472	5275
Overweight (25-30)	0.304	0.460	7206	0.277	0.448	1931	0.314	0.464	5275
Obese/high-risk obese (>=30)	0.291	0.454	7206	0.215	0.411	1931	0.318	0.466	5275
BMI missing	0.038	0.192	7206	0.053	0.224	1931	0.033	0.179	5275
IADLs or ADLs: 0	0.255	0.436	7206	0.144	0.352	1931	0.295	0.456	5275
IADLs: 1	0.167	0.373	7206	0.177	0.381	1931	0.164	0.370	5275
ADLs: 1-2	0.283	0.450	7206	0.251	0.434	1931	0.294	0.456	5275
ADLs: 3-4	0.141	0.348	7206	0.169	0.375	1931	0.131	0.337	5275
ADLs: 5-6	0.155	0.362	7206	0.259	0.438	1931	0.116	0.321	5275
Chronic Conditions (except ADRD): 0	0.009	0.093	7206	0.033	0.178	1931	0.000	0.000	5275
Chronic Conditions (except ADRD): 1	0.055	0.228	7206	0.071	0.257	1931	0.049	0.216	5275
Chronic Conditions (except ADRD): 2	0.092	0.289	7206	0.123	0.328	1931	0.081	0.272	5275

Chronic Conditions (except ADRD): 3-4	0.296	0.456	7206	0.317	0.466	1931	0.288	0.453	5275
Chronic Conditions (except ADRD): 5-6	0.287	0.452	7206	0.256	0.437	1931	0.298	0.458	5275
Chronic Conditions (except ADRD): 7-10	0.239	0.426	7206	0.182	0.386	1931	0.259	0.438	5275
Chronic Conditions (except ADRD): 11+	0.023	0.150	7206	0.018	0.132	1931	0.025	0.156	5275

Notes: The working sample consists of MA beneficiaries from 2015-2022 MCBS. The sample includes beneficiaries who enroll in a FFS plan.