Trends in Racial, Ethnic, Sex, and Rural-Urban Inequities in Health Care in Medicare Advantage: 2009-2018

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Preface

This report presents summary information on the performance of Medicare Advantage (MA) plans on specific measures of quality of health care. The report highlights trends in (1) racial and ethnic differences, (2) sex differences, and (3) rural-urban differences in health care experiences and clinical care from 2009 to 2018.

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- Older Adults' Access to Preventive/Ambulatory Services

Abbreviations Used in This Report

AMI	acute myocardial infarction
AOD	alcohol or other drug
API	Asian or Pacific Islander
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CMS	Centers for Medicare & Medicaid Services
DMARD	disease-modifying antirheumatic drug
HEDIS	Healthcare Effectiveness Data and Information Set
MA	Medicare Advantage

Overview, Methods, and Summary of Key Findings

Overview

The Institute of Medicine (now the National Academy of Medicine) has identified the equitable delivery of care as a hallmark of quality (Institute of Medicine, 2001). Investigating inequities in the delivery of care requires making comparisons of quality across groups of patients who differ on characteristics or factors related to social risk, such as race, ethnicity, sex, and geography.

Since 2015, the Centers for Medicare & Medicaid Services' Office of Minority Health (CMS OMH) has published annual reports that highlight inequities in the quality of care delivered to Medicare beneficiaries nationwide based on these factors. Until now, these annual reports, which can be accessed from the Stratified Reporting section of the CMS OMH website (CMS, 2021), have focused on comparisons within a single year.

An investigation of historical trends can provide another important perspective on inequities. This report presents an analysis of historical trends in inequities by race, ethnicity, sex, and geography among Medicare beneficiaries enrolled in Medicare Advantage (MA) plans nationwide, revealing the extent to which there has been progress in reducing or eliminating initial inequities in those areas. Focusing on a set of patient experience and clinical care measures that are comparable across a 10-year period, the report describes inequities that existed in 2009, how those inequities changed over the 10-year period, how scores for each beneficiary group changed over time, and what inequities remained in 2018.

Three sets of specific comparisons are presented in this report. In the first set, quality of care for racial and ethnic minority beneficiaries is compared with quality of care for White beneficiaries. In the second, quality of care for female beneficiaries is compared with quality of care for male beneficiaries. In the third, quality of care for beneficiaries residing in rural areas is compared with quality of care for beneficiaries residing in urban areas. The choice of reference groups was based on concerns raised by the Institute of Medicine about whether racial and ethnic minority, female, and rural patients receive care that is as good as care for White, male, and urban patients, respectively (Institute of Medicine, 2001). The use of these reference groups is not meant to indicate that they are normative. For all measures, the goal is to provide high quality, appropriate care for all groups.

Data Sources

This report focuses on measures that are comparable across the 10-year period from 2009 to 2018. In all, this report provides data regarding four patient experience measures and seven clinical care measures.

Patient experience data were collected via an annual national survey of Medicare beneficiaries, known as the Medicare Consumer Assessment of Healthcare Providers and Systems (CAHPS®) survey.[1] For this report, we used data from respondents to the 2009–2018 Medicare CAHPS surveys to examine trends in scores on non–Part D 2021 Star Rating measures (CMS, 2020a) that were similarly specified over this period and that do not use a 0–10 rating scale (Martino et al., 2013; Weinick et al., 2011).[2] In particular,

[1] Detailed information about this survey can be found on the MA and Prescription Drug Plan CAHPS page at CMS.gov (CMS, 2020b).

[2] Some CAHPS items ask respondents to rate aspects of their care on a 0–10 scale. There are known differences in the 0–10 scale use by certain demographic groups (Mayer et al., 2016), as explained in Appendix 5. Thus, these items are not used to compare trends in scores across groups.

the measures included in this analysis are three patient experience composite measures (*Getting Needed Care*, *Getting Care Quickly*, and *Customer Service*)[3] and a single item that asks if beneficiaries have been immunized for the flu in the last year (*Annual Flu Vaccine*). During the timeframe for this analysis, the CAHPS survey underwent a revision: version 4.0 was used through 2016, and version 5.0 was used starting in 2017. Based on the results of a randomized controlled experiment, we adjusted mean scores from version 5.0 to match scores from version 4.0 (Beckett et al., 2019).

Clinical care data were gathered through medical records and insurance claims or encounter data for hospitalizations, medical office visits, and procedures. These data, which are collected each year from MA plans nationwide, are part of the Healthcare Effectiveness Data and Information Set (HEDIS®).[4] Although the annual flu vaccination measure is a HEDIS measure, it is collected via the Medicare CAHPS survey and thus is included with the patient experience measures in this report. Whereas all patient experience measures are applicable to beneficiaries aged 18 years and older, certain HEDIS measures apply to beneficiaries in a more-limited age range, as noted throughout the report. For this report, we assembled a data set containing beneficiary-level data for all HEDIS years from 2009 through 2018. Because HEDIS measures get added, dropped, or substantially changed over the years, this analysis was limited to the seven measures that were consistently available and similarly defined across the 10 HEDIS years, 2009–2018. Specifically, the seven HEDIS measures included in this analysis are

- *Continuous Beta-Blocker Treatment*
- *Diabetes Care—Eye Exam*
- *Diabetes Care—Kidney Disease Monitoring*
- *Rheumatoid Arthritis Management*
- *Follow-Up After Hospital Stay for Mental Illness* (within 30 days of discharge)
- *Engagement of Alcohol or Other Drug Treatment*
- *Older Adults' Access to Preventive/Ambulatory Services*.

Case-mix adjustment of the CAHPS composite measures accounts for shifts in case-mix adjustors so that valid comparisons can be made by group both within and between years. Trend analyses of the three CAHPS composite measures were case-mix-adjusted using a standard set of adjustors (age, education, self-reported general and mental health, proxy response, eligibility for a low-income subsidy to purchase prescription medication, and dual eligibility for Medicare/Medicaid).[5] Trend analyses of the *Annual Flu Vaccine* measure and all other HEDIS measures were not case-mix-adjusted, in keeping with how these measures are officially scored.

For comparisons by race and ethnicity, scores are provided for Asian or Pacific Islander (API), Black, Hispanic, and White beneficiaries. These racial and ethnic groups were chosen because enough information was available to describe the experiences of beneficiaries in these groups. For comparisons by geography, beneficiaries were classified as living in a rural or urban area based on the zip code of their mailing address and the corresponding Census Bureau core-based statistical area (U.S. Census Bureau, 2016). Core-based statistical areas consist of the county or counties associated with at least one

[3] Composite measures summarize, through averaging, the answers to two or more related CAHPS survey items.
[4] Detailed information about these data can be found on the National Committee for Quality Assurance's HEDIS webpage (National Committee for Quality Assurance, undated b).
[5] Adjustment for Asian language survey completion was added as a case-mix adjustor in 2018. Because language is closely tied to race and ethnicity, it is not used in trend analyses of CAHPS measures by race and ethnicity. For consistency, it was omitted from the trend analyses of CAHPS measures by sex and geography as well.

core urban area plus adjacent counties having a high degree of social and economic integration with the core. Metropolitan statistical areas contain a core urban area of 50,000 or more population. Micropolitan statistical areas contain a core urban area of at least 10,000 but less than 50,000 population. For this report, any beneficiary residing within a metropolitan statistical area was classified as an urban resident; any beneficiary living in a micropolitan statistical area or outside of a core-based statistical area was classified as a rural resident.

Table 1 presents information about sample sizes and the distribution of race and ethnicity for each of the four patient experience and seven clinical care measures. Table 2 presents information about sample sizes and the distribution of sex and geography for each of these measures.

Data Displays

Section I of the report provides paired bar graphs showing scores for API, Black, Hispanic, and White beneficiaries on each of the patient experience and clinical care measures in 2009 and 2018. Section II provides paired bar graphs showing scores for females and males on each measure in 2009 and 2018. Section III provides paired bar graphs showing scores for rural and urban residents on each measure in 2009 and 2018.

A group's score represents the percentage of the best possible score for that measure. For example, consider a measure for which the best possible score is 4 and the worst possible score is 1. If a given group's score on that measure is 3.5, then that group's score on a 0–100 scale is ([3.5−1]/[4−1])*100 = 83.3. On the 0–100 scale that is used for all measures, differences of 1 point are considered "small," differences of 3 points are considered "medium," and differences of 5 points or more are considered "large" (Quigley et al., 2018).

For each paired bar graph, comments are provided on (1) group differences that existed in 2009, (2) group differences that remained in 2018, (3) how scores changed for each group over time, and (4) how inequities between groups changed over time. In comments about group differences that existed in 2009 and 2018—i.e., cross-sectional comparisons—differences that are not statistically significant or that are statistically significant but less than 3 points in magnitude on a 0–100 scale are distinguished from differences that are both statistically significant and 3 or more points in magnitude. In comments about how scores and inequities changed over time, only differences that are statistically significant and 1 point or larger are discussed; differences over time that are not statistically significant or that are statistically significant but less than 1 point (before rounding) are treated as indicative of no change. If scores for two groups being compared did not differ ($p < 0.05$) in either 2009 or 2018, commentary about how inequities changed over time is omitted.

The scores presented in the paired bar graphs and discussed in the accompanying comments are based on linear regression models (one per measure) that estimated and tested initial and ending differences between groups cross-sectionally, changes in measure scores over time for each group, and differences in differences-by-group over time to assess narrowing or widening of inequities. For the purpose of visualizing changes in both scores and inequities over time, line graphs (one per measure) were created that show scores over time for each group relative to the score for the reference group (White beneficiaries for the comparisons by race and ethnicity, male beneficiaries for the comparisons by sex, and urban residents for the comparisons by geography) in 2009. These line graphs are presented in Appendices 1–3. Finally, scores by racial and ethnic group, sex, and geography are provided for each

measure from 2009 to 2018 in Appendix 4. Additional information about the regression models on which the bar and line graphs are based is provided in Appendix 5.

Summary of Findings: Trends in Racial and Ethnic Inequities in Health Care in Medicare Advantage

Patient Experience Measures

All Racial and Ethnic Minority Groups Versus White Beneficiaries. In 2009, scores for API, Black, and Hispanic beneficiaries were lower than scores for White beneficiaries on the measures of *Getting Needed Care*, *Getting Care Quickly*, and *Customer Service*. In 2009, the score for API beneficiaries on the *Annual Flu Vaccine* measure was 7 points higher than the score for White beneficiaries, whereas scores for Black and Hispanic beneficiaries on this measure were 16 points lower than the score for White beneficiaries.

API Versus White Beneficiaries. A pattern of higher scores for API beneficiaries relative to White beneficiaries on the *Annual Flu Vaccine* measure changed little from 2009 to 2018, as did patterns of lower scores for API beneficiaries relative to White beneficiaries on the *Getting Care Quickly* and *Customer Service* measures. Scores on *Getting Needed Care* decreased from 2009 to 2018 at a steeper rate for API beneficiaries than for White beneficiaries. Although differences in scale use complicate cross-sectional comparisons of scores on CAHPS composite measures for API versus other beneficiaries (explained in detail in Appendix 5), the interpretation of trends over time is unaffected by such considerations. Thus, the steeper decline in *Getting Needed Care* for API beneficiaries relative to White beneficiaries likely reflects a growing inequity.

Black Versus White Beneficiaries. For two patient experience measures, scores for Black beneficiaries improved more than scores for White beneficiaries. For the other two patient experience measures, scores for White beneficiaries decreased while scores for Black beneficiaries either increased or remained about the same. This divergence in trends resulted in the elimination of two small-to-moderate inequities and the reduction, by a third, of two large inequities.

Hispanic Versus White Beneficiaries. The inequities that Hispanic beneficiaries faced in 2009 on the measures of *Getting Needed Care*, *Getting Care Quickly*, and *Customer Service* changed little from 2009 to 2018. However, scores for Hispanic beneficiaries on the *Annual Flu Vaccine* measure increased more than scores for White beneficiaries on this measure, resulting in the reduction, by more than a third, of an initially large inequity.

Clinical Care Measures

API Versus White Beneficiaries. In 2009, scores for API versus White beneficiaries were better on two of the seven clinical care measures (in one case, by more than 10 points), worse for two measures, and similar for the other three measures. Scores for API beneficiaries improved on five of the clinical care measures and worsened on one. In one instance, the score for API beneficiaries improved more than the score for White beneficiaries; in another instance, the score for API beneficiaries improved less than the score for White beneficiaries. The result was that in 2018, scores for API beneficiaries were better than scores for White beneficiaries on four measures and worse on three measures. All in all, scores for API relative to White beneficiaries were not consistently better or worse in 2009 or 2018.

Black Versus White Beneficiaries. In 2009, scores on five of the seven clinical care measures were worse for Black beneficiaries than for White beneficiaries. Three of these five inequities were large; one exceeded 15 points. From 2009 to 2018, scores for Black beneficiaries improved for five of the clinical

care measures and worsened for two. In three instances, scores for Black beneficiaries improved more than scores for White beneficiaries, resulting in the elimination of an initially large inequity, an initially moderate inequity, and an initially small inequity by 2018 (with scores for Black beneficiaries surpassing those for White beneficiaries in the last instance). By 2018, scores for Black versus White beneficiaries remained worse on two of the clinical care measures (much worse in one case: a 13-point deficit), were better for two measures, and were similar for the other three measures.

Hispanic Versus White Beneficiaries. In 2009, scores on all seven clinical care measures were worse for Hispanic beneficiaries than for White beneficiaries. Four of those differences were large (5 points or more), including a difference that exceeded 15 points. Scores for Hispanic beneficiaries improved for six of the seven clinical care measures and decreased for one; four of the improvements exceeded 10 points. Large improvements for Hispanic beneficiaries relative to White beneficiaries from 2009 to 2018 resulted in the elimination of inequities on five of the seven clinical care measures, including three for which scores for Hispanic beneficiaries eventually surpassed those for White beneficiaries. For the other two measures, differences between Hispanic and White beneficiaries that existed in 2009 were reduced by about 1 point each by 2018.

Summary of Findings: Trends in Inequities by Sex in Health Care in Medicare Advantage

Patient Experience Measures

In 2009, differences between male and female beneficiaries on patient experience measures were small and mixed. Female beneficiaries had higher scores than males on *Getting Care Quickly* and *Customer Service*, similar scores on *Getting Needed Care*, and better scores on the *Annual Flu Vaccine* measure. This pattern of small, mixed differences did not change appreciably over the 10-year timeframe for this analysis.

Clinical Care Measures

In 2009, female beneficiaries had generally higher scores on the clinical care measures than male beneficiaries. The two largest differences were observed for *Follow-Up After Hospitalization for Mental Illness* (8-point advantage for female beneficiaries) and *Diabetes Care—Eye Exam* (5-point advantage for female beneficiaries). Differences between male and female beneficiaries in 2018 were generally similar to ones observed in 2009 for all but two clinical care measures. The two exceptions were *Continuous Beta-Blocker Treatment* and *Rheumatoid Arthritis Management*, for which improvements in scores were at least 1 point greater for male beneficiaries than for female beneficiaries. This disparate trend on these measures resulted in reductions in the extent to which scores were better for female than for male beneficiaries.

Summary of Findings: Trends in Rural-Urban Inequities in Health Care in Medicare Advantage

In 2009, scores on one patient experience and all clinical care measures were lower for rural residents than for urban residents; deficits of more than 10 points were observed for *Diabetes Care—Eye Exam*, *Rheumatoid Arthritis Management*, and *Annual Flu Vaccine*. From 2009 to 2018, there was dramatic improvement in scores for rural residents on the *Annual Flu Vaccine* measure as well as on six of the seven clinical care measures; these improvements were considerably larger than improvements observed for urban residents. In many of these cases, an initially large inequity was eliminated due to these disparate trends. One exception to this pattern involves the *Engagement of Alcohol or Other Drug Treatment* measure, the one measure on which scores for rural beneficiaries were higher than scores for urban residents in 2009. For this measure, scores declined for both rural and urban residents, but the

decline was steeper for rural than for urban residents. As a result of these dissimilar trends, scores for rural and urban residents on *Engagement of Alcohol or Other Drug Treatment* ended up similar in 2018.

Conclusions

Trends in Racial and Ethnic Inequities in Patient Experience. Substantial reductions occurred in what were very large inequities for Black and Hispanic beneficiaries on the *Annual Flu Vaccine* measure in 2009. Progress still remains to be made, though, as inequities for these groups were not entirely eliminated. Substantial progress in the reduction of inequities in patient experience for Black beneficiaries was also observed, although there is still room for improvement for this group on *Getting Care Quickly*. There was little progress made in the reduction of inequities in patient experience for Hispanic beneficiaries, and scores on *Getting Needed Care* declined faster for Asian and Pacific Islander beneficiaries than for any other racial or ethnic group. These, too, are areas in need of continued attention.

Trends in Racial and Ethnic Inequities in Clinical Care. There was substantial improvement for Black and Hispanic beneficiaries in the area of clinical care, both absolutely and relative to White beneficiaries. These trends resulted in a substantial reduction in what were large inequities on almost all clinical care measures analyzed. Still, there were some large shortfalls that remained in 2018, most notably for *Follow-Up After Hospitalization for Mental Illness*. On that measure, 2018 scores for Black beneficiaries were still 13–20 points worse than scores for API, Hispanic, and White beneficiaries.

Trends in Inequities by Sex. Gaps between female and male beneficiaries on the patient experience and clinical care measures analyzed for this report were generally small and mixed in 2009, sometimes favoring female beneficiaries and sometimes favoring male beneficiaries. These patterns of small inequities by sex generally did not change over the 10-year period covered by this analysis.

Trends in Rural-Urban Inequities. Finally, improvements for rural residents on rates of flu vaccination and scores on six of seven HEDIS measures analyzed resulted in the substantial reduction or elimination of what were often large inequities on these measures in 2009.

Further investigation is needed to understand the reason for the large improvements in care that occurred for Black and Hispanic beneficiaries and for rural residents, since lessons learned from such an investigation could potentially be applied to ensure continued progress toward greater health care equity for all beneficiaries.

Table 1. Sample Sizes and Distribution of Race and Ethnicity by Measure, 2009–2018

	N	% API	% Black	% Hispanic	% White	% Other
Patient Experience Measures[†]						
Getting Needed Care	1,424,920	3.7	9.0	12.7	72.3	2.3
Getting Care Quickly	1,662,061	3.6	9.8	12.4	71.9	2.3
Customer Service	761,641	3.8	11.1	15.2	67.3	2.6
Annual Flu Vaccine	1,852,880	3.8	9.7	12.8	71.4	2.3
Clinical Care Measures[‡]						
Continuous Beta-Blocker Treatment	449,728	3.0	9.9	12.9	72.0	2.2
Diabetes Care—Eye Exam	3,281,656	4.4	15.4	18.5	59.1	2.6
Diabetes Care—Kidney Disease Monitoring	3,286,962	4.4	15.5	18.7	58.8	2.6
Rheumatoid Arthritis Management	1,459,770	2.8	12.4	16.8	65.5	2.5
Follow-Up After Hospital Stay for Mental Illness (within 30 days of discharge)	501,875	1.5	15.5	14.7	63.8	4.5
Engagement of Alcohol or Other Drug Treatment	2,717,209	1.7	14.0	17.1	63.8	3.3
Older Adults' Access to Preventive/Ambulatory Services	105,240,162	4.0	9.0	11.6	73.4	1.9

NOTES: API = Asian or Pacific Islander. Sample sizes and distributions reflect data from 2009 to 2018. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races. The "Other" category includes non-Hispanic American Indian/Alaska Native and Multiracial beneficiaries; because these groups are small and estimates of their scores are imprecise, we do not include them in trend reports.

[†] Percentages are weighted for sampling and nonresponse. Sample sizes are unweighted.

[‡] Percentages are weighted for sampling. Sample sizes are unweighted.

Table 2. Sample Sizes and Distribution of Sex and Geography by Measure, 2009–2018

	Sex			Geography		
	N	% Female	% Male	N	% Rural	% Urban
Patient Experience Measures†						
Getting Needed Care	1,484,974	56.4	43.6	1,484,974	15.0	85.0
Getting Care Quickly	1,747,535	57.0	43.0	1,747,535	15.3	84.7
Customer Service	792,606	56.6	43.4	792,606	14.5	85.5
Annual Flu Vaccine	1,907,766	56.7	43.3	1,907,766	15.6	84.4
Clinical Care Measures‡						
Continuous Beta-Blocker Treatment	472,668	45.2	54.8	467,834	15.4	84.6
Diabetes Care—Eye Exam	3,390,092	51.4	48.6	3,364,167	17.1	82.9
Diabetes Care—Kidney Disease Monitoring	3,403,102	51.4	48.6	3,380,537	16.9	83.1
Rheumatoid Arthritis Management	1,521,905	76.4	23.6	1,509,730	15.6	84.4
Follow-Up After Hospital Stay for Mental Illness (within 30 days of discharge)	517,309	56.5	43.5	514,218	14.6	85.4
Engagement of Alcohol or Other Drug Treatment	2,829,088	45.5	54.5	2,806,966	10.9	89.1
Older Adults' Access to Preventive/Ambulatory Services	110,260,713	57.3	42.7	109,140,057	14.3	85.7

NOTES: Sample sizes and distributions reflect data from 2009 to 2018.

† Percentages are weighted for sampling and nonresponse. Sample sizes are unweighted.

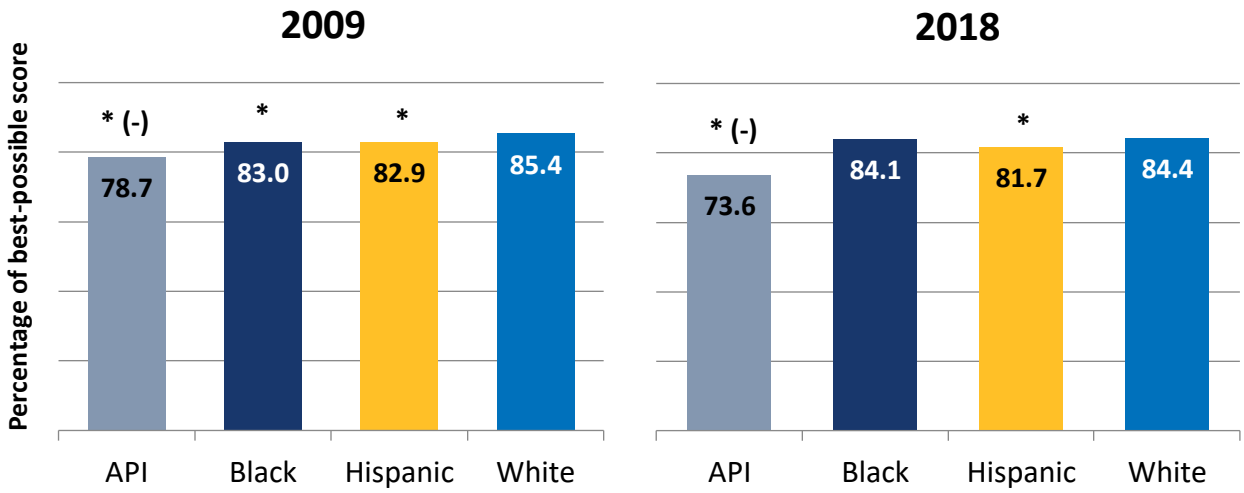
‡ Percentages are weighted for sampling. Sample sizes are unweighted.

SECTION I:

Trends in Racial and Ethnic Inequities in Health Care in Medicare Advantage: 2009–2018

Getting Needed Care

Percentage of the best-possible score (on a 0–100 scale) earned on how easy it is for patients to get needed care,† by race and ethnicity, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In 2009, API, Black, and Hispanic beneficiaries reported worse experiences getting needed care than White beneficiaries. The difference between API beneficiaries and White beneficiaries was greater than 3 points on a 0–100 scale. The difference between Black beneficiaries and White beneficiaries was less than 3 points, as was the difference between Hispanic beneficiaries and White beneficiaries.
- In 2018, API and Hispanic beneficiaries reported worse experiences getting needed care than White beneficiaries. The difference between API beneficiaries and White beneficiaries was greater than 3 points on a 0–100 scale. The difference between Hispanic beneficiaries and White beneficiaries was less than 3 points. In 2018, Black beneficiaries reported experiences with getting needed care that were similar to the experiences White beneficiaries reported.
- From 2009 to 2018, scores on this measure decreased by about 5 points for API, and by about 1 point each for Hispanic beneficiaries and White beneficiaries. Scores for Black beneficiaries were similar in 2009 and 2018.
- From 2009 to 2018, the gap between API beneficiaries and White beneficiaries widened by about 4 points. The gap between Black beneficiaries and White beneficiaries narrowed by about 2 points. The gap between Hispanic beneficiaries and White beneficiaries remained about the same.

***** Significantly different from the score for White beneficiaries ($p < 0.05$).

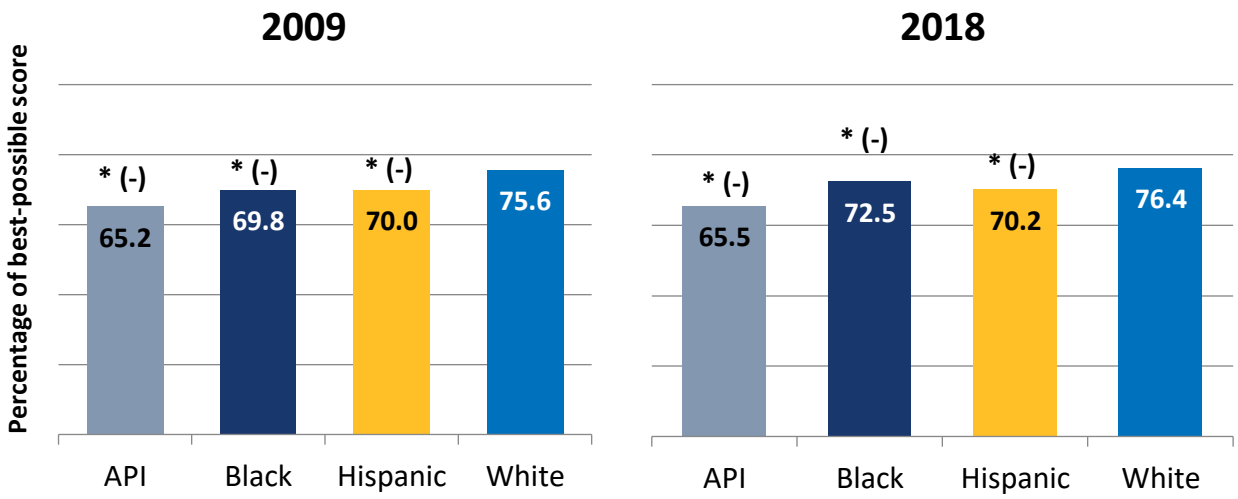
For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

† This includes how often in the last six months patients got appointments with specialists as soon as they needed them and how easy it was to get needed care, tests, or treatment.

Getting Appointments and Care Quickly

Percentage of the best-possible score (on a 0–100 scale) earned on how quickly patients get appointments and care,† by race and ethnicity, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In both 2009 and 2018, API, Black, and Hispanic beneficiaries reported worse experiences getting appointments and care quickly than White beneficiaries. In every case, the difference was greater than 3 points on a 0–100 scale.
- From 2009 to 2018, scores on this measure increased by about 3 points for Black beneficiaries. Scores for API beneficiaries, Hispanic beneficiaries, and White beneficiaries were similar in 2009 and 2018.
- From 2009 to 2018, the gap between Black beneficiaries and White beneficiaries narrowed by about 2 points. The gap between API beneficiaries and White beneficiaries remained about the same, as did the gap between Hispanic beneficiaries and White beneficiaries.

***** Significantly different from the score for White beneficiaries ($p < 0.05$).

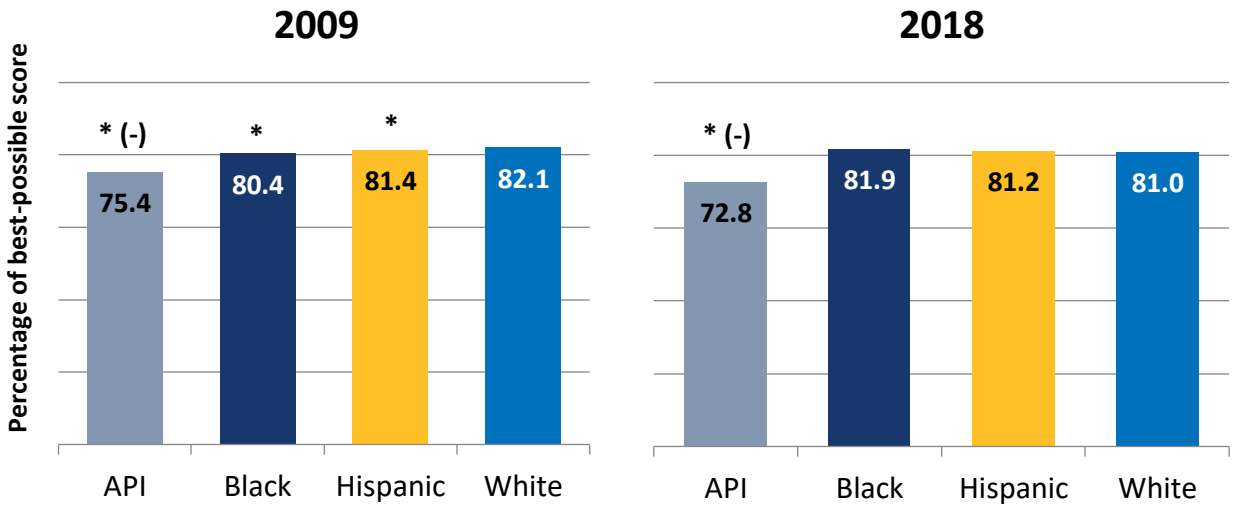
For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

† This includes how often in the last six months patients got care that was needed right away, as well as how easy it was to get appointments for checkups and routine care.

Customer Service

Percentage of the best-possible score (on a 0–100 scale) earned on three aspects of customer service,† by race and ethnicity, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In 2009, API, Black, and Hispanic beneficiaries reported worse experiences with customer service than White beneficiaries. The difference between API beneficiaries and White beneficiaries was greater than 3 points on a 0–100 scale. The difference between Black beneficiaries and White beneficiaries was less than 3 points, as was the difference between Hispanic beneficiaries and White beneficiaries.
- In 2018, API beneficiaries reported worse experiences with customer service than White beneficiaries. The difference was greater than 3 points on a 0–100 scale. In 2018, Black beneficiaries and Hispanic beneficiaries reported experiences with customer service that were similar to the experiences White beneficiaries reported.
- From 2009 to 2018, scores on this measure decreased by about 3 points for API beneficiaries and increased by about 2 points for Black beneficiaries. Scores for Hispanic beneficiaries and White beneficiaries were about the same in 2009 and 2018.
- The gap that existed between Black beneficiaries and White beneficiaries in 2009 no longer existed in 2018. The gap between API beneficiaries and White beneficiaries remained about the same, as did the gap between Hispanic beneficiaries and White beneficiaries.

***** Significantly different from the score for White beneficiaries ($p < 0.05$).

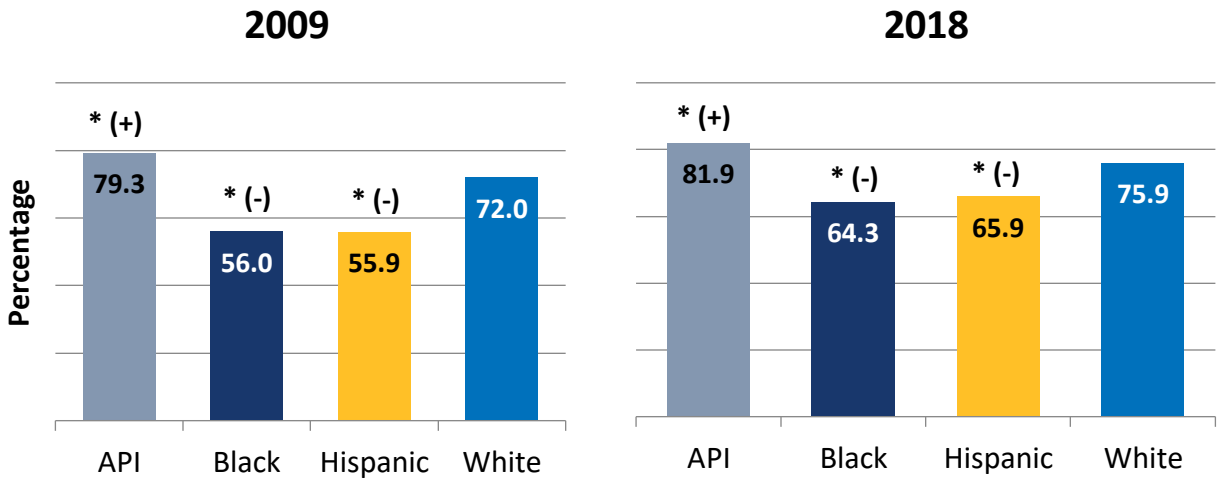
For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

† This includes how often in the last six months health plan customer service staff provided the information or help that beneficiaries needed, how often beneficiaries were treated with courtesy and respect, and how often forms from the health plan were easy to fill out.

Annual Flu Vaccine

Percentage of MA enrollees who got a vaccine (flu shot), by race and ethnicity, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In both 2009 and 2018, API beneficiaries were more likely than White beneficiaries to have received the flu vaccine. In each year, the difference between API beneficiaries and White beneficiaries was greater than 3 percentage points. In both 2009 and 2018, Black beneficiaries and Hispanic beneficiaries were less likely than White beneficiaries to have received the flu vaccine. In each year, the difference between Black beneficiaries and White beneficiaries was greater than 3 percentage points, as was the difference between Hispanic beneficiaries and White beneficiaries.
- From 2009 to 2018, scores on this measure increased by about 3 points for API beneficiaries, by about 8 points for Black beneficiaries, by about 10 points for Hispanic beneficiaries, and by about 4 points for White beneficiaries.
- From 2009 to 2018, the gap between Black beneficiaries and White beneficiaries narrowed by about 4 points. The gap between Hispanic beneficiaries and White beneficiaries narrowed by about 6 points. The gap between API beneficiaries and White beneficiaries remained about the same.

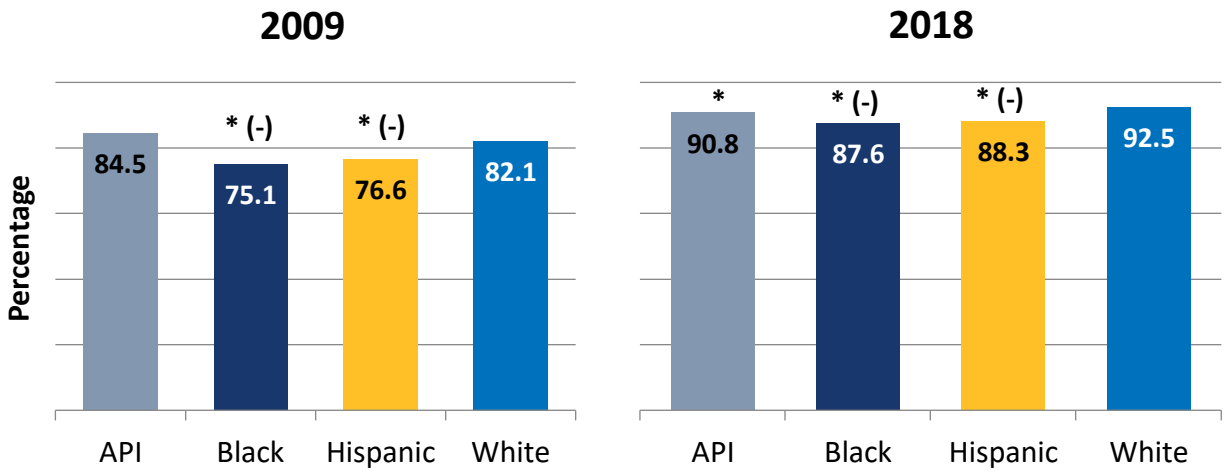
***** Significantly different from the score for White beneficiaries ($p < 0.05$).

For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

Continuous Beta-Blocker Treatment

Percentage of MA enrollees aged 18 years and older who were hospitalized and discharged with a diagnosis of acute myocardial infarction (AMI) who received continuous beta-blocker treatment for six months after discharge, by race and ethnicity, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In 2009, API beneficiaries who were hospitalized and discharged with a diagnosis of AMI were about as likely as White beneficiaries who were hospitalized and discharged with a diagnosis of AMI to have received continuous beta-blocker treatment for six months after discharge. In 2018, API beneficiaries who were hospitalized and discharged with a diagnosis of AMI were less likely than White beneficiaries to have received continuous beta-blocker treatment for six months after discharge. The difference between API beneficiaries and White beneficiaries in 2018 was less than 3 percentage points. In both 2009 and 2018, Black beneficiaries and Hispanic beneficiaries who were hospitalized and discharged with a diagnosis of AMI were less likely than White beneficiaries who were hospitalized and discharged with a diagnosis of AMI to have received continuous beta-blocker treatment for six months after discharge. In each year, the difference between Black beneficiaries and White beneficiaries was greater than 3 percentage points, as was the difference between Hispanic beneficiaries and White beneficiaries.
- From 2009 to 2018, scores on this measure increased by about 6 points for API beneficiaries, by about 13 points for Black beneficiaries, by about 12 points for Hispanic beneficiaries, and by about 10 points for White beneficiaries.
- The steeper increase in scores for White beneficiaries relative to API beneficiaries resulted in an inequity in 2018 that was not present in 2009. The gap between Black beneficiaries and White beneficiaries remained about the same, as did the gap between Hispanic beneficiaries and White beneficiaries.

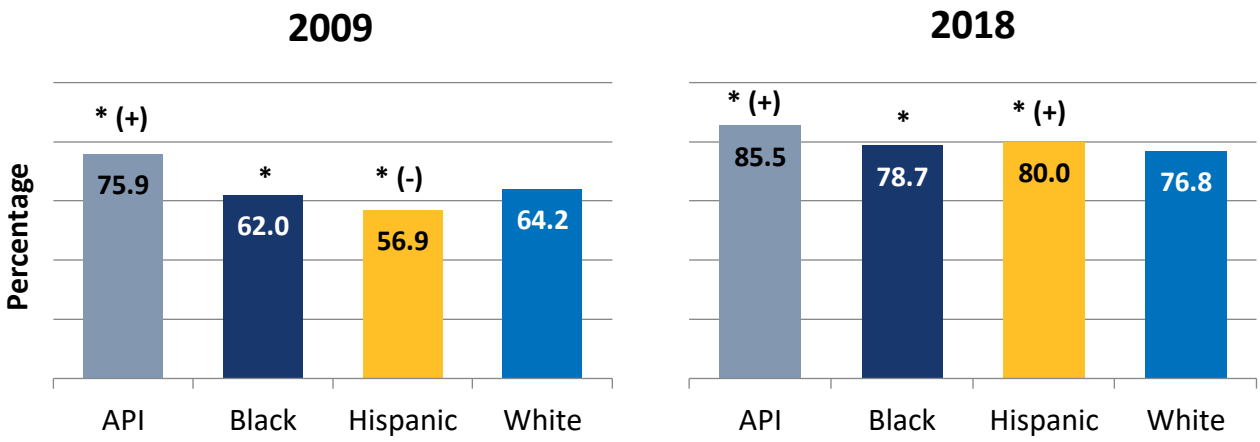
***** Significantly different from the score for White beneficiaries ($p < 0.05$).

For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

Diabetes Care—Eye Exam

Percentage of MA enrollees aged 18 to 75 years with diabetes (type 1 and type 2) who had an eye exam (retinal) in the past year, by race and ethnicity, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In both 2009 and 2018, API beneficiaries with diabetes were more likely than White beneficiaries with diabetes to have had an eye exam in the past year. In each year, the difference between API beneficiaries and White beneficiaries was greater than 3 percentage points. In 2009, Black beneficiaries with diabetes were less likely than White beneficiaries with diabetes to have had an eye exam in the past year. In 2018, Black beneficiaries with diabetes were more likely than White beneficiaries with diabetes to have had an eye exam in the past year. In each year, the difference between Black beneficiaries and White beneficiaries was less than 3 percentage points. In 2009, Hispanic beneficiaries with diabetes were less likely than White beneficiaries with diabetes to have had an eye exam in the past year. In 2018, Hispanic beneficiaries with diabetes were more likely than White beneficiaries with diabetes to have had an eye exam in the past year. In each year, the difference between Hispanic beneficiaries and White beneficiaries was greater than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 10 points for API beneficiaries, by about 17 points for Black beneficiaries, by about 23 points for Hispanic beneficiaries, and by about 13 points for White beneficiaries.
- Because of the steeper increase in scores for Black and Hispanic beneficiaries relative to White beneficiaries, inequities favoring White beneficiaries in 2009 reversed to favor Black and Hispanic beneficiaries by 2018. The gap between API beneficiaries and White beneficiaries remained about the same.

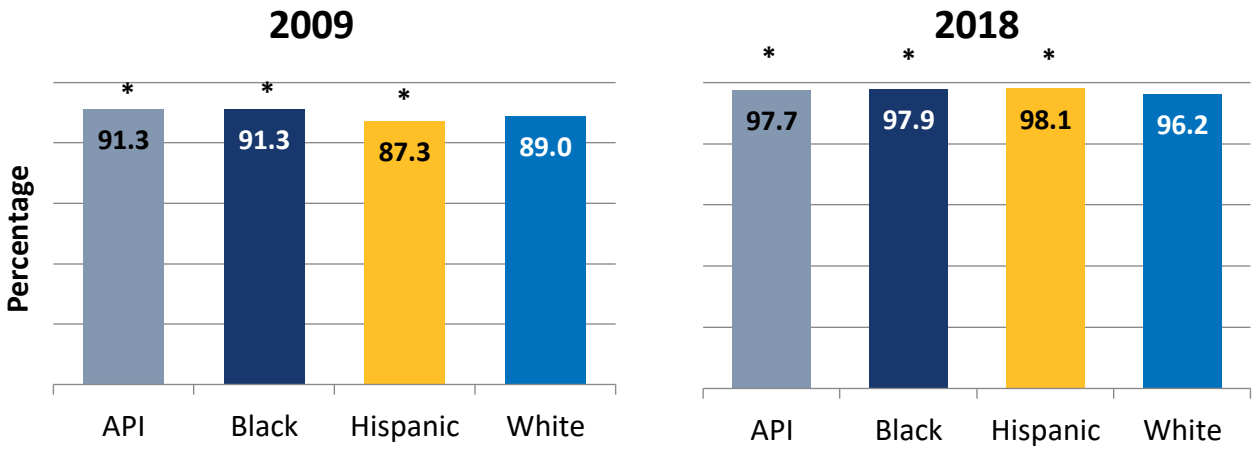
***** Significantly different from the score for White beneficiaries ($p < 0.05$).

For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

Diabetes Care—Kidney Disease Monitoring

Percentage of MA enrollees aged 18 to 75 years with diabetes (type 1 and type 2) who had medical attention for nephropathy in the past year, by race and ethnicity, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In both 2009 and 2018, API beneficiaries with diabetes were more likely than White beneficiaries with diabetes to have had medical attention for nephropathy in the past year. In each year, the difference between API beneficiaries and White beneficiaries was less than 3 percentage points. In both 2009 and 2018, Black beneficiaries with diabetes were more likely than White beneficiaries with diabetes to have had medical attention for nephropathy in the past year. In each year, the difference between Black beneficiaries and White beneficiaries was less than 3 percentage points. In 2009, Hispanic beneficiaries with diabetes were less likely than White beneficiaries with diabetes to have had medical attention for nephropathy in the past year. In 2018, Hispanic beneficiaries with diabetes were more likely than White beneficiaries with diabetes to have had medical attention for nephropathy in the past year. In each year, the difference between Hispanic beneficiaries and White beneficiaries was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 6 points for API beneficiaries, by about 7 points for Black beneficiaries, by about 11 points for Hispanic beneficiaries, and by about 7 points for White beneficiaries.
- Because of the steeper increase in scores for Hispanic beneficiaries relative to White beneficiaries, an inequity favoring White beneficiaries in 2009 reversed to favor Hispanic beneficiaries by 2018. The gap between API beneficiaries and White beneficiaries remained about the same, as did the gap between Black beneficiaries and White beneficiaries.

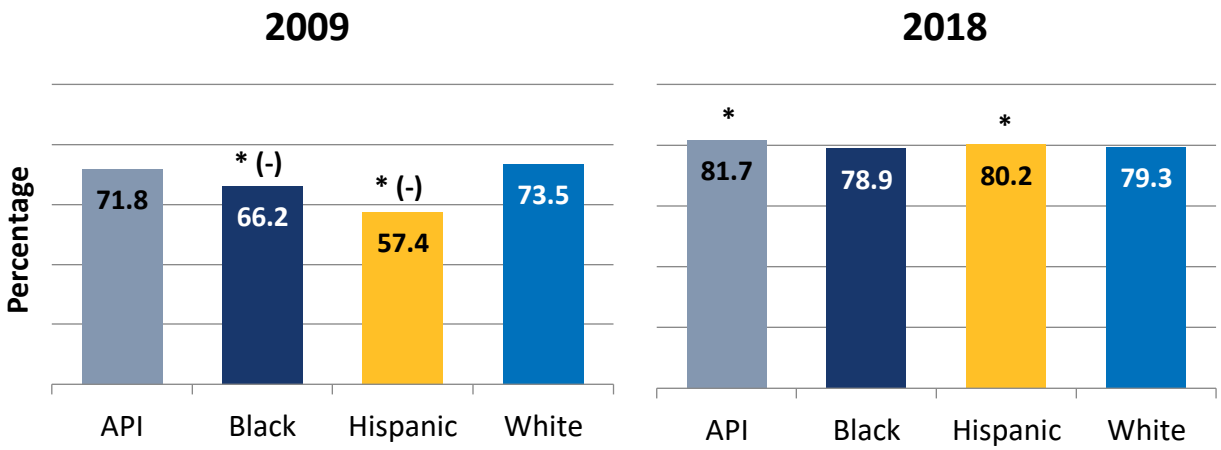
***** Significantly different from the score for White beneficiaries ($p < 0.05$).

For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

Rheumatoid Arthritis Management

Percentage of MA enrollees aged 18 years and older who were diagnosed with rheumatoid arthritis during the past year who were dispensed at least one ambulatory prescription for a DMARD, by race and ethnicity, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTES: DMARD = disease-modifying antirheumatic drug. API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In 2009, API beneficiaries who were diagnosed with rheumatoid arthritis were about as likely as White beneficiaries who were diagnosed with rheumatoid arthritis to have been dispensed at least one DMARD. In 2018, API beneficiaries who were diagnosed with rheumatoid arthritis were more likely than White beneficiaries who were diagnosed with rheumatoid arthritis to have been dispensed at least one DMARD. The difference between API beneficiaries and White beneficiaries in 2018 was less than 3 percentage points. In 2009, Black beneficiaries who were diagnosed with rheumatoid arthritis were less likely than White beneficiaries with rheumatoid arthritis to have been dispensed at least one DMARD. The difference between Black beneficiaries and White beneficiaries in 2009 was greater than 3 percentage points. In 2018, Black beneficiaries who were diagnosed with rheumatoid arthritis were about as likely as White beneficiaries who were diagnosed with rheumatoid arthritis to have been dispensed at least one DMARD. In 2009, Hispanic beneficiaries who were diagnosed with rheumatoid arthritis were less likely than White beneficiaries with rheumatoid arthritis to have been dispensed at least one DMARD. The difference between Hispanic beneficiaries and White beneficiaries in 2009 was greater than 3 percentage points. In 2018, Hispanic beneficiaries who were diagnosed with rheumatoid arthritis were more likely than White beneficiaries with rheumatoid arthritis to have been dispensed at least one DMARD. The difference between Hispanic beneficiaries and White beneficiaries in 2018 was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 10 points for API beneficiaries, by about 13 points for Black beneficiaries, by about 23 points for Hispanic beneficiaries, and by about 6 points for White beneficiaries.
- The steeper increase in scores for API beneficiaries relative to White beneficiaries resulted in an inequity in 2018 that was not present in 2009. The gap between Black beneficiaries and White beneficiaries narrowed by about 7 points, with no gap remaining in 2018. The steeper increase

in scores for Hispanic beneficiaries relative to White beneficiaries resulted in the reversal of an initially large inequity that favored White beneficiaries in 2009 but that ended up favoring Hispanic beneficiaries in 2018.

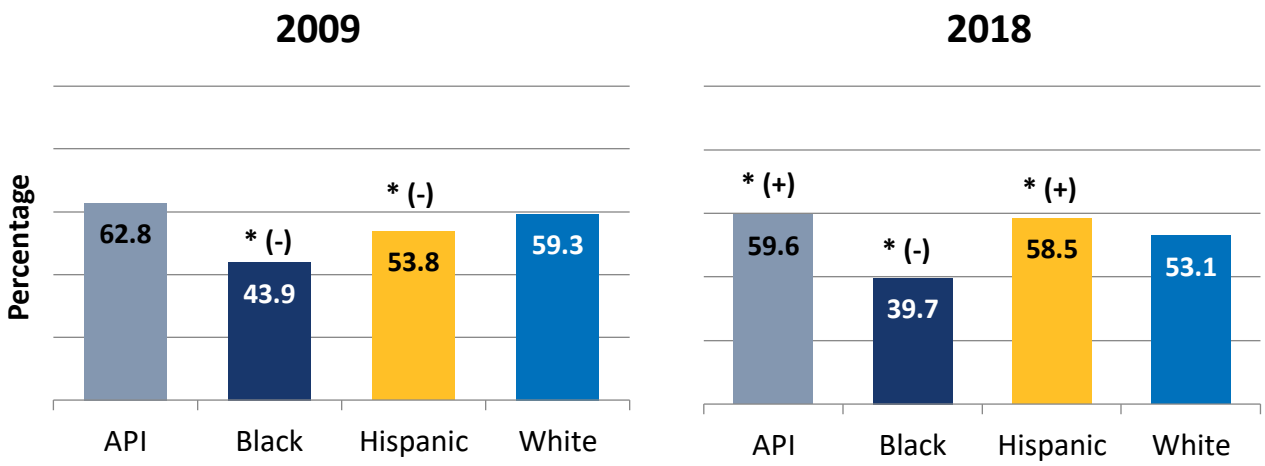
***** Significantly different from the score for White beneficiaries ($p < 0.05$).

For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

Follow-Up After Hospital Stay for Mental Illness (within 30 days of discharge)

Percentage of MA enrollees aged 18 years and older† who were hospitalized for treatment of selected mental health disorders who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 30 days of discharge, by race and ethnicity, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In 2009, API beneficiaries who were hospitalized for a mental health disorder were about as likely as White beneficiaries who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. In 2018, API beneficiaries who were hospitalized for a mental health disorder were more likely than White beneficiaries who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. The difference between API beneficiaries and White beneficiaries in 2018 was greater than 3 percentage points. In both 2009 and 2018, Black beneficiaries who were hospitalized for a mental health disorder were less likely than White beneficiaries who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. In each year, the difference between Black beneficiaries and White beneficiaries was greater than 3 percentage points. In 2009, Hispanic beneficiaries who were hospitalized for a mental health disorder were less likely than White beneficiaries who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. In 2018, Hispanic beneficiaries who were hospitalized for a mental health disorder were more likely than White beneficiaries who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. In each year, the difference between Hispanic beneficiaries and White beneficiaries was greater than 3 percentage points.
- From 2009 to 2018, scores on this measure remained about the same for API beneficiaries. From 2009 to 2018, scores on this measure decreased by about 4 points for Black beneficiaries and by

about 6 points for White beneficiaries. From 2009 to 2018, scores on this measure increased by about 5 points for Hispanic beneficiaries.

- The increase in scores for Hispanic beneficiaries and decrease in scores for White beneficiaries resulted in the reversal of an initially large inequity that favored White beneficiaries in 2009 but that ended up favoring Hispanic beneficiaries in 2018. The gap between API beneficiaries and White beneficiaries remained about the same, as did the gap between Black beneficiaries and White beneficiaries.

***** Significantly different from the score for White beneficiaries ($p < 0.05$).

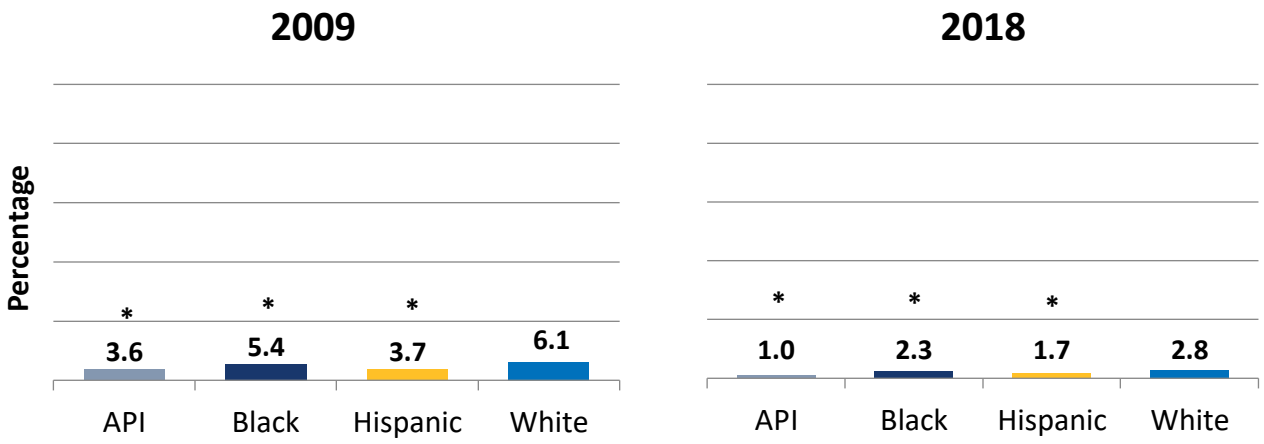
For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

† Although the lower-bound age cutoff for this HEDIS measure is six years old, the data used in this report are limited to adults.

Engagement of Alcohol or Other Drug Treatment

Percentage of MA enrollees aged 18 years and older† with a new episode of AOD dependence who initiated treatment who had two or more additional services within 30 days of the initiation visit, by race and ethnicity, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTES: AOD = alcohol or other drug. API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In both 2009 and 2018, API, Black, and Hispanic beneficiaries with a new episode of AOD dependence who initiated treatment were less likely than White beneficiaries with a new episode of AOD dependence who initiated treatment to have had two or more additional services within 30 days of their initial visit for treatment. In each year, the difference between API beneficiaries and White beneficiaries was less than 3 percentage points, as were the differences between Black beneficiaries and White beneficiaries and between Hispanic beneficiaries and White beneficiaries.
- From 2009 to 2018, scores on this measure decreased by about 3 points for API, Black, and White beneficiaries, and by about 2 points for Hispanic beneficiaries.
- From 2009 to 2018, the gap between Hispanic beneficiaries and White beneficiaries narrowed by about 1 point. The gap between API beneficiaries and White beneficiaries remained about the same, as did the gap between Black beneficiaries and White beneficiaries.

***** Significantly different from the score for White beneficiaries ($p < 0.05$).

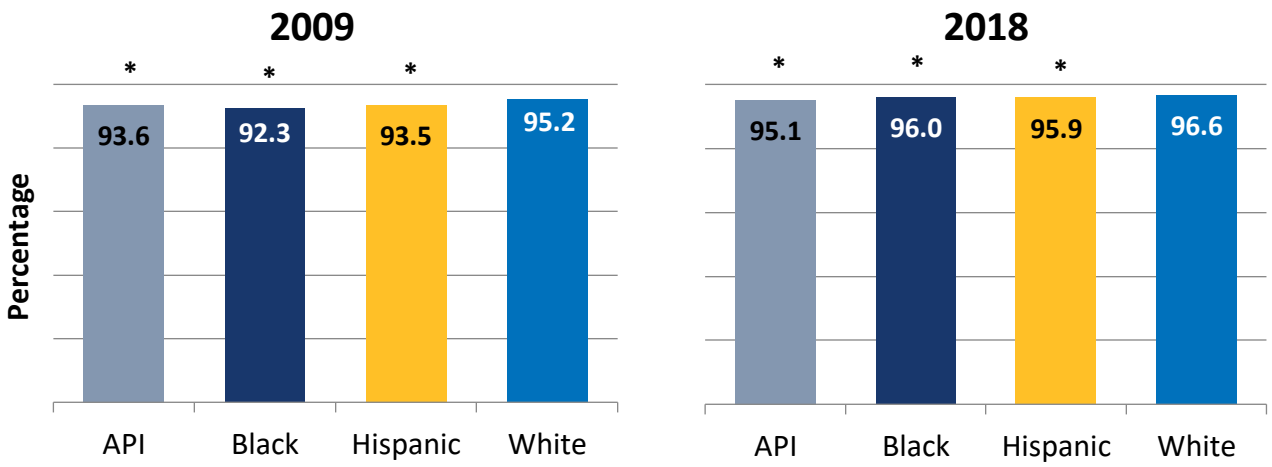
For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

† Although the lower-bound age cutoff for this HEDIS measure is 13 years old, the data used in this report are limited to adults.

Older Adults' Access to Preventive/Ambulatory Services

Percentage of MA enrollees aged 65 years and older who had an ambulatory or preventive care visit in the past year, by race and ethnicity, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTES: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Summary

- In both 2009 and 2018, API, Black, and Hispanic beneficiaries were less likely than White beneficiaries to have had an ambulatory or preventive care visit. In each year, the difference between API beneficiaries and White beneficiaries was less than 3 percentage points, as were the differences between Black beneficiaries and White beneficiaries and between Hispanic beneficiaries and White beneficiaries.
- From 2009 to 2018, scores on this measure increased by about 2 points for API beneficiaries, by about 4 points for Black beneficiaries, by about 2 points for Hispanic beneficiaries, and by about 1 point for White beneficiaries.
- From 2009 to 2018, the gap between Black beneficiaries and White beneficiaries narrowed by about 2 points, and the gap between Hispanic beneficiaries and White beneficiaries narrowed by about 1 point. The gap between API beneficiaries and White beneficiaries remained about the same.

***** Significantly different from the score for White beneficiaries ($p < 0.05$).

For statistically significant differences between White beneficiaries and racial or ethnic minority beneficiaries in a given measurement year, the following symbols are also used when applicable:

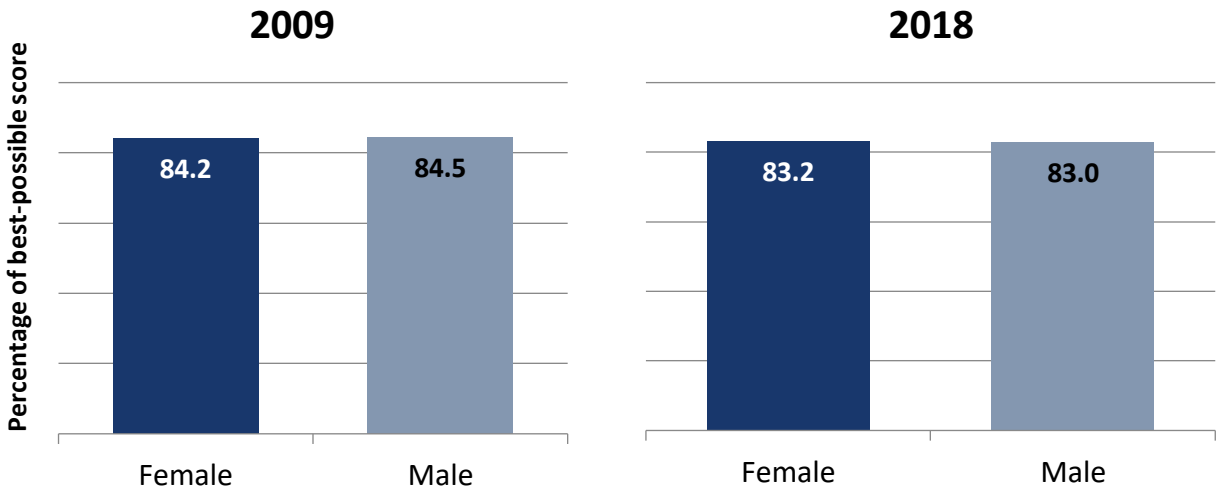
(+) Difference is equal to or larger than 3 points (before rounding) and favors the racial or ethnic minority group.
(-) Difference is equal to or larger than 3 points (before rounding) and favors White beneficiaries.

SECTION II:

Trends in Inequities by Sex in Health Care in Medicare Advantage: 2009–2018

Getting Needed Care

Percentage of the best-possible score (on a 0–100 scale) earned on how easy it is for patients to get needed care,[†] by sex, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

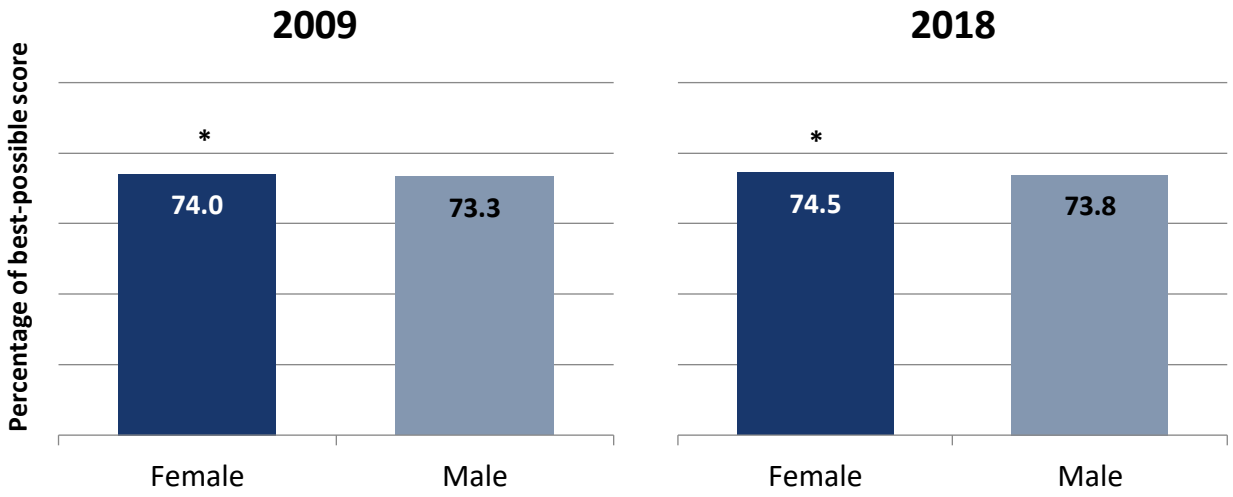
Summary

- In both 2009 and 2018, female beneficiaries reported experiences getting needed care that were similar to the experiences that male beneficiaries reported.
- From 2009 to 2018, scores on this measure decreased by about 1 point for female beneficiaries and by about 2 points for male beneficiaries.

[†] This includes how often in the last six months patients got appointments with specialists as soon as they needed them and how easy it was to get needed care, tests, or treatment.

Getting Appointments and Care Quickly

Percentage of the best-possible score (on a 0–100 scale) earned on how quickly patients get appointments and care,† by sex, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

Summary

- In both 2009 and 2018, female beneficiaries reported better experiences getting appointments and care quickly than male beneficiaries. The difference between female beneficiaries and male beneficiaries was less than 3 points on a 0–100 scale.
- Scores for both female beneficiaries and male beneficiaries were about the same in 2009 and 2018.
- From 2009 to 2018, the gap between female and male beneficiaries remained about the same.

***** Significantly different from the score for male beneficiaries ($p < 0.05$).

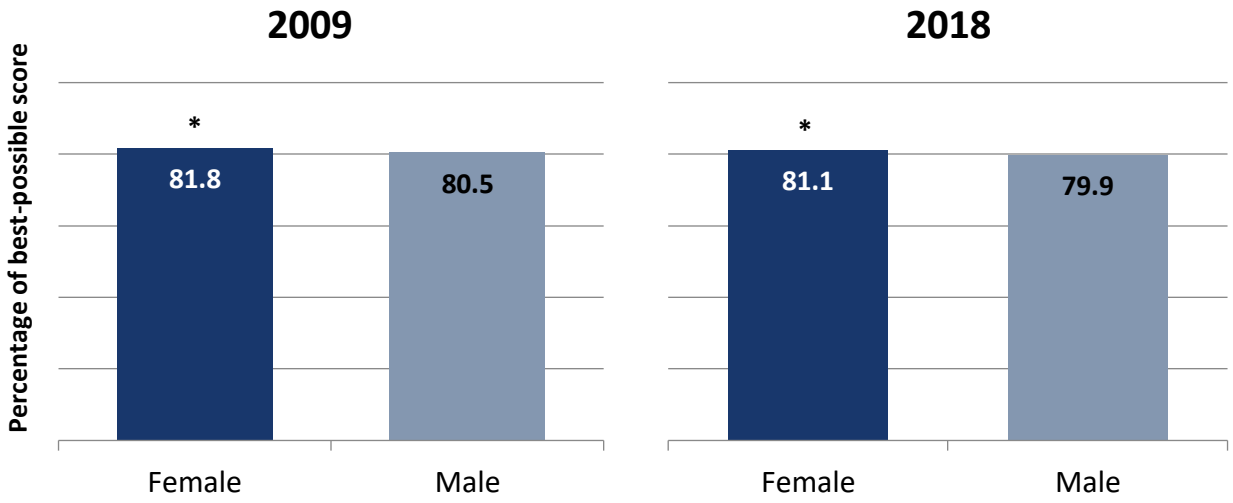
For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

† This includes how often in the last six months patients got care that was needed right away, as well as how easy it was to get appointments for checkups and routine care.

Customer Service

Percentage of the best-possible score (on a 0–100 scale) earned on three aspects of customer service,† by sex, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

Summary

- In both 2009 and 2018, female beneficiaries reported better experiences with customer service than male beneficiaries. In each year, the difference between female beneficiaries and male beneficiaries was less than 3 points on a 0–100 scale.
- Scores for both female beneficiaries and male beneficiaries were about the same in 2009 and 2018.
- From 2009 to 2018, the gap between female and male beneficiaries remained about the same.

***** Significantly different from the score for male beneficiaries ($p < 0.05$).

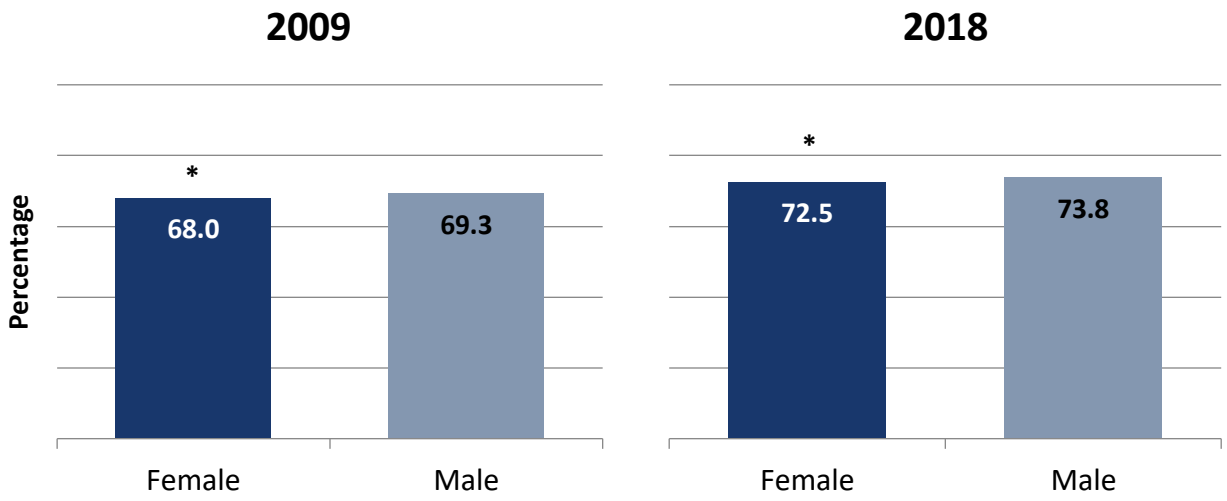
For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

† This includes how often in the last six months health plan customer service staff provided the information or help that beneficiaries needed, how often beneficiaries were treated with courtesy and respect, and how often forms from the health plan were easy to fill out.

Annual Flu Vaccine

Percentage of MA enrollees who got a vaccine (flu shot), by sex, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

Summary

- In both 2009 and 2018, female beneficiaries were less likely than male beneficiaries to have received the flu vaccine. In each year, the difference between female beneficiaries and male beneficiaries was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 5 points for both female beneficiaries and male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries remained about the same.

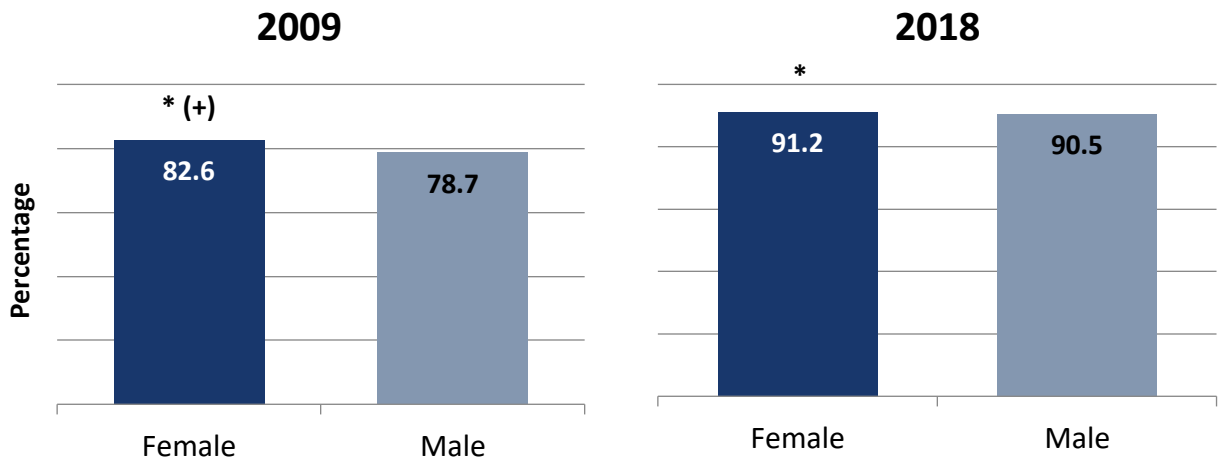
***** Significantly different from the score for male beneficiaries ($p < 0.05$).

For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

Continuous Beta-Blocker Treatment

Percentage of MA enrollees aged 18 years and older who were hospitalized and discharged with a diagnosis of acute myocardial infarction (AMI) who received continuous beta-blocker treatment for six months after discharge, by sex, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In both 2009 and 2018, female beneficiaries who were hospitalized and discharged with a diagnosis of AMI were more likely than male beneficiaries who were hospitalized and discharged with a diagnosis of AMI to have received continuous beta-blocker treatment for six months after discharge. In 2009, the difference between female beneficiaries and male beneficiaries was greater than 3 percentage points. In 2018, the difference between female beneficiaries and male beneficiaries was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 9 points for female beneficiaries and by about 12 points for male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries narrowed by about 3 points.

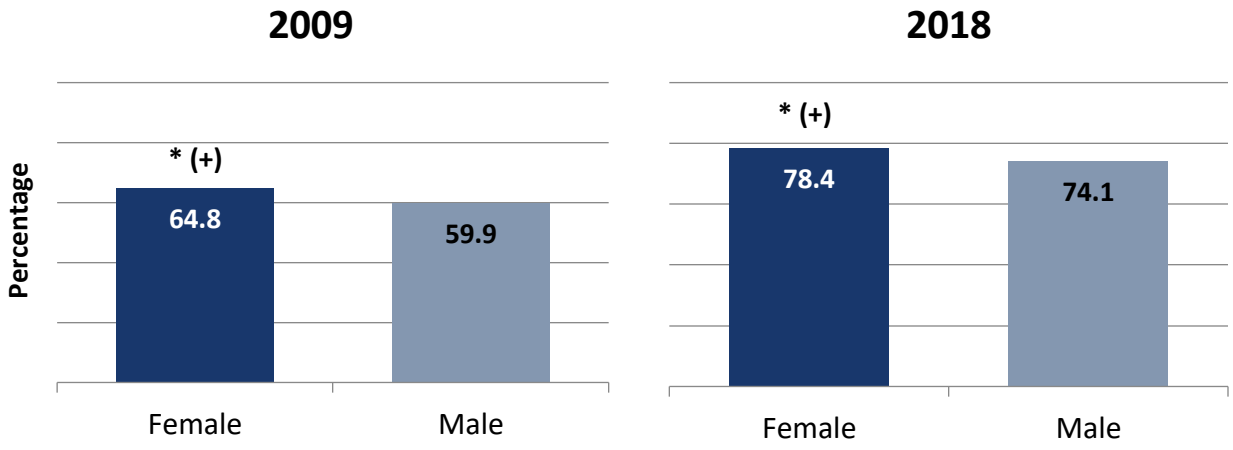
***** Significantly different from the score for male beneficiaries ($p < 0.05$).

For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

Diabetes Care—Eye Exam

Percentage of MA enrollees aged 18 to 75 years with diabetes (type 1 and type 2) who had an eye exam (retinal) in the past year, by sex, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In both 2009 and 2018, female beneficiaries with diabetes were more likely than male beneficiaries with diabetes to have had an eye exam in the past year. In each year, the difference between female beneficiaries and male beneficiaries was greater than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 14 points for both female beneficiaries and male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries remained about the same.

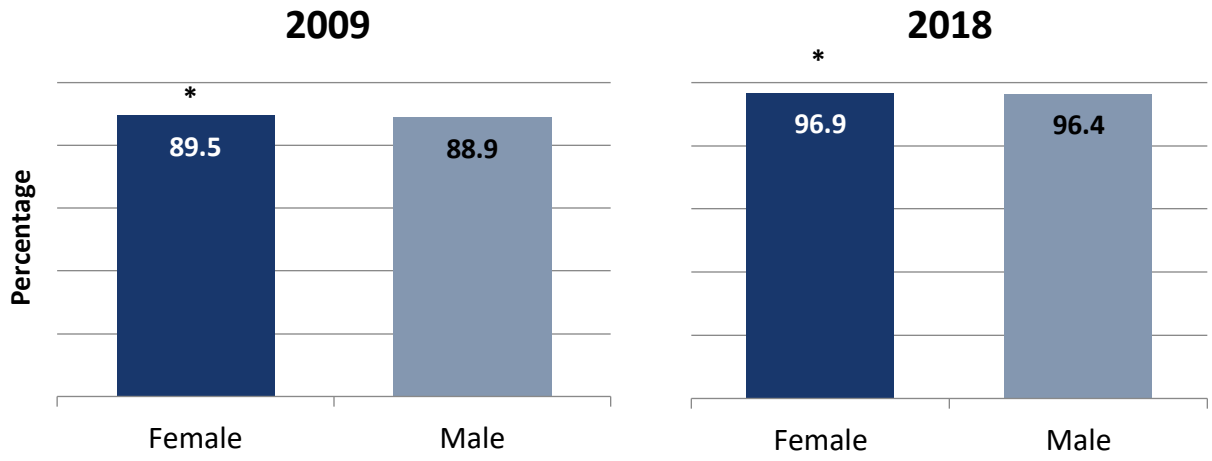
***** Significantly different from the score for male beneficiaries ($p < 0.05$).

For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

Diabetes Care—Kidney Disease Monitoring

Percentage of MA enrollees aged 18 to 75 years with diabetes (type 1 and type 2) who had medical attention for nephropathy in the past year, by sex, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In both 2009 and 2018, female beneficiaries with diabetes were more likely than male beneficiaries with diabetes to have had medical attention for nephropathy in the past year. In each year, the difference between female beneficiaries and male beneficiaries was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 7 points for female beneficiaries and by about 8 points for male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries remained about the same.

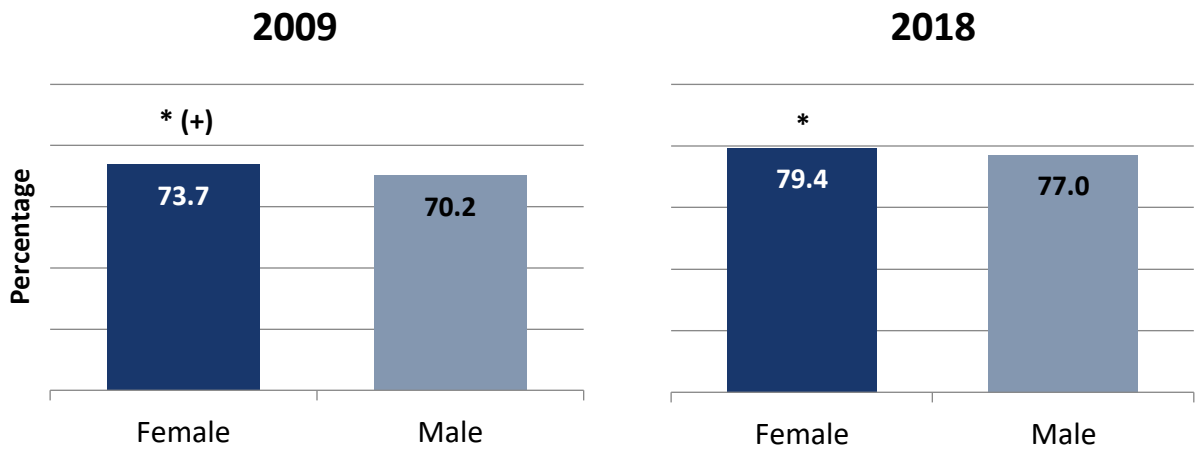
***** Significantly different from the score for male beneficiaries ($p < 0.05$).

For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

Rheumatoid Arthritis Management

Percentage of MA enrollees aged 18 years and older who were diagnosed with rheumatoid arthritis during the past year who were dispensed at least one ambulatory prescription for a DMARD, by sex, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTE: DMARD = disease-modifying antirheumatic drug.

Summary

- In both 2009 and 2018, female beneficiaries who were diagnosed with rheumatoid arthritis were more likely than male beneficiaries who were diagnosed with rheumatoid arthritis to have been dispensed at least one DMARD. In 2009, the difference between female beneficiaries and male beneficiaries was greater than 3 percentage points. In 2018, the difference between female beneficiaries and male beneficiaries was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 6 points for female beneficiaries and by about 7 points for male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries narrowed by about 1 point.

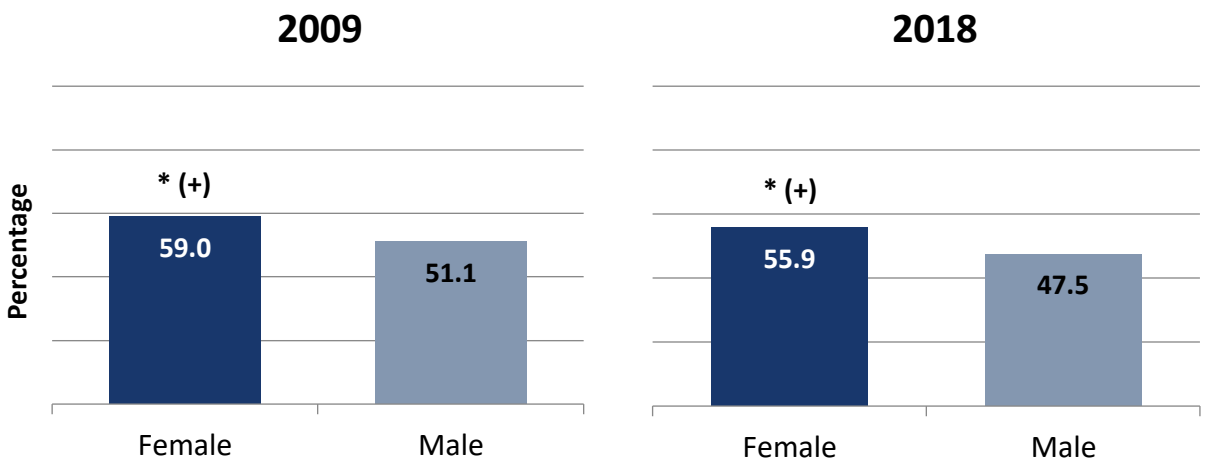
***** Significantly different from the score for male beneficiaries ($p < 0.05$).

For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

Follow-Up After Hospital Stay for Mental Illness (within 30 days of discharge)

Percentage of MA enrollees aged 18 years and older[†] who were hospitalized for treatment of selected mental health disorders who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 30 days of discharge, by sex, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In both 2009 and 2018, female beneficiaries who were hospitalized for a mental health disorder were more likely than male beneficiaries who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. In each year, the difference between female beneficiaries and male beneficiaries was greater than 3 percentage points.
- From 2009 to 2018, scores on this measure decreased by about 3 points for female beneficiaries and about 4 points for male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries remained about the same.

***** Significantly different from the score for male beneficiaries ($p < 0.05$).

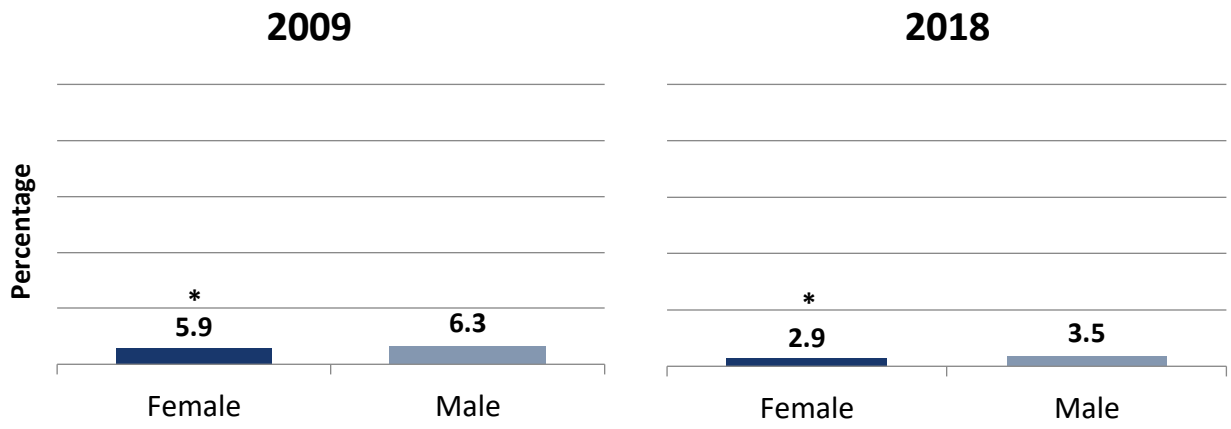
For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

[†] Although the lower-bound age cutoff for this HEDIS measure is six years old, the data used in this report are limited to adults.

Engagement of Alcohol or Other Drug Treatment

Percentage of MA enrollees aged 18 years and older† with a new episode of AOD dependence who initiated treatment who had two or more additional services within 30 days of the initiation visit, by sex, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2019 from MA plans nationwide.
NOTE: AOD = alcohol or other drug.

Summary

- In both 2009 and 2018, female beneficiaries with a new episode of AOD dependence who initiated treatment were less likely than male beneficiaries with a new episode of AOD dependence who initiated treatment to have had two or more additional services within 30 days of their initial visit for treatment. In each year, the difference between female beneficiaries and male beneficiaries was less than 3 percentage points.
- From 2009 to 2018, scores on this measure decreased by about 3 points for both female beneficiaries and male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries remained about the same.

***** Significantly different from the score for male beneficiaries ($p < 0.05$).

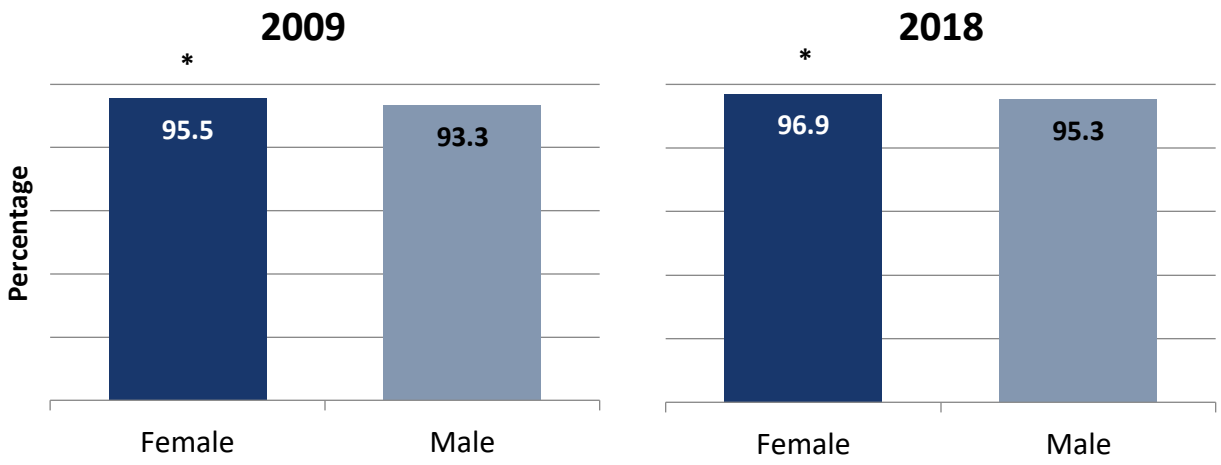
For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

† Although the lower-bound age cutoff for this HEDIS measure is 13 years old, the data used in this report are limited to adults.

Older Adults' Access to Preventive/Ambulatory Services

Percentage of MA enrollees aged 65 years and older who had an ambulatory or preventive care visit in the past year, by sex, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2019 from MA plans nationwide.

Summary

- In both 2009 and 2018, female beneficiaries were more likely than male beneficiaries to have had an ambulatory or preventive care visit. In each year, the difference between female beneficiaries and male beneficiaries was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 1 point for female beneficiaries and about 2 points for male beneficiaries.
- From 2009 to 2018, the gap between female beneficiaries and male beneficiaries remained about the same.

***** Significantly different from the score for male beneficiaries ($p < 0.05$).

For statistically significant differences between female and male beneficiaries in a given measurement year, the following symbols are also used when applicable:

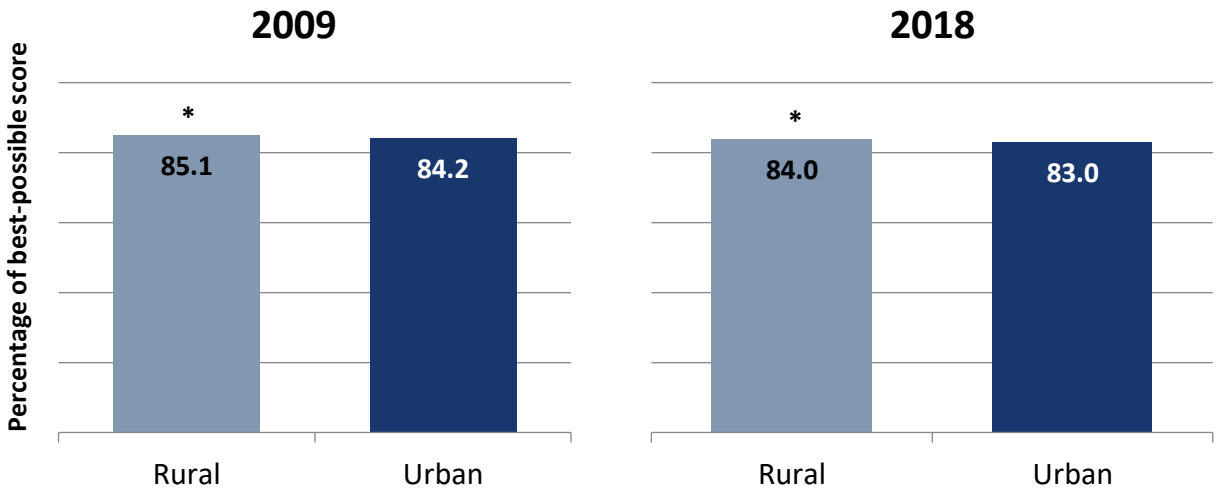
(+) Difference is equal to or larger than 3 points (before rounding) and favors female beneficiaries.
(-) Difference is equal to or larger than 3 points (before rounding) and favors male beneficiaries.

SECTION III:

Trends in Rural-Urban Inequities in Health Care in Medicare Advantage: 2009–2018

Getting Needed Care

Percentage of the best-possible score (on a 0–100 scale) earned on how easy it is for patients to get needed care,† by geography, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

Summary

- In both 2009 and 2018, rural residents reported better experiences getting needed care than urban residents. In each year, the difference between rural residents and urban residents was less than 3 points on a 0–100 scale.
- From 2009 to 2018, scores on this measure decreased by about 1 point for both rural residents and urban residents.
- From 2009 to 2018, the gap between rural residents and urban remained about the same.

***** Significantly different from the score for urban residents ($p < 0.05$).

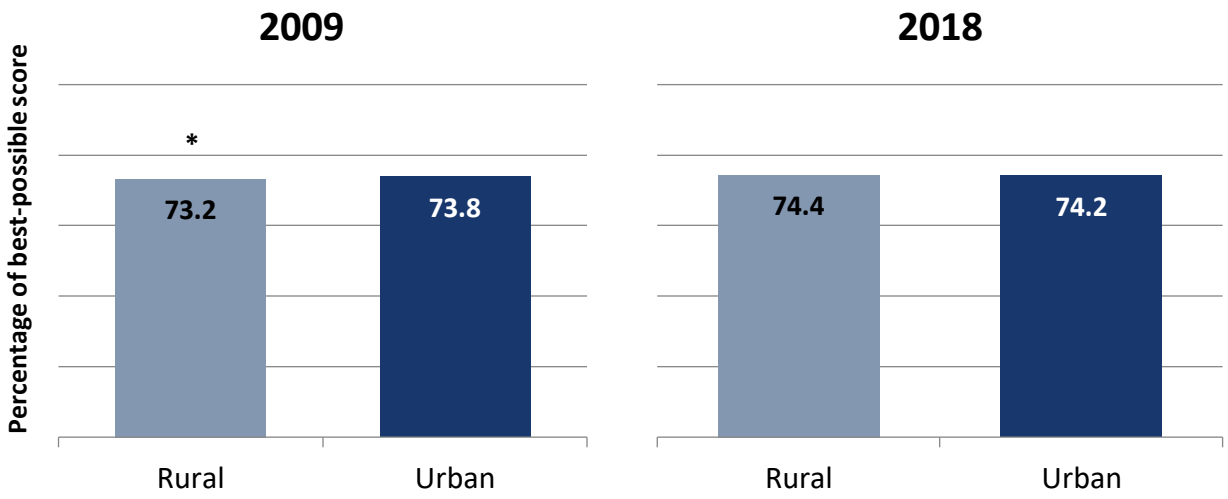
For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

† This includes how often in the last six months patients got appointments with specialists as soon as they needed them and how easy it was to get needed care, tests, or treatment.

Getting Appointments and Care Quickly

Percentage of the best-possible score (on a 0–100 scale) earned on how quickly patients get appointments and care,† by geography, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

Summary

- In 2009, rural residents reported worse experiences getting appointments and care quickly than urban residents. The difference between rural residents and urban residents was less than 3 points on a 0–100 scale.
- In 2018, rural residents reported experiences getting appointments and care quickly that were similar to the experiences that urban residents reported.
- From 2009 to 2018, scores on this measure increased by about 1 point for rural residents and remained about the same for urban residents.
- From 2009 to 2018, the gap between rural residents and urban residents remained about the same.

***** Significantly different from the score for urban residents ($p < 0.05$).

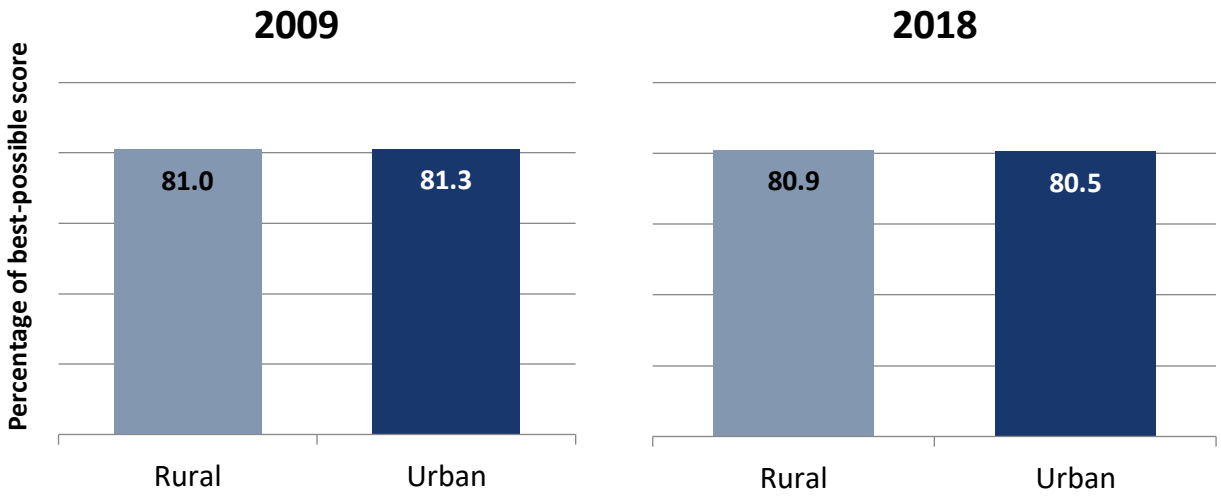
For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

† This includes how often in the last six months patients got care that was needed right away, as well as how easy it was to get appointments for checkups and routine care.

Customer Service

Percentage of the best-possible score (on a 0–100 scale) earned on three aspects of customer service,[†] by geography, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

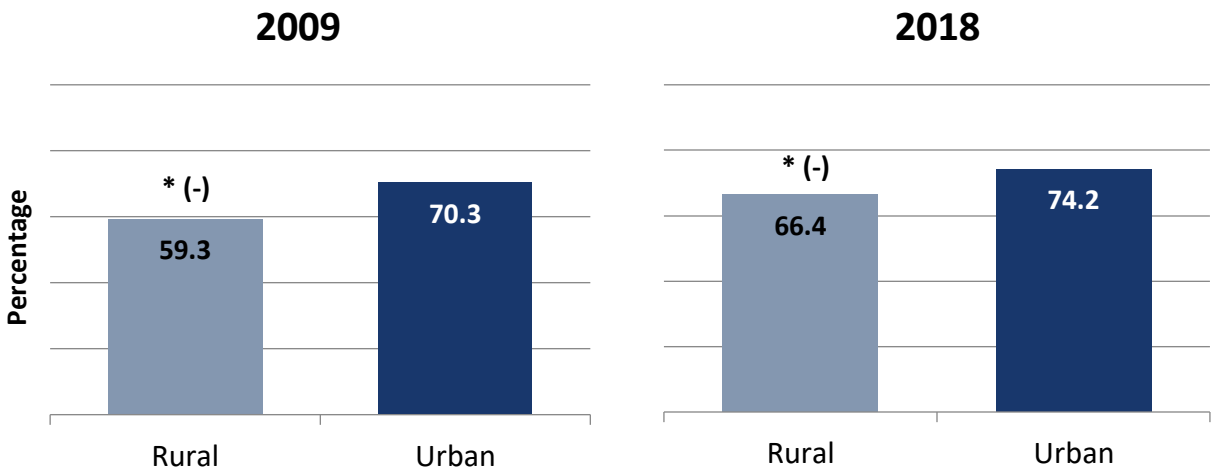
Summary

- In both 2009 and 2018, rural residents reported experiences with customer service that were similar to the experiences that urban residents reported.
- Scores for both rural residents and urban residents were about the same in 2009 and 2018.

[†] This includes how often in the last six months health plan customer service staff provided the information or help that beneficiaries needed, how often beneficiaries were treated with courtesy and respect, and how often forms from the health plan were easy to fill out.

Annual Flu Vaccine

Percentage of MA enrollees who got a vaccine (flu shot), by geography, in 2009 and 2018



SOURCE: Data from the 2009 and 2018 Medicare CAHPS Survey.

Summary

- In both 2009 and 2018, rural residents were less likely than urban residents to have received the flu vaccine. In each year, the difference between rural residents and urban residents was greater than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 7 points for rural residents and by about 4 points for urban residents.
- From 2009 to 2018, the gap between rural residents and urban residents narrowed by about 3 points.

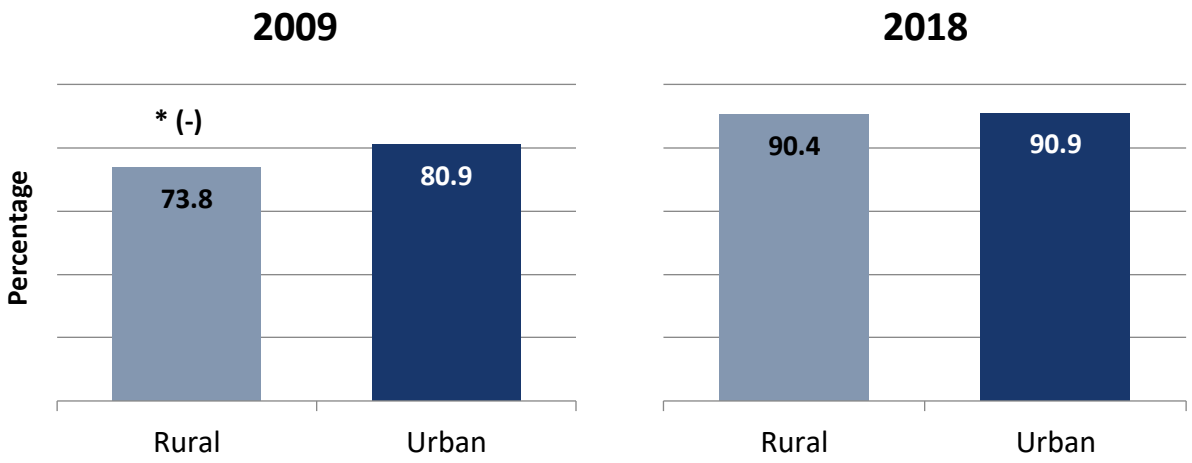
***** Significantly different from the score for urban residents ($p < 0.05$).

For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

Continuous Beta-Blocker Treatment

Percentage of MA enrollees aged 18 years and older who were hospitalized and discharged with a diagnosis of acute myocardial infarction (AMI) who received continuous beta-blocker treatment for six months after discharge, by geography, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In 2009, rural residents who were hospitalized and discharged with a diagnosis of AMI were less likely than urban residents who were hospitalized and discharged with a diagnosis of AMI to have received continuous beta-blocker treatment for six months after discharge. The difference between rural residents and urban residents was greater than 3 percentage points.
- In 2018, rural residents who were hospitalized and discharged with a diagnosis of AMI were about as likely as urban residents who were hospitalized and discharged with a diagnosis of AMI to have received continuous beta-blocker treatment for six months after discharge.
- From 2009 to 2018, scores on this measure increased by about 17 points for rural residents and by about 10 points for urban residents.
- From 2009 to 2018, the gap between rural residents and urban residents narrowed by about 7 points.

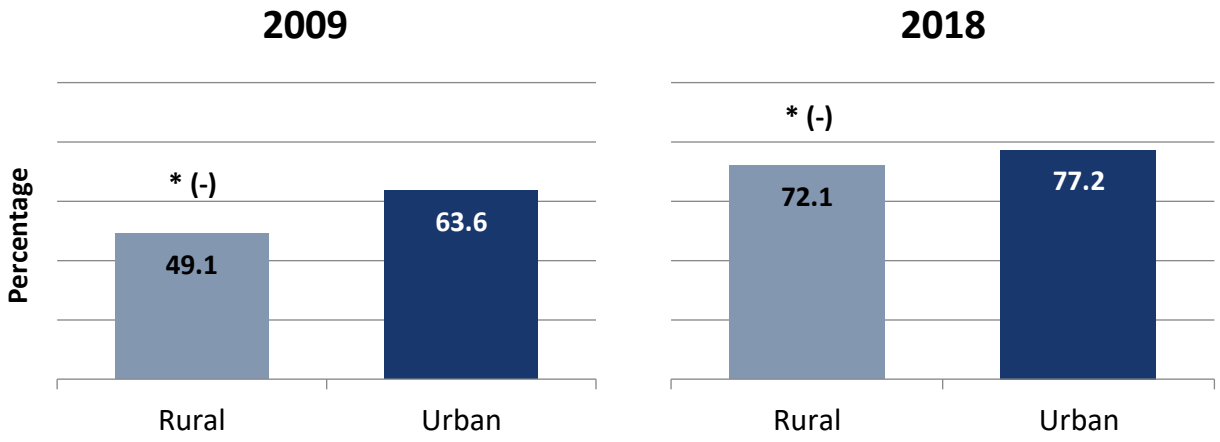
***** Significantly different from the score for urban residents ($p < 0.05$).

For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

Diabetes Care—Eye Exam

Percentage of MA enrollees aged 18 to 75 years with diabetes (type 1 and type 2) who had an eye exam (retinal) in the past year, by geography, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In both 2009 and 2018, rural residents with diabetes were less likely than urban residents with diabetes to have had an eye exam in the past year. In each year, the difference between rural residents and urban residents was greater than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 23 points for rural residents and by about 14 points for urban residents.
- From 2009 to 2018, the gap between rural residents and urban residents narrowed by about 9 points.

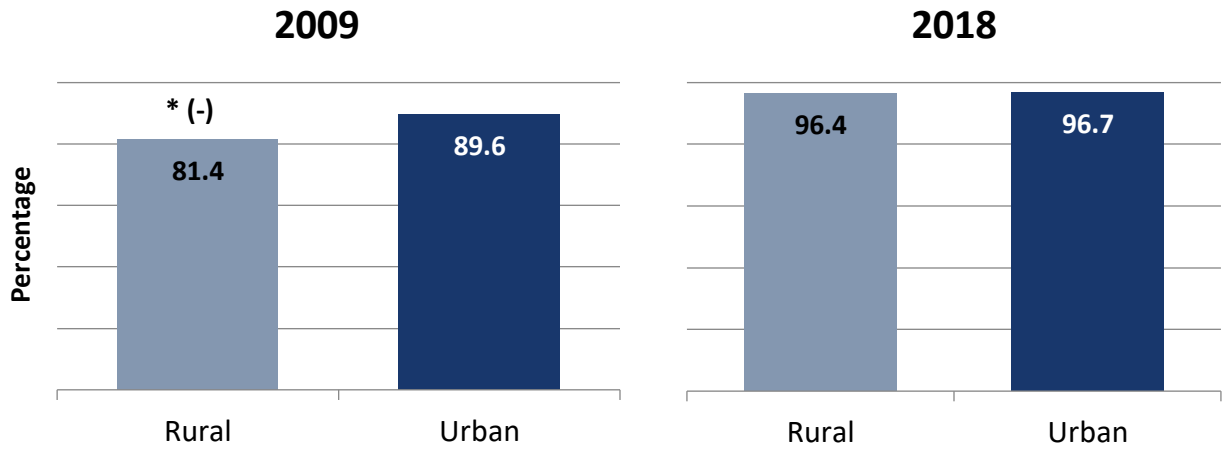
***** Significantly different from the score for urban residents ($p < 0.05$).

For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

Diabetes Care—Kidney Disease Monitoring

Percentage of MA enrollees aged 18 to 75 years with diabetes (type 1 and type 2) who had medical attention for nephropathy in the past year, by geography, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In 2009, rural residents with diabetes were less likely than urban residents with diabetes to have had medical attention for nephropathy in the past year. The difference between rural residents and urban residents was greater than 3 percentage points.
- In 2018, rural residents with diabetes were about as likely as urban residents with diabetes to have had medical attention for nephropathy in the past year.
- From 2009 to 2018, scores on this measure increased by about 15 points for rural residents and by about 7 points for urban residents.
- From 2009 to 2018, the gap between rural residents and urban residents narrowed by about 8 points.

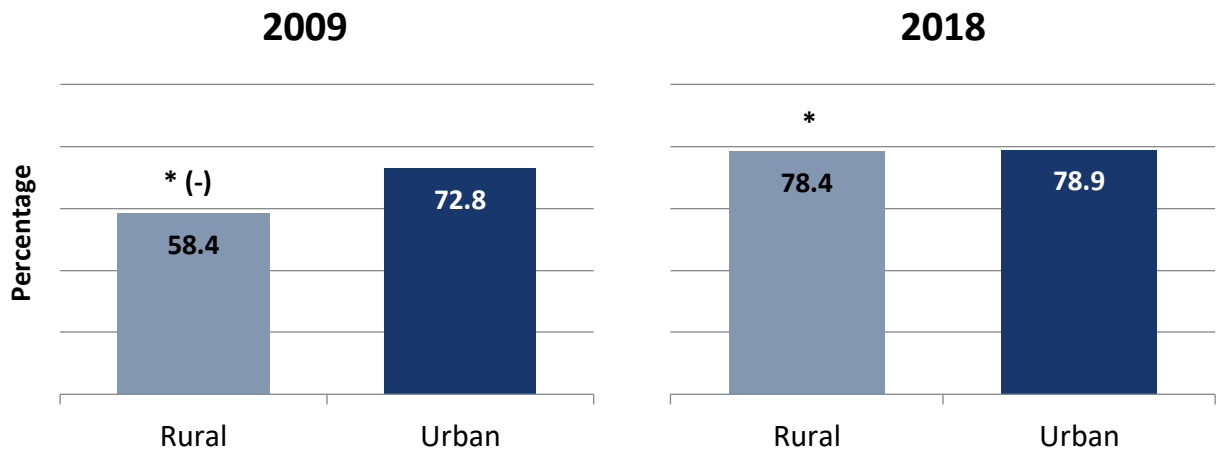
***** Significantly different from the score for urban residents ($p < 0.05$).

For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

Rheumatoid Arthritis Management

Percentage of MA enrollees aged 18 years and older who were diagnosed with rheumatoid arthritis during the past year who were dispensed at least one ambulatory prescription for a DMARD, by geography, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.
NOTE: DMARD = disease-modifying antirheumatic drug.

Summary

- In both 2009 and 2018, rural residents who were diagnosed with rheumatoid arthritis were less likely than urban residents who were diagnosed with rheumatoid arthritis to have been dispensed at least one DMARD. In 2009, the difference between rural residents and urban residents was greater than 3 percentage points. In 2018, the difference between rural residents and urban residents was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 20 points for rural residents and by about 6 points for urban residents.
- From 2009 to 2018, the gap between rural residents and urban residents narrowed by about 14 points.

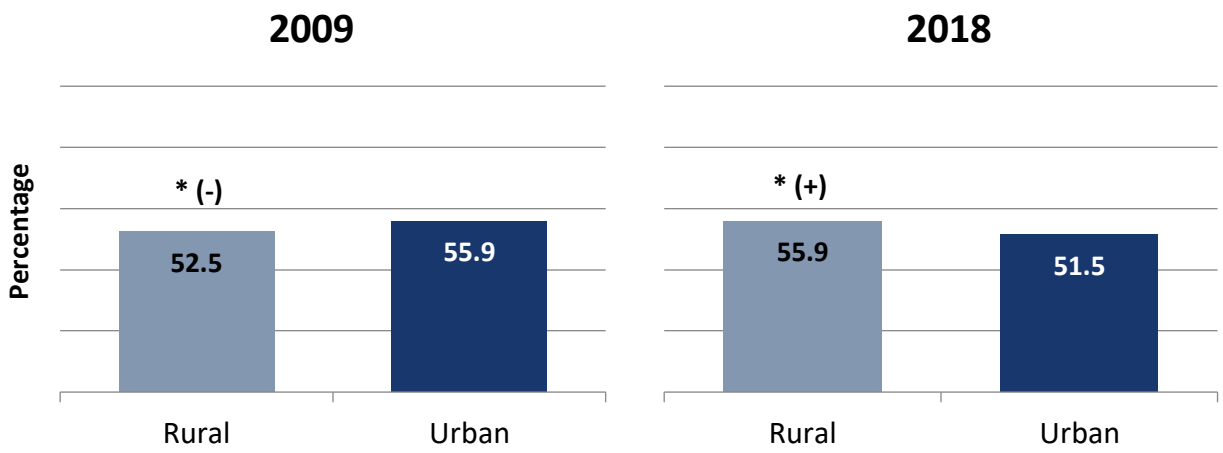
***** Significantly different from the score for urban residents ($p < 0.05$).

For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

Follow-Up After Hospital Stay for Mental Illness (within 30 days of discharge)

Percentage of MA enrollees aged 18 years and older† who were hospitalized for treatment of selected mental health disorders who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 30 days of discharge, by geography, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2009 and 2018 from MA plans nationwide.

Summary

- In 2009, rural residents who were hospitalized for a mental health disorder were less likely than urban residents who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. The difference between rural residents and urban residents was greater than 3 percentage points.
- In 2018, rural residents who were hospitalized for a mental health disorder were more likely than urban residents who were hospitalized for a mental health disorder to have had a follow-up visit with a mental health practitioner within 30 days of being discharged. The difference between rural residents and urban residents was greater than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 3 points for rural residents and decreased by about 4 points for urban residents.
- The disparate pattern of change on this measure for rural and urban residents led to a reversal of the inequity between these groups.

***** Significantly different from the score for urban residents ($p < 0.05$).

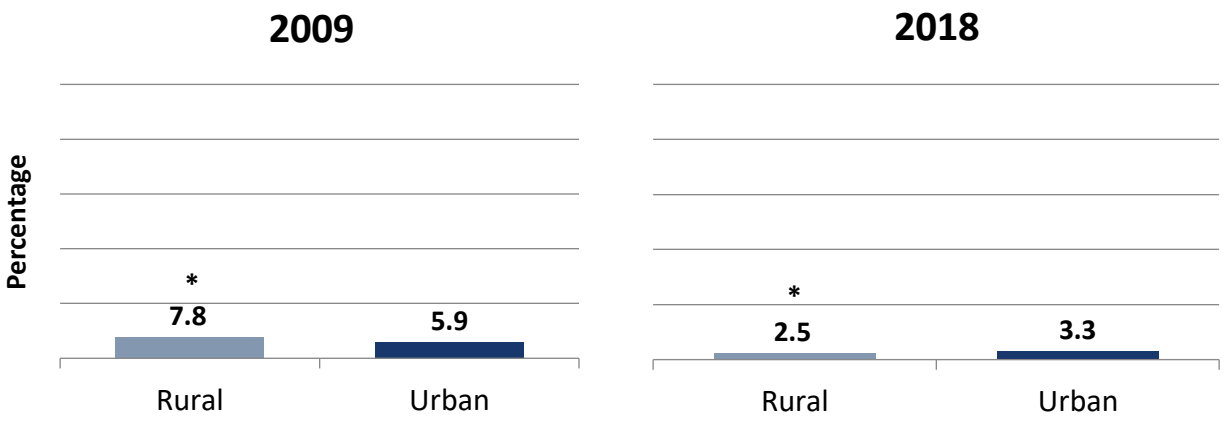
For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

† Although the lower-bound age cutoff for this HEDIS measure is six years old, the data used in this report are limited to adults.

Engagement of Alcohol or Other Drug Treatment

Percentage of MA enrollees aged 18 years and older[†] with a new episode of AOD dependence who initiated treatment who had two or more additional services within 30 days of the initiation visit, by geography, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2019 from MA plans nationwide.
NOTE: AOD = alcohol or other drug.

Summary

- In 2009, rural residents with a new episode of AOD dependence who initiated treatment were more likely than urban residents with a new episode of AOD dependence who initiated treatment to have had two or more additional services within 30 days of their initial visit for treatment. The difference between rural residents and urban residents was less than 3 percentage points.
- In 2018, rural residents with a new episode of AOD dependence who initiated treatment were less likely than urban residents with a new episode of AOD dependence who initiated treatment to have had two or more additional services within 30 days of their initial visit for treatment. The difference between rural residents and urban residents was less than 3 percentage points.
- From 2009 to 2018, scores on this measure decreased by about 5 points for rural residents and by about 3 points for urban residents.
- The steeper decrease in scores for rural residents than for urban residents led to the elimination of the small inequity that existed between these groups in 2009.

***** Significantly different from the score for urban residents ($p < 0.05$).

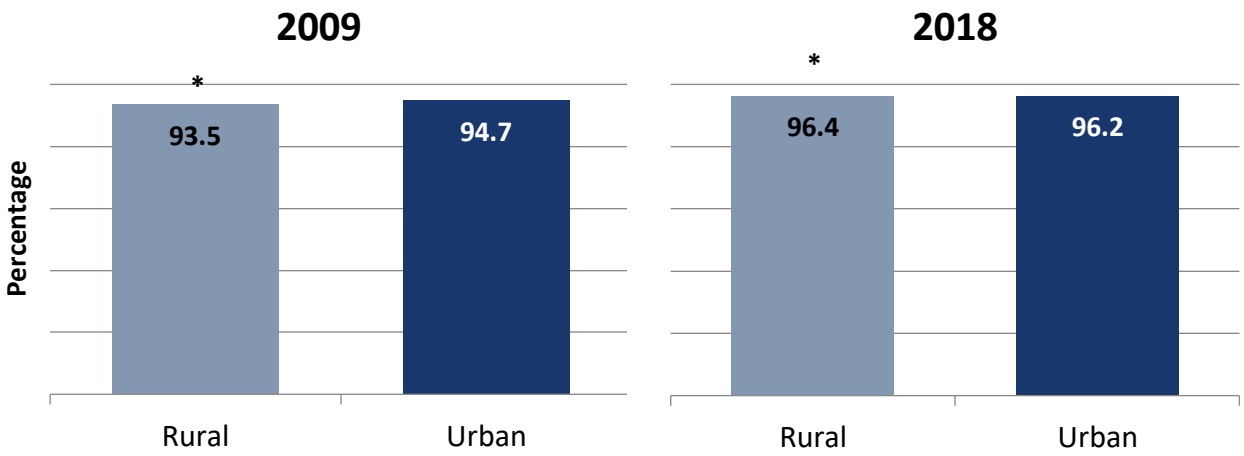
For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

[†] Although the lower-bound age cutoff for this HEDIS measure is 13 years old, the data used in this report are limited to adults.

Older Adults' Access to Preventive/Ambulatory Services

Percentage of MA enrollees aged 65 years and older who had an ambulatory or preventive care visit in the past year, by geography, in 2009 and 2018



SOURCE: Clinical quality data were collected in 2019 from MA plans nationwide.

Summary

- In 2009, rural residents were less likely than urban residents to have had an ambulatory or preventive care visit. The difference between rural residents and urban residents was less than 3 percentage points.
- In 2018, rural residents were more likely than urban residents to have had an ambulatory or preventive care visit. The difference between rural residents and urban residents was less than 3 percentage points.
- From 2009 to 2018, scores on this measure increased by about 3 points for rural residents and by about 2 points for urban residents.
- The steeper increase in scores for rural residents versus urban residents led to the elimination of the small inequity that existed between these groups in 2009.

***** Significantly different from the score for urban residents ($p < 0.05$).

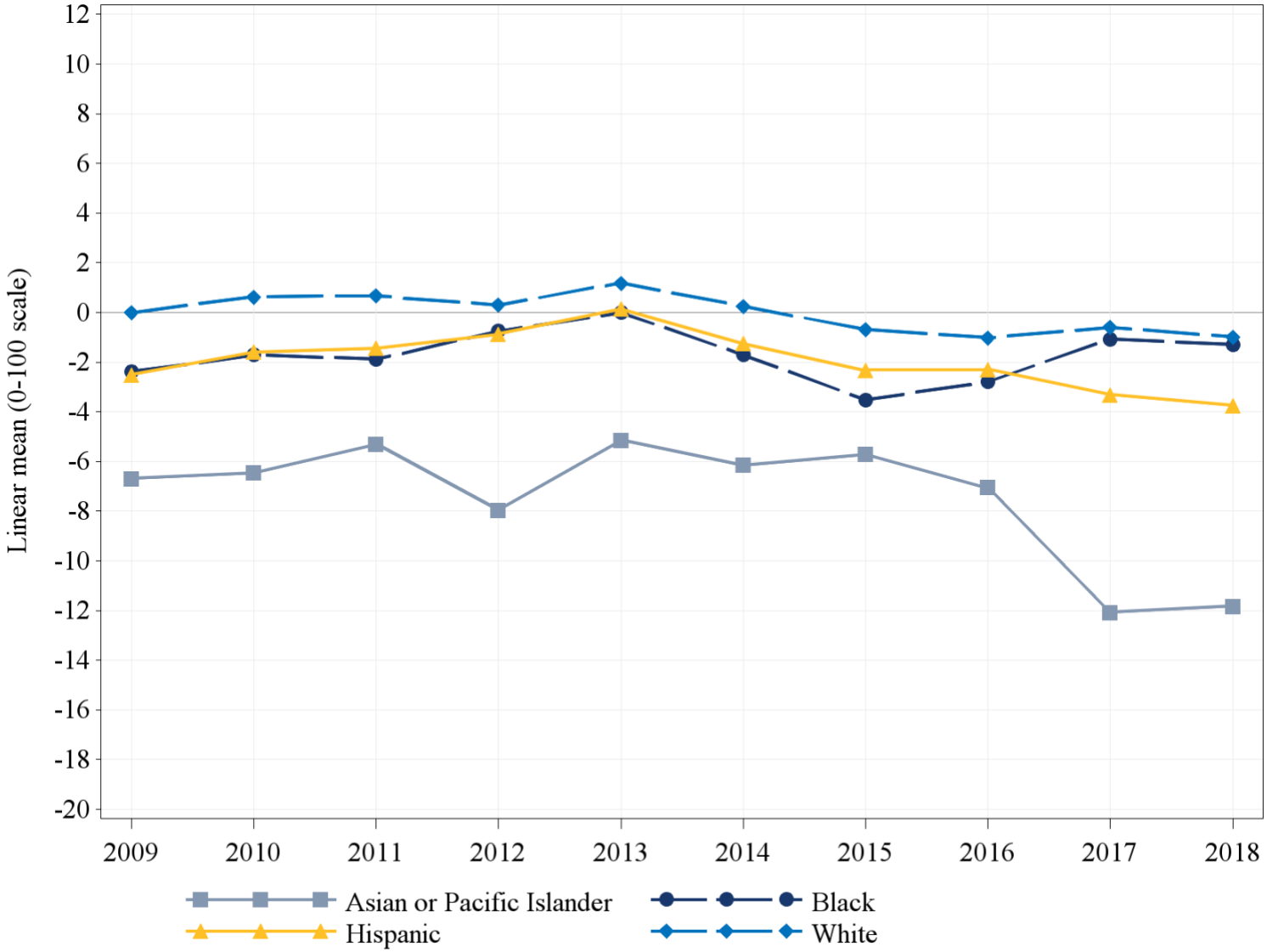
For statistically significant differences between rural and urban residents in a given measurement year, the following symbols are also used when applicable:

(+) Difference is equal to or larger than 3 points (before rounding) and favors rural residents.
(-) Difference is equal to or larger than 3 points (before rounding) and favors urban residents.

Appendix 1:
Graphs of Scores on Patient Experience and Clinical Care Measures by Race and Ethnicity: 2009–2018

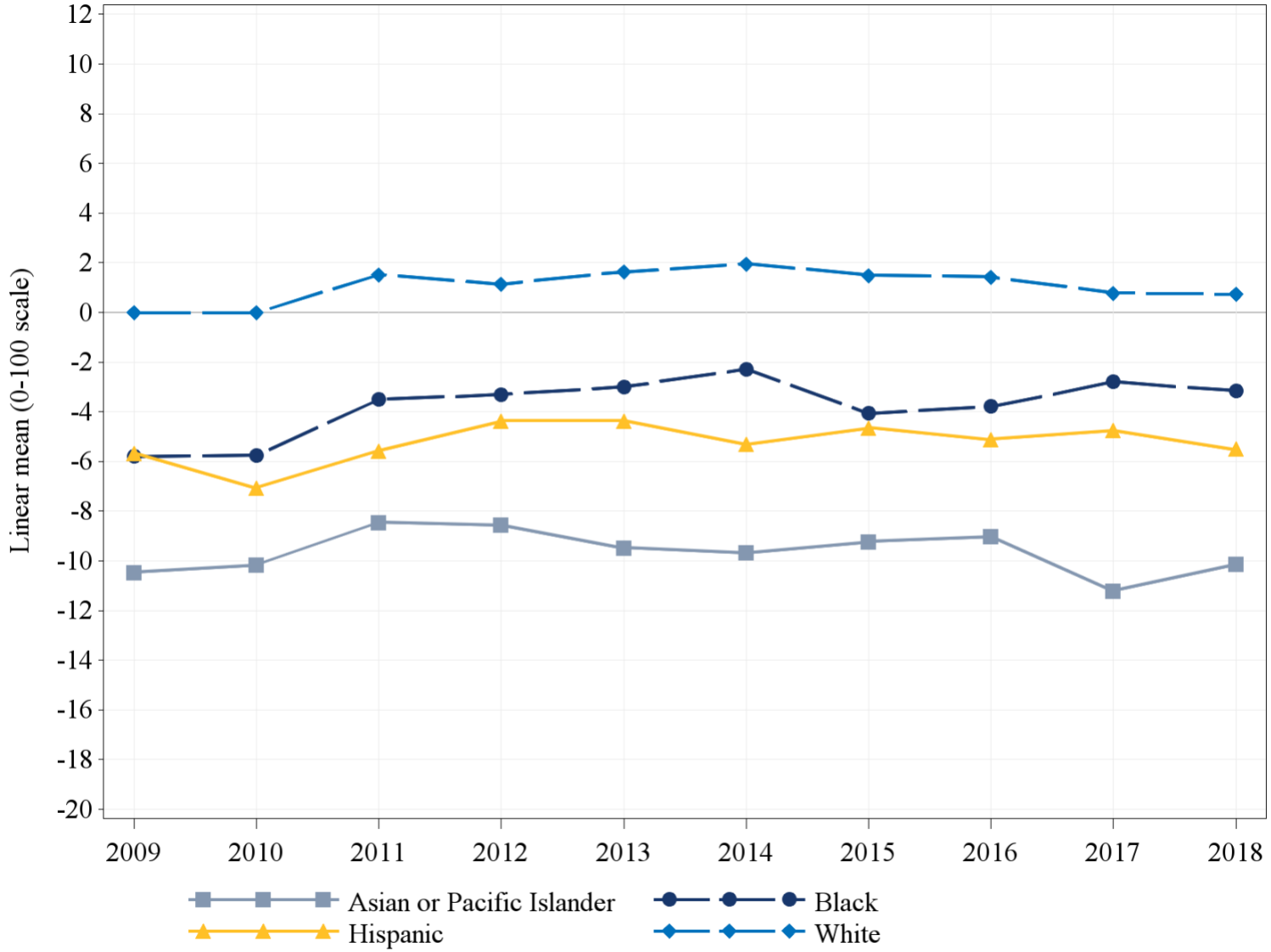
Getting Needed Care

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (85.4)



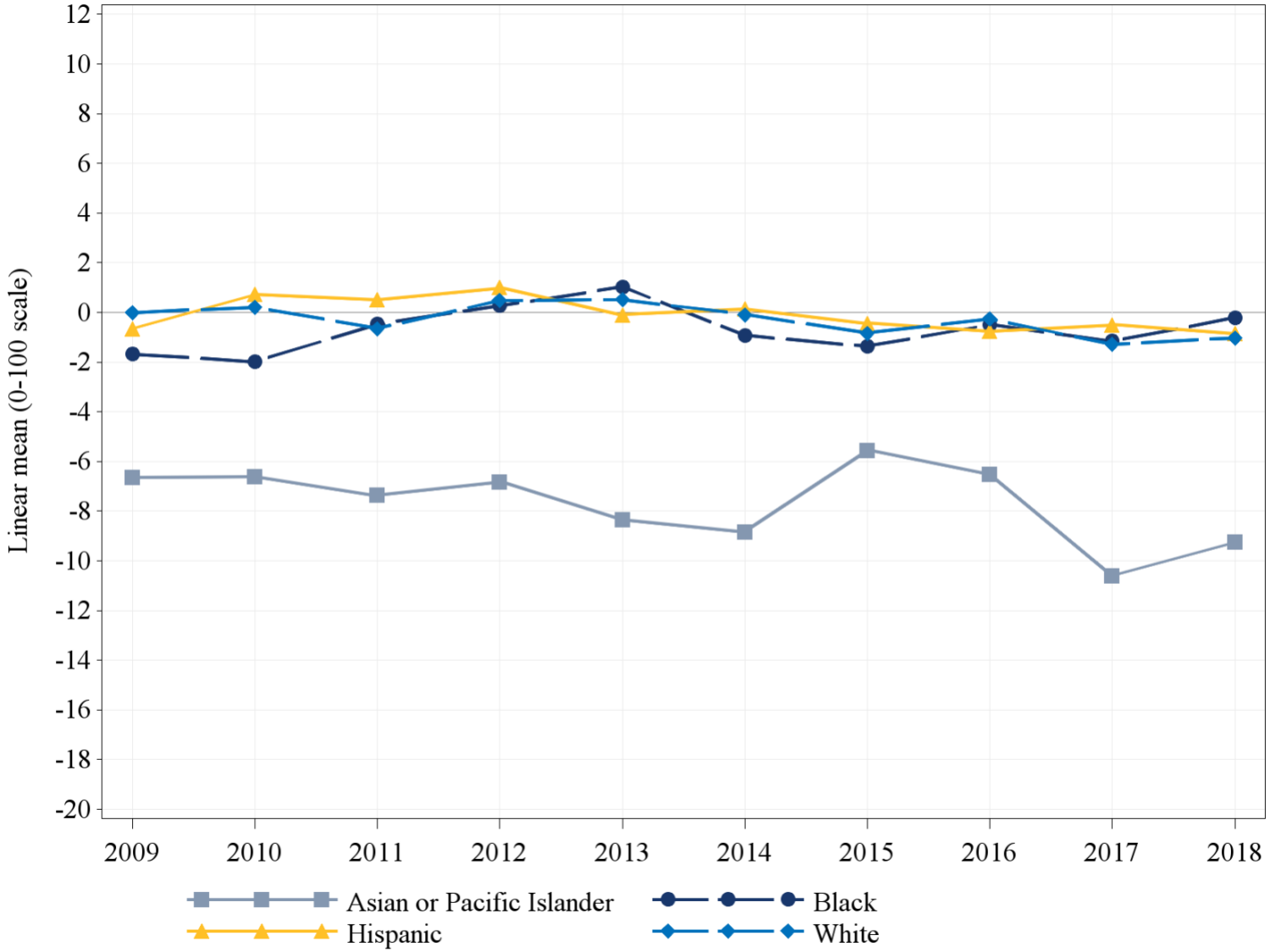
Getting Appointments and Care Quickly

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (75.6)



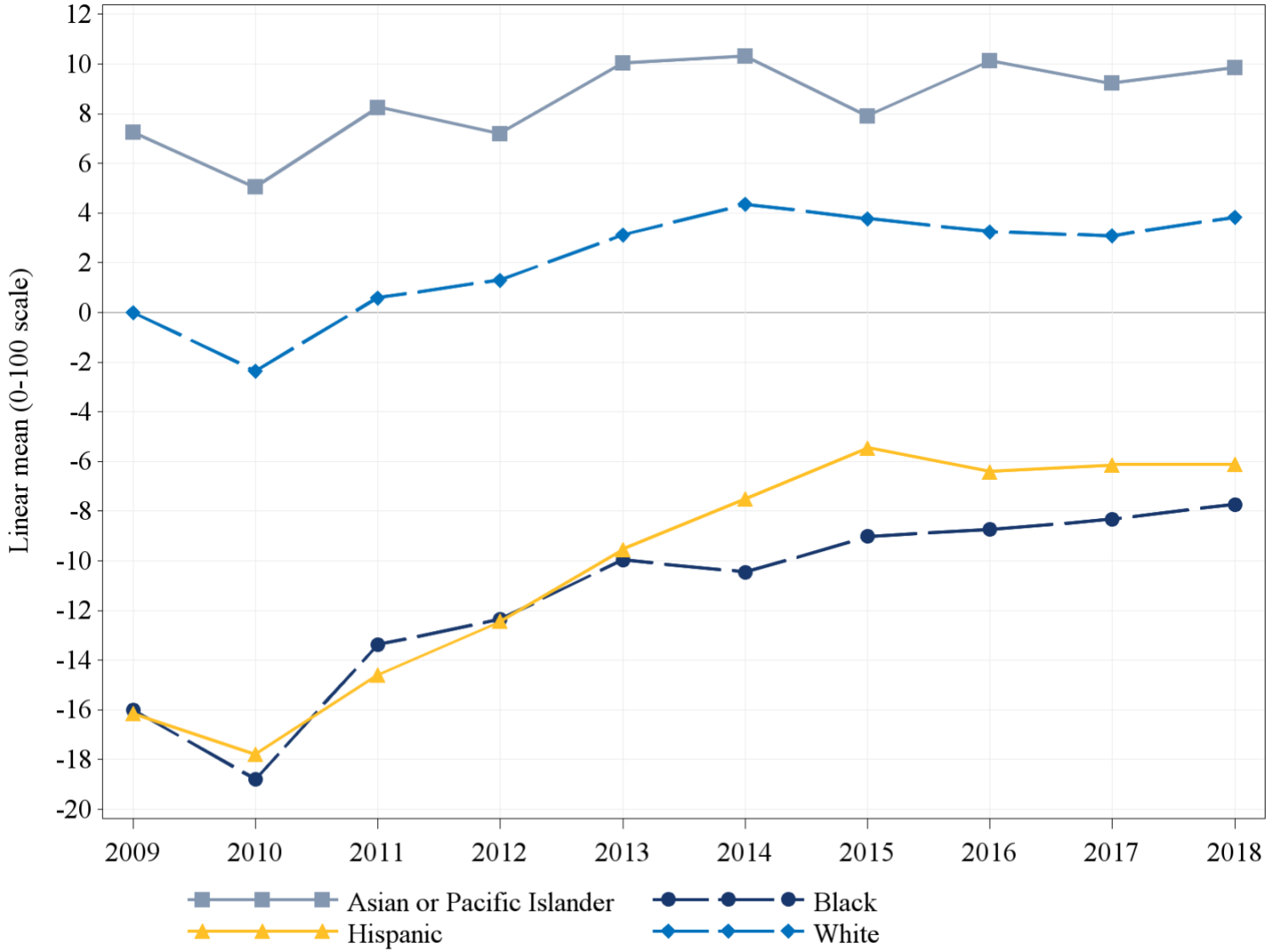
Customer Service

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (82.1)



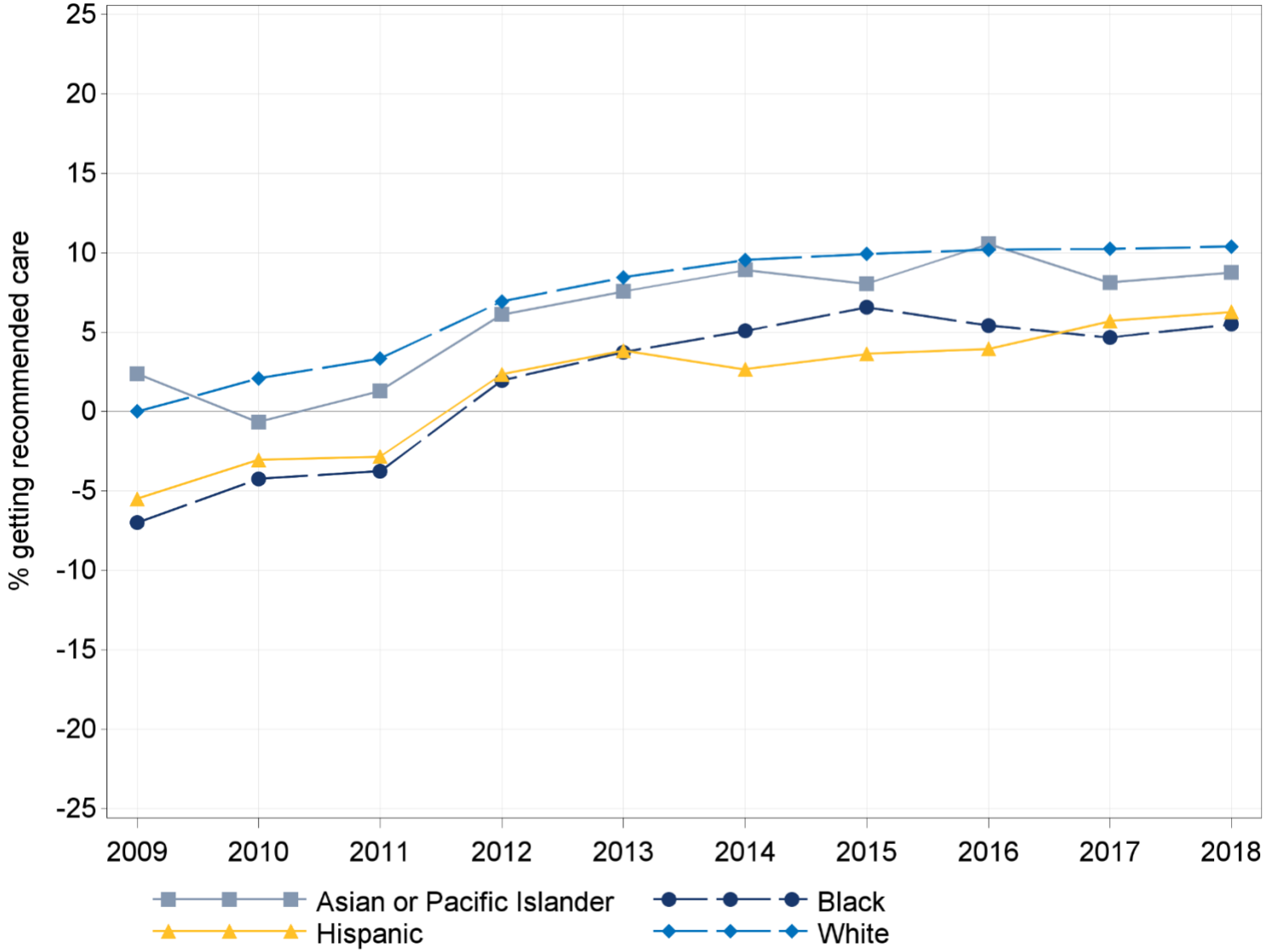
Annual Flu Vaccine

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (72.0)



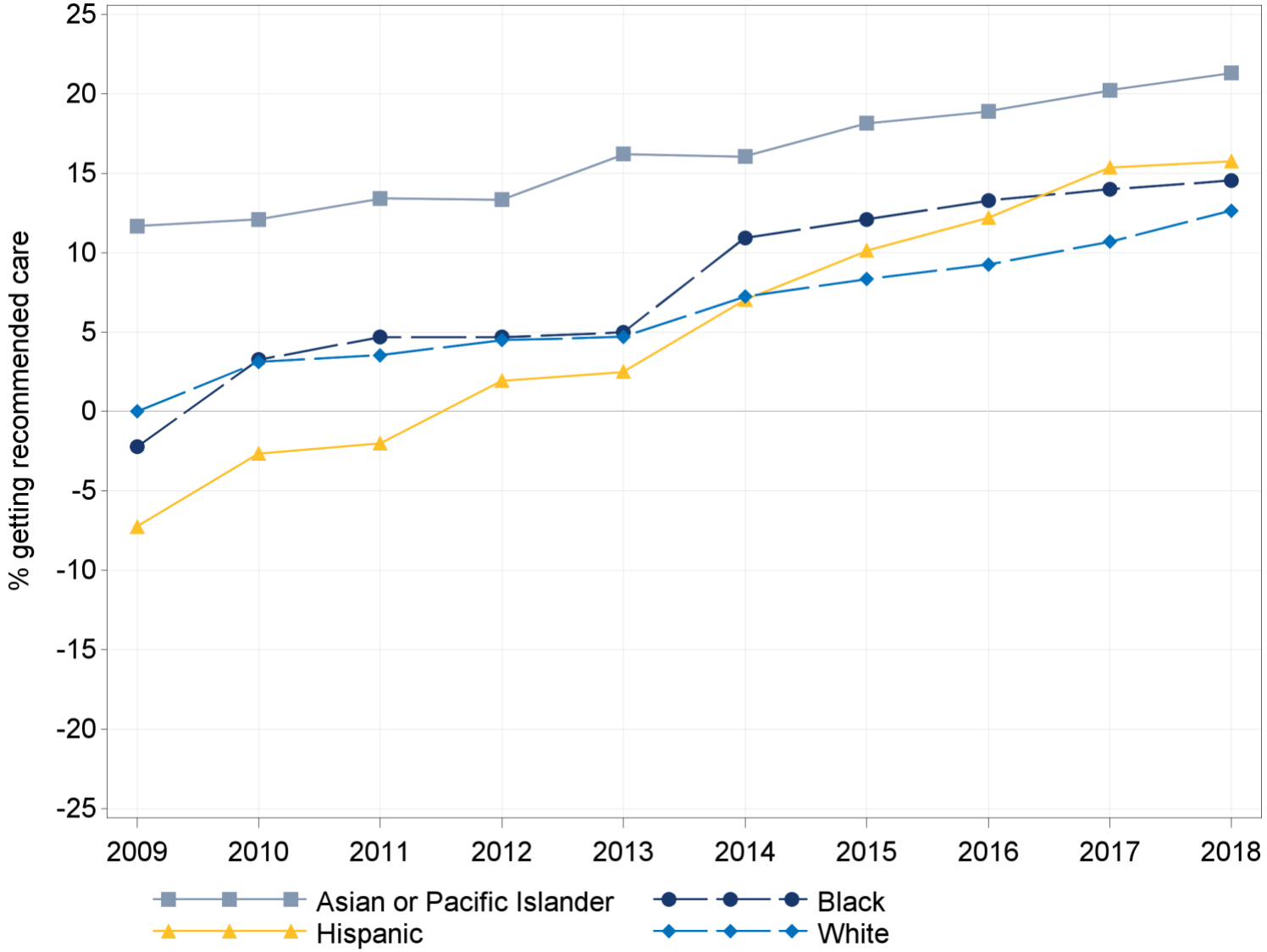
Continuous Beta-Blocker Treatment

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (82.1)



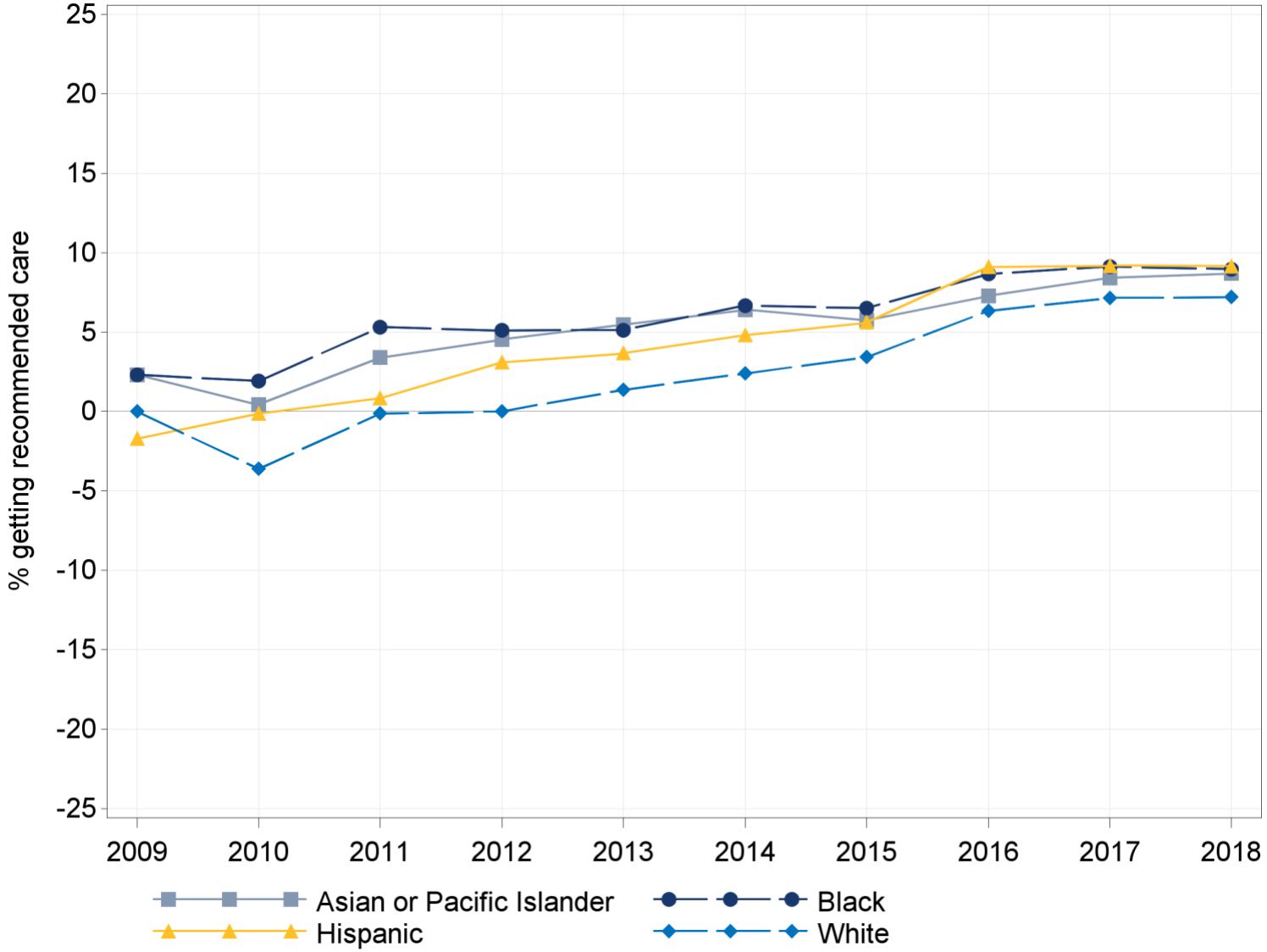
Diabetes Care—Eye Exam

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (64.2)



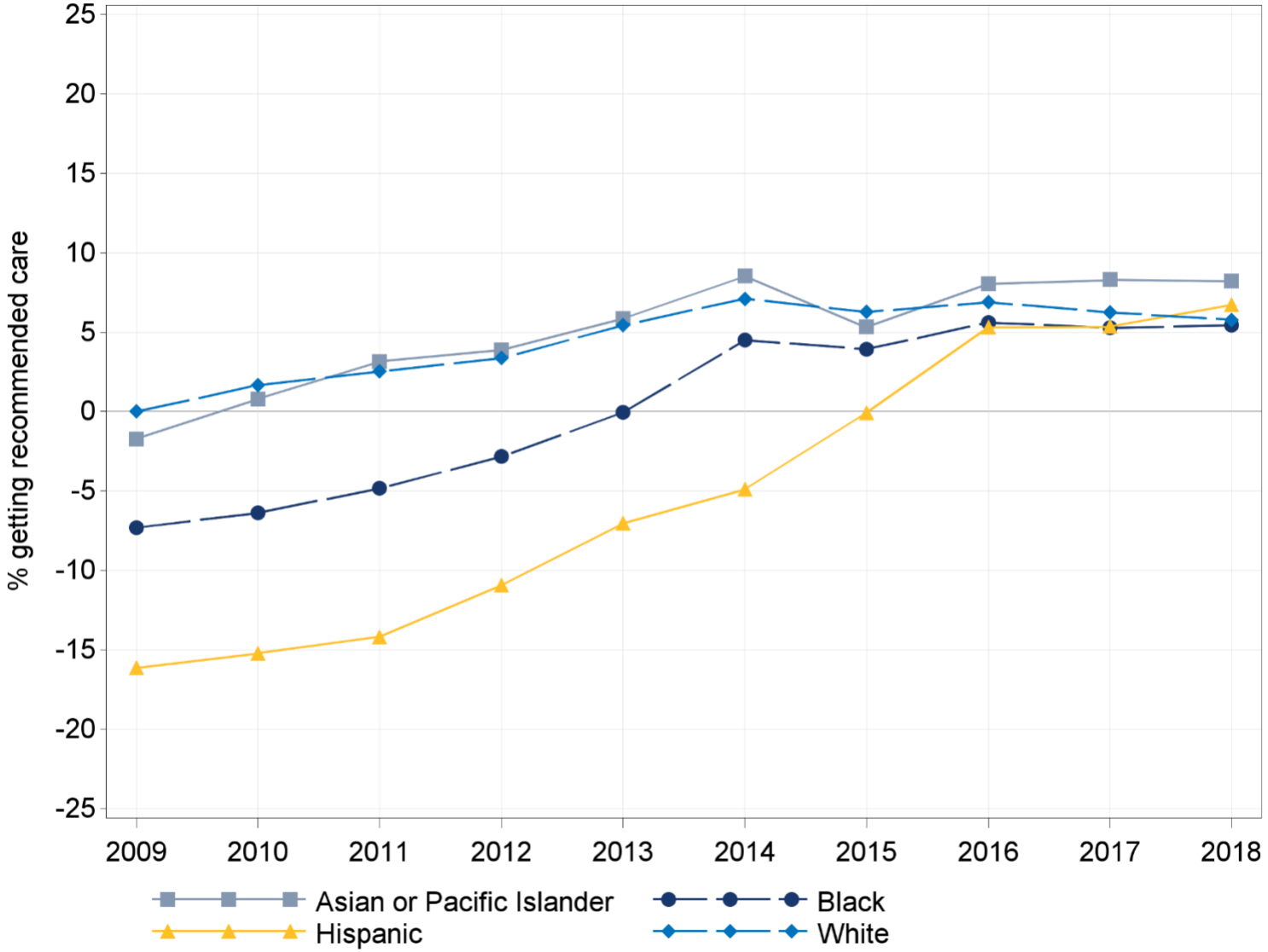
Diabetes Care—Kidney Disease Monitoring

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (89.0)



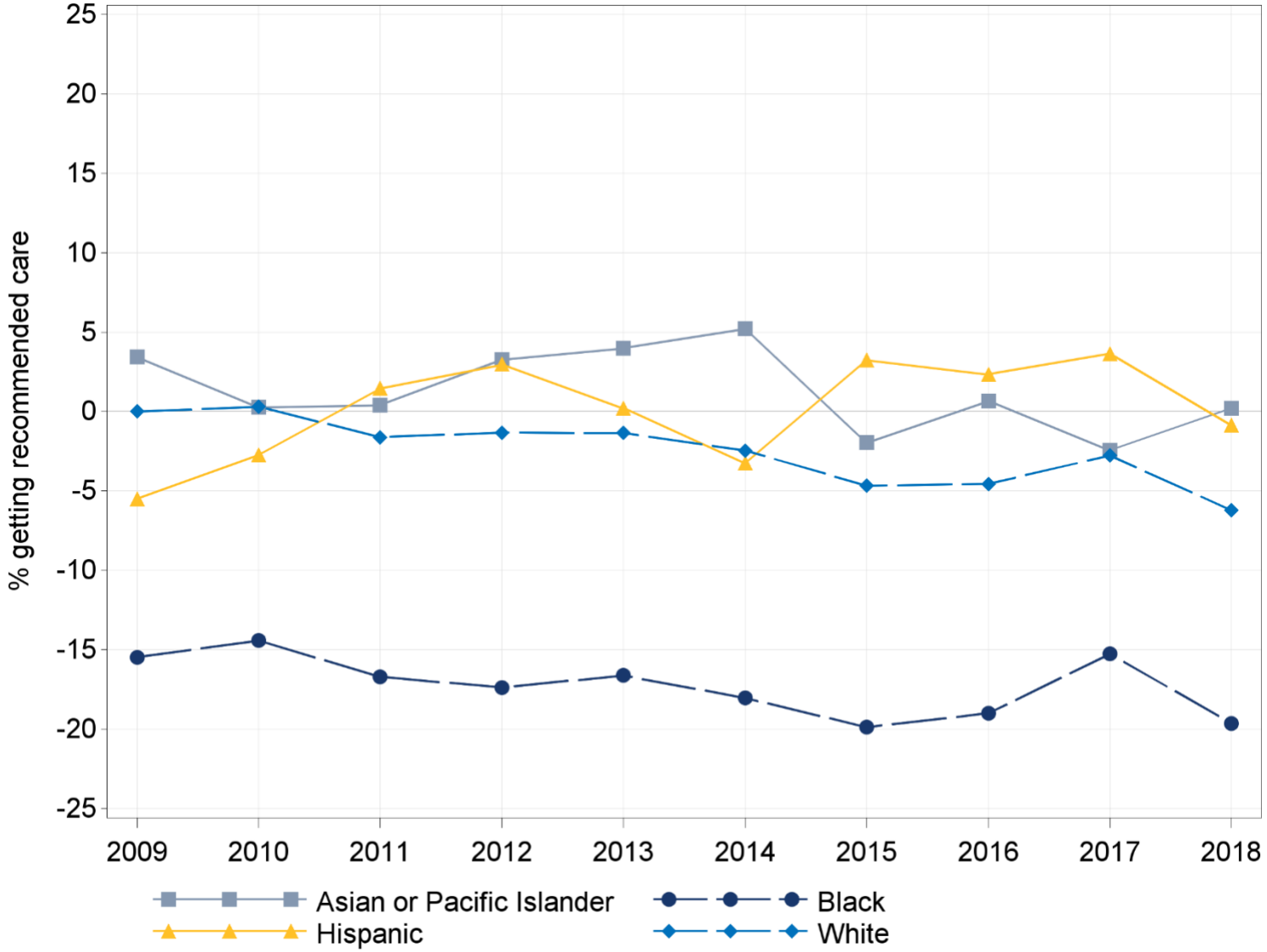
Rheumatoid Arthritis Management

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (73.5)



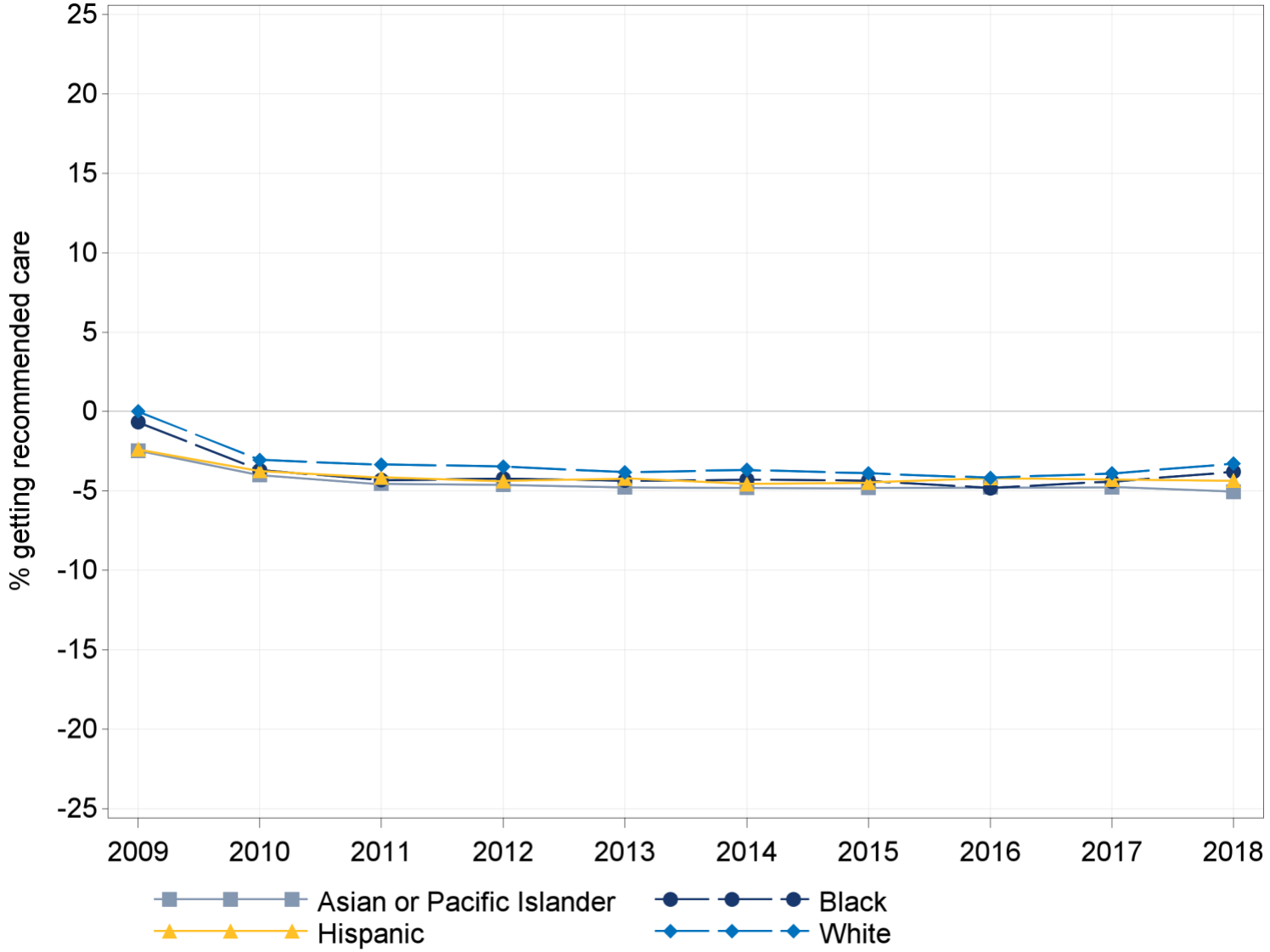
Follow-Up After Hospitalization for Mental Illness (within 30 days of discharge)

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (59.3)



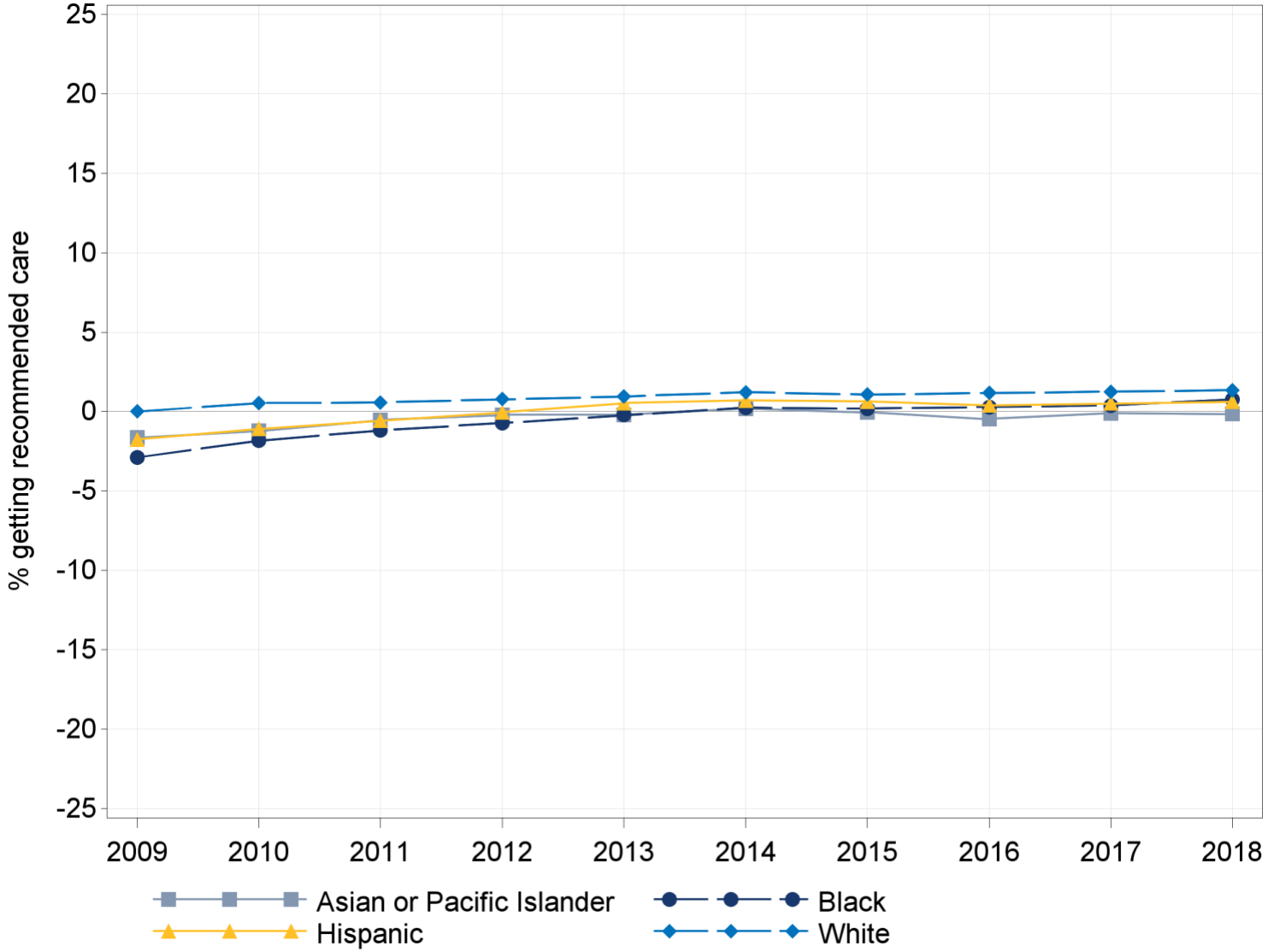
Engagement of Alcohol or Other Drug Treatment

2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (6.1)



Older Adults' Access to Preventive/Ambulatory Services

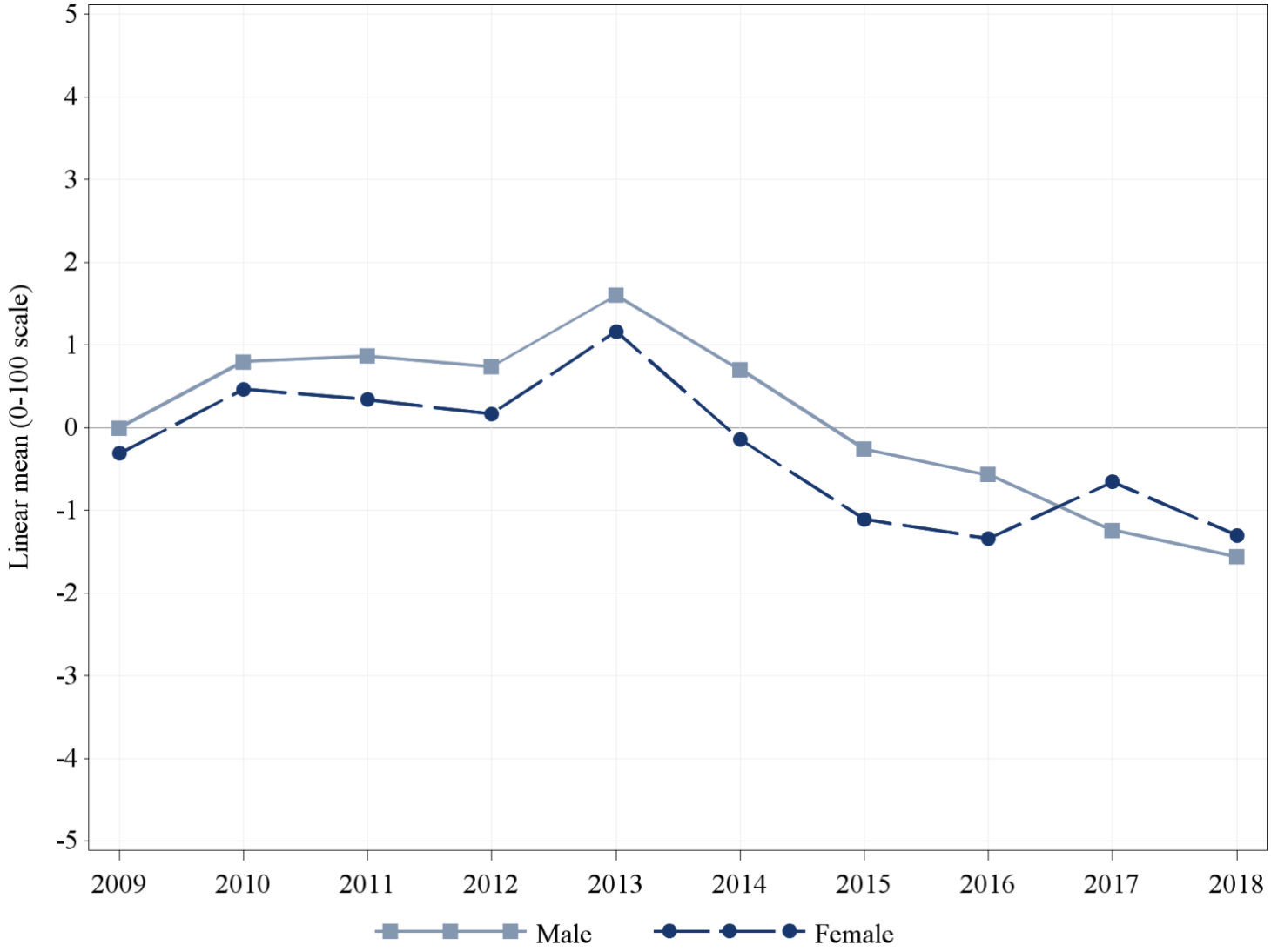
2009–2018 trend, by race and ethnicity, subtracted from the 2009 mean for White beneficiaries (95.2)



Appendix 2:
Graphs of Scores on Patient Experience and Clinical Care Measures by Sex: 2009–2018

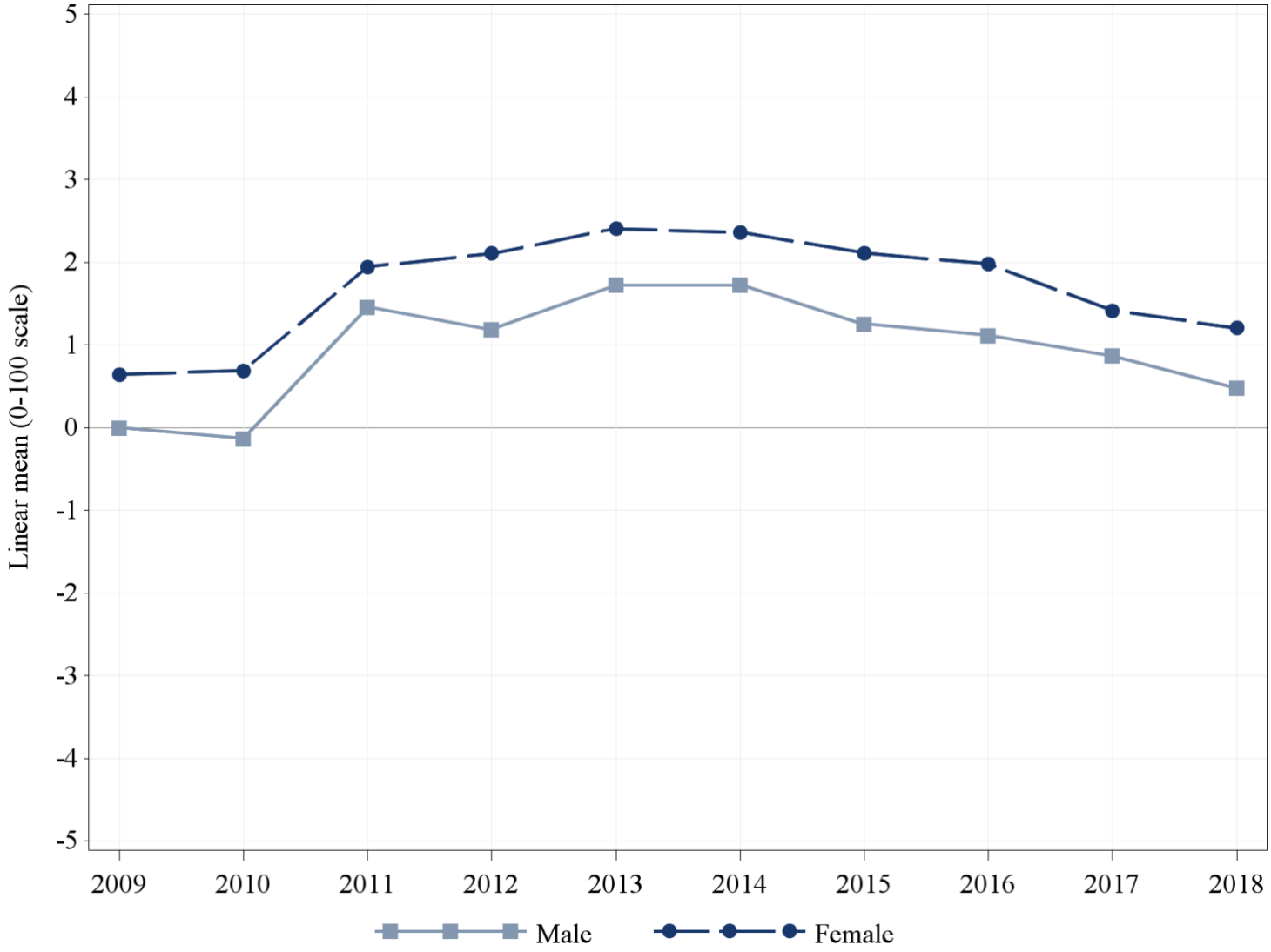
Getting Needed Care

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (84.5)



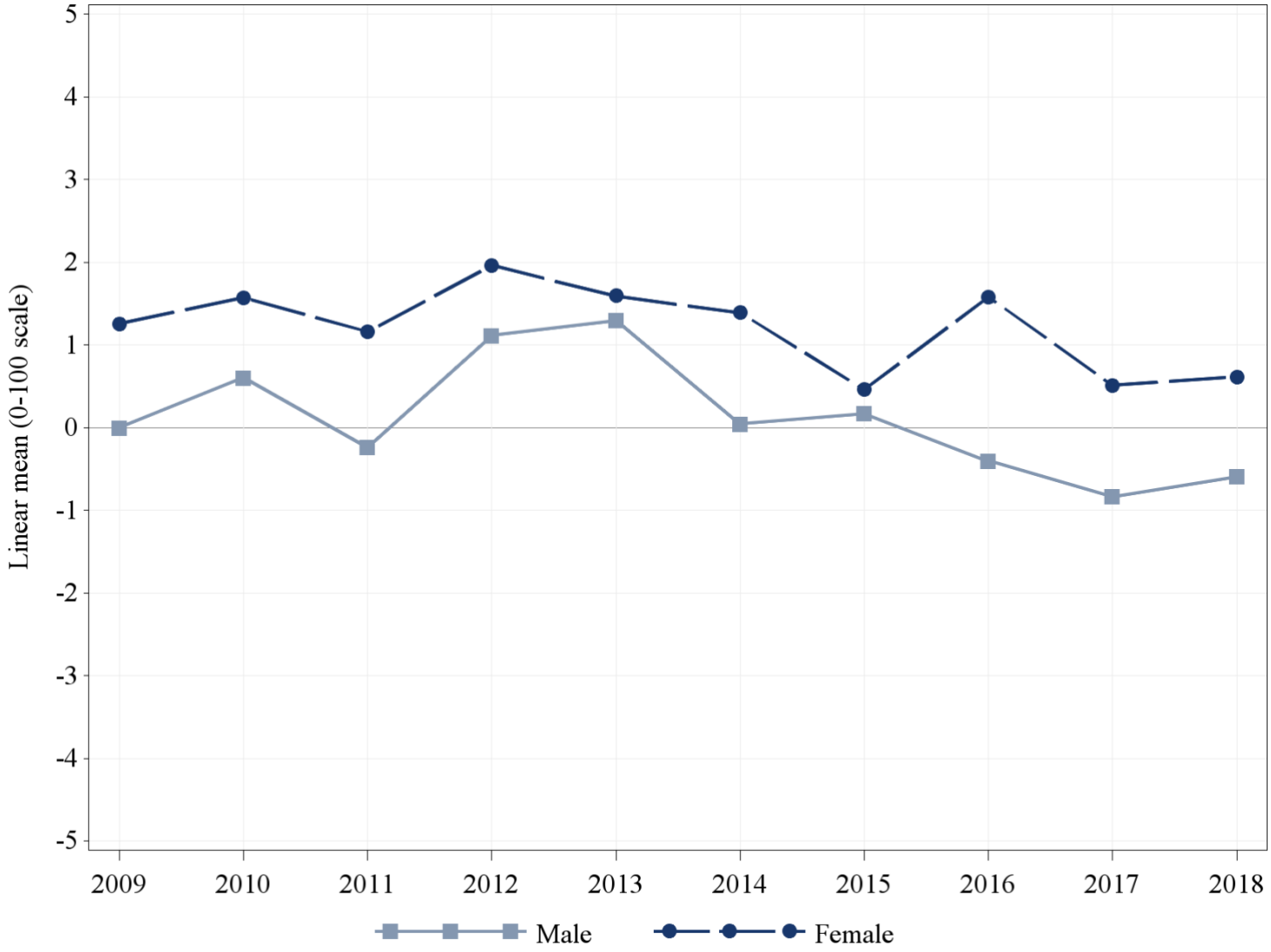
Getting Appointments and Care Quickly

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (73.3)



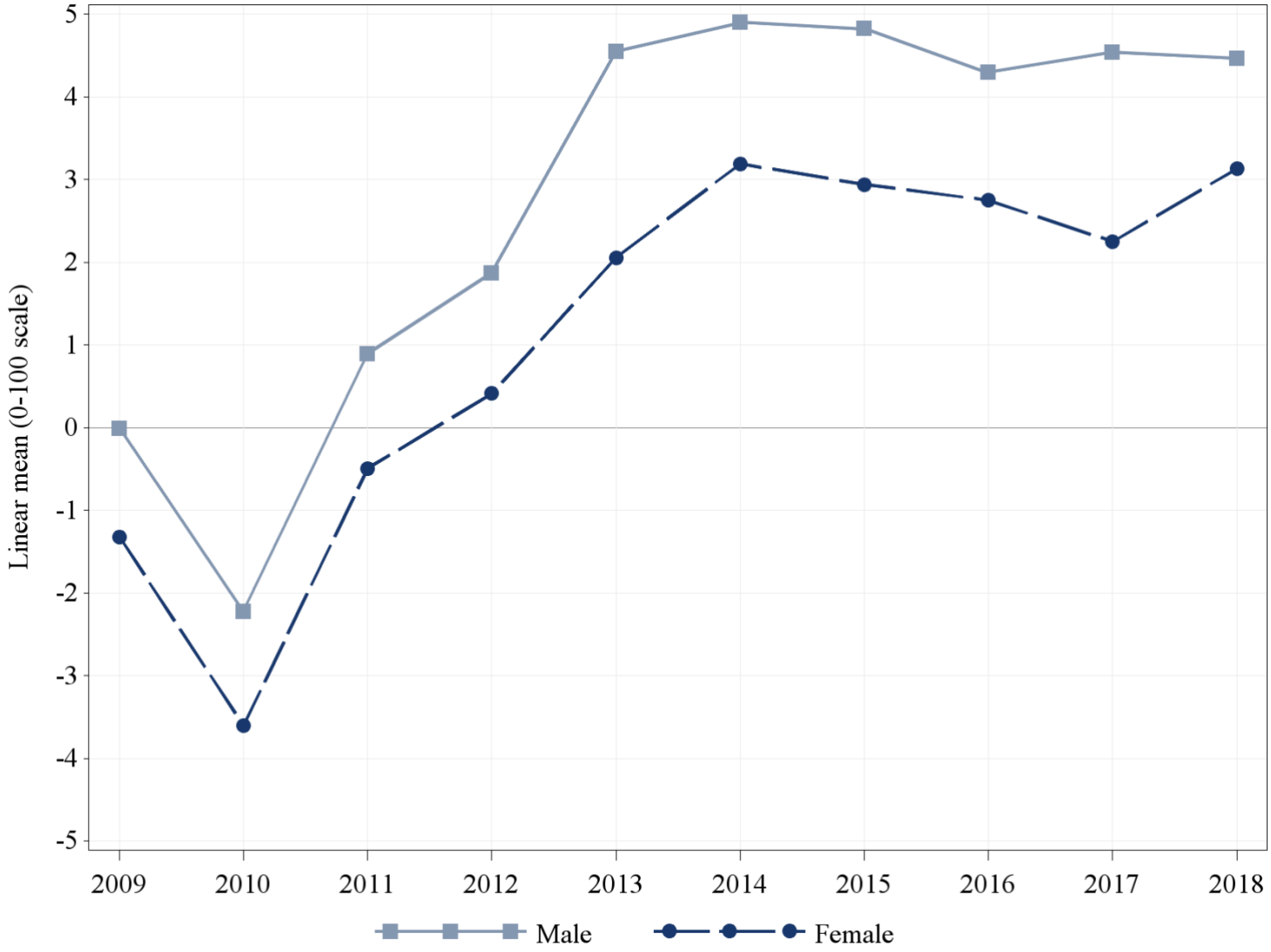
Customer Service

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (80.5)



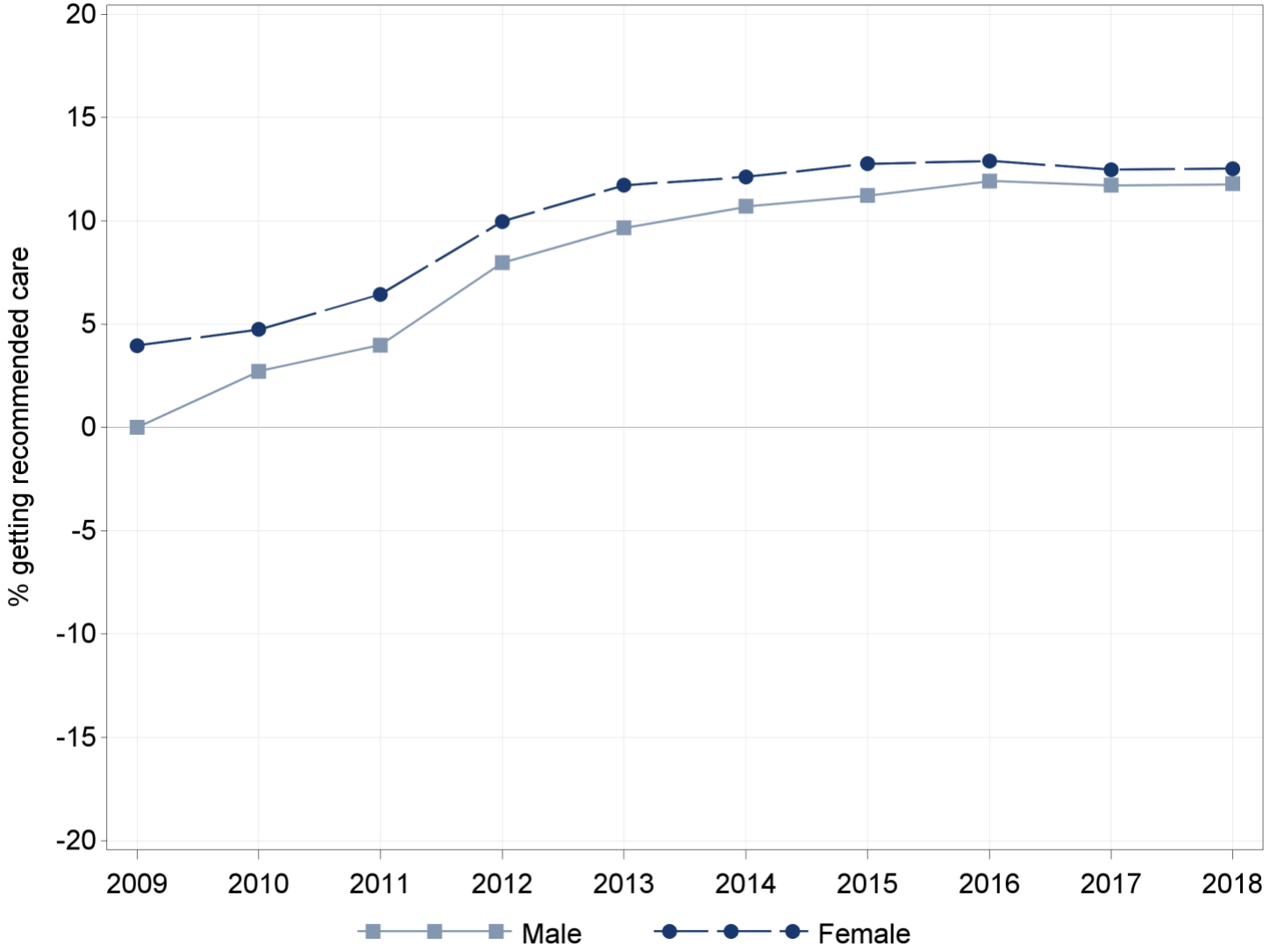
Annual Flu Vaccine

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (69.3)



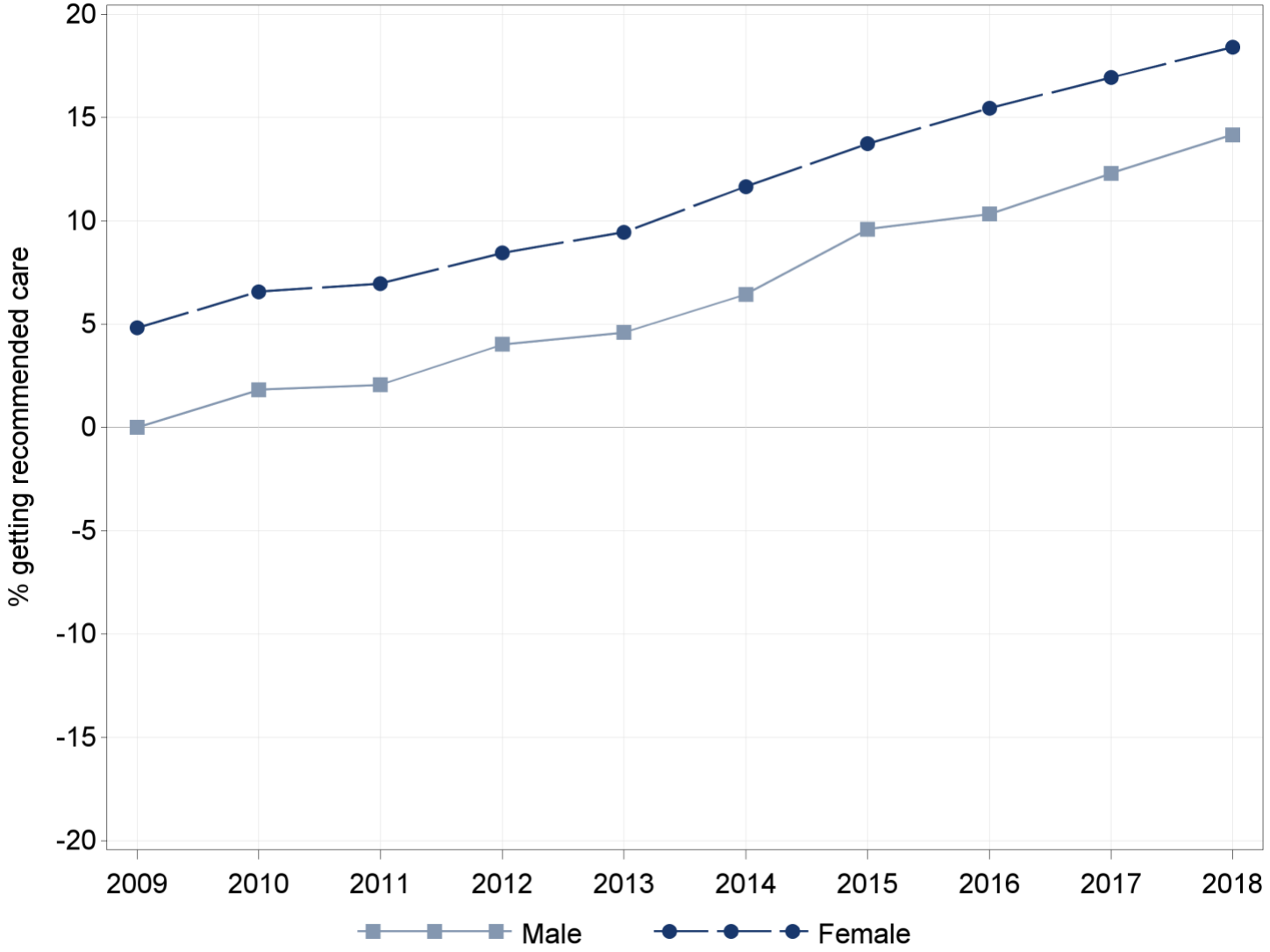
Continuous Beta-Blocker Treatment

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (78.7)



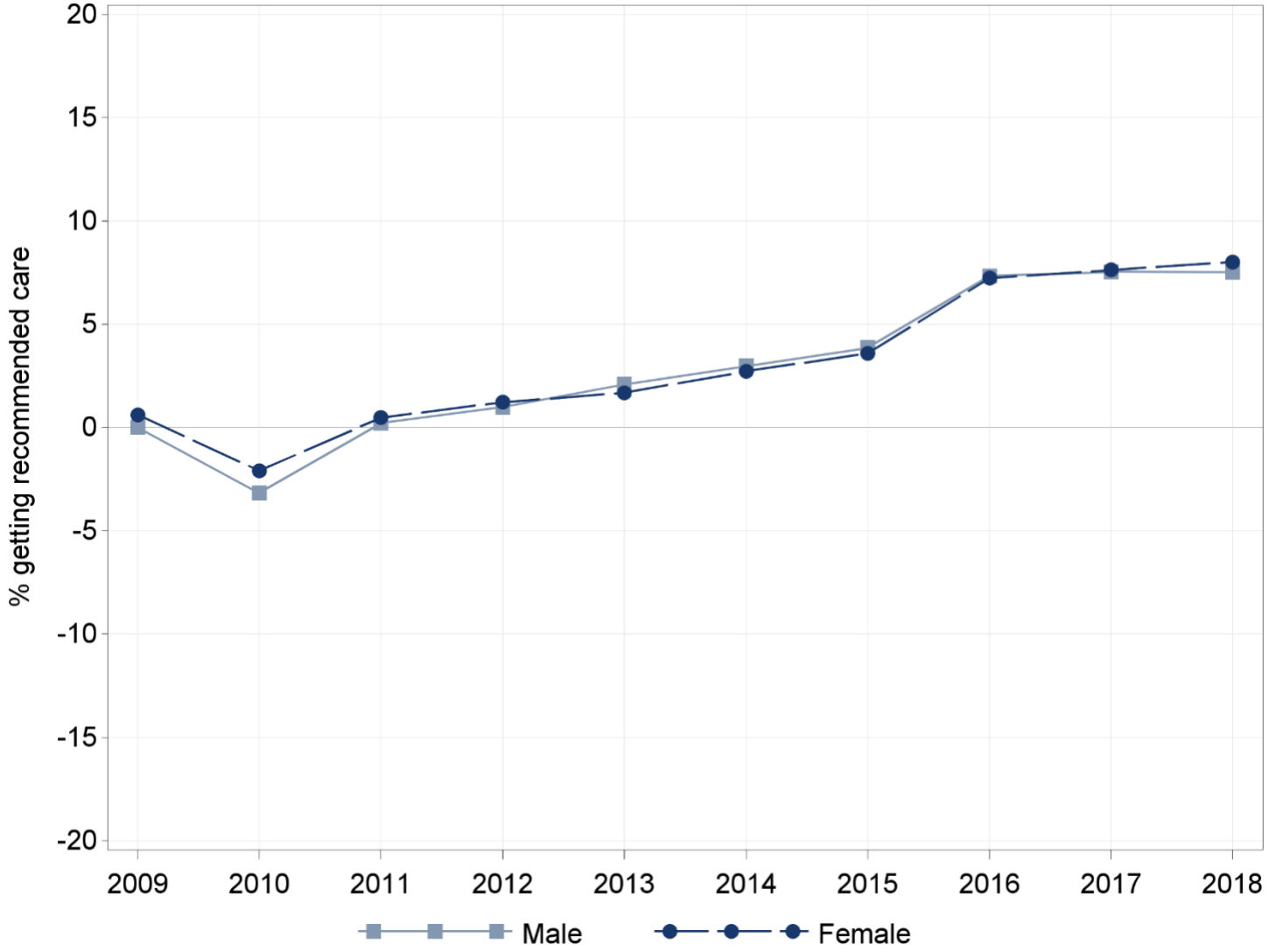
Diabetes Care—Eye Exam

2009-2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (59.9)



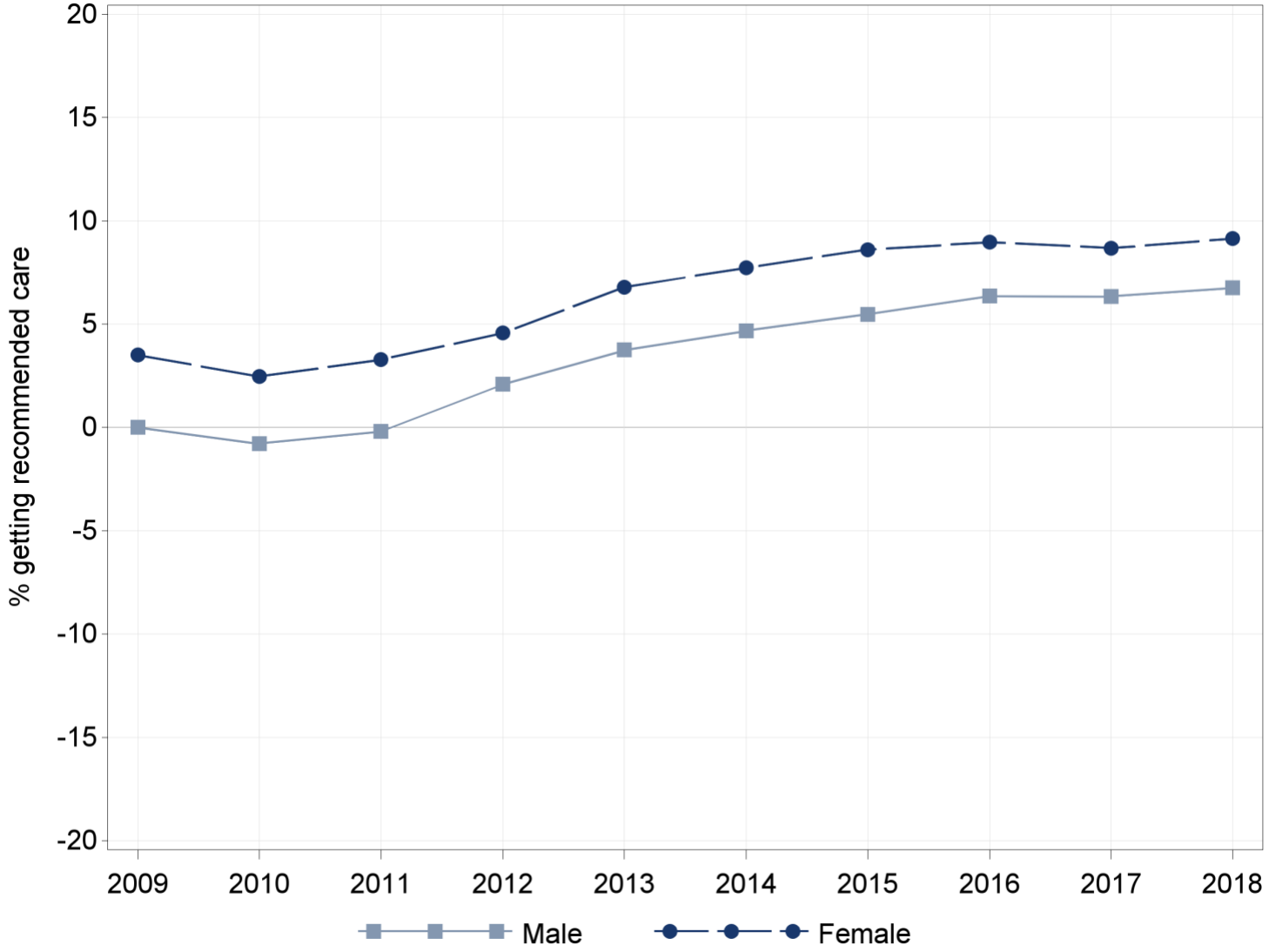
Diabetes Care—Kidney Disease Monitoring

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (88.9)



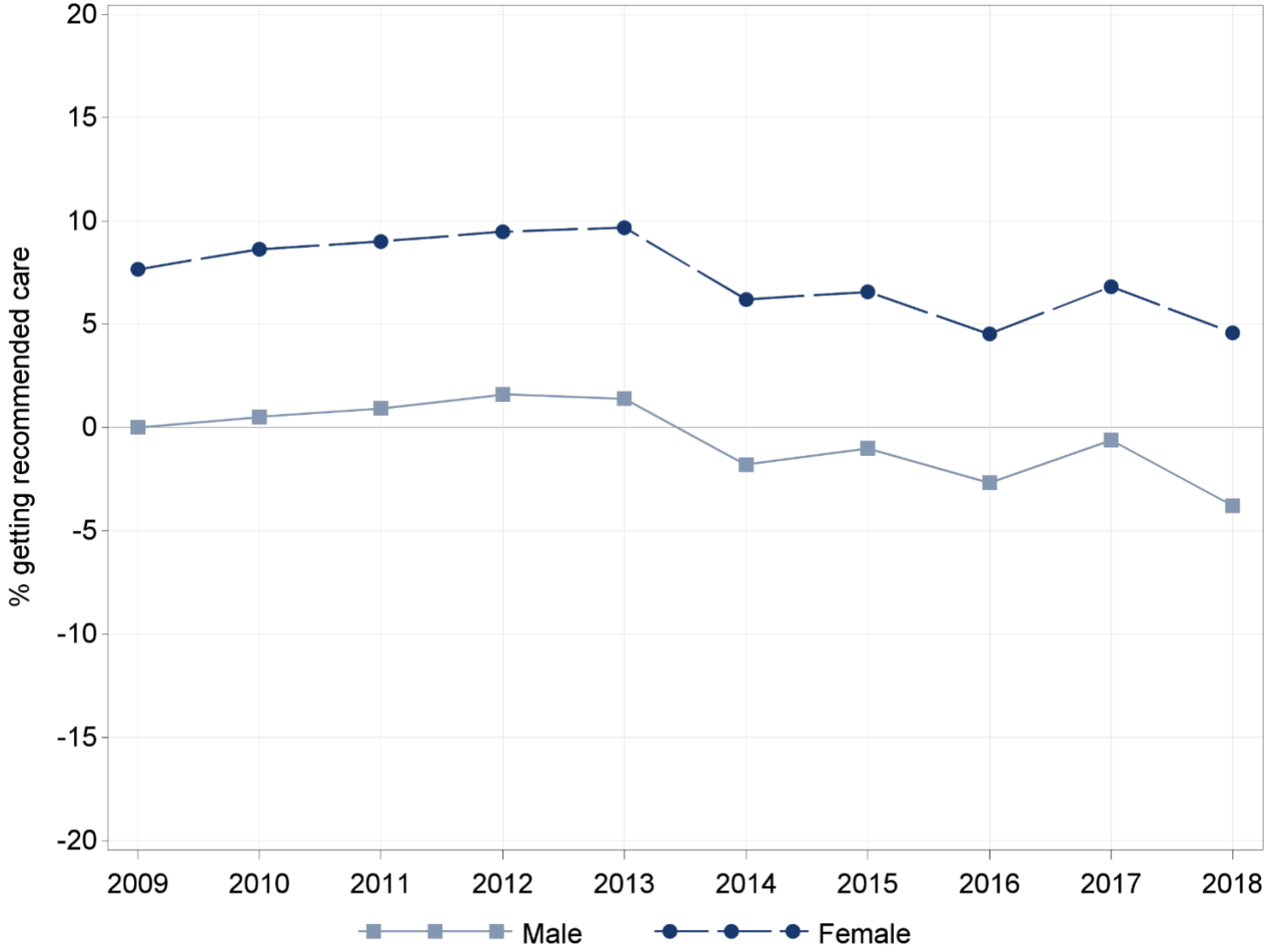
Rheumatoid Arthritis Management

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (70.2)



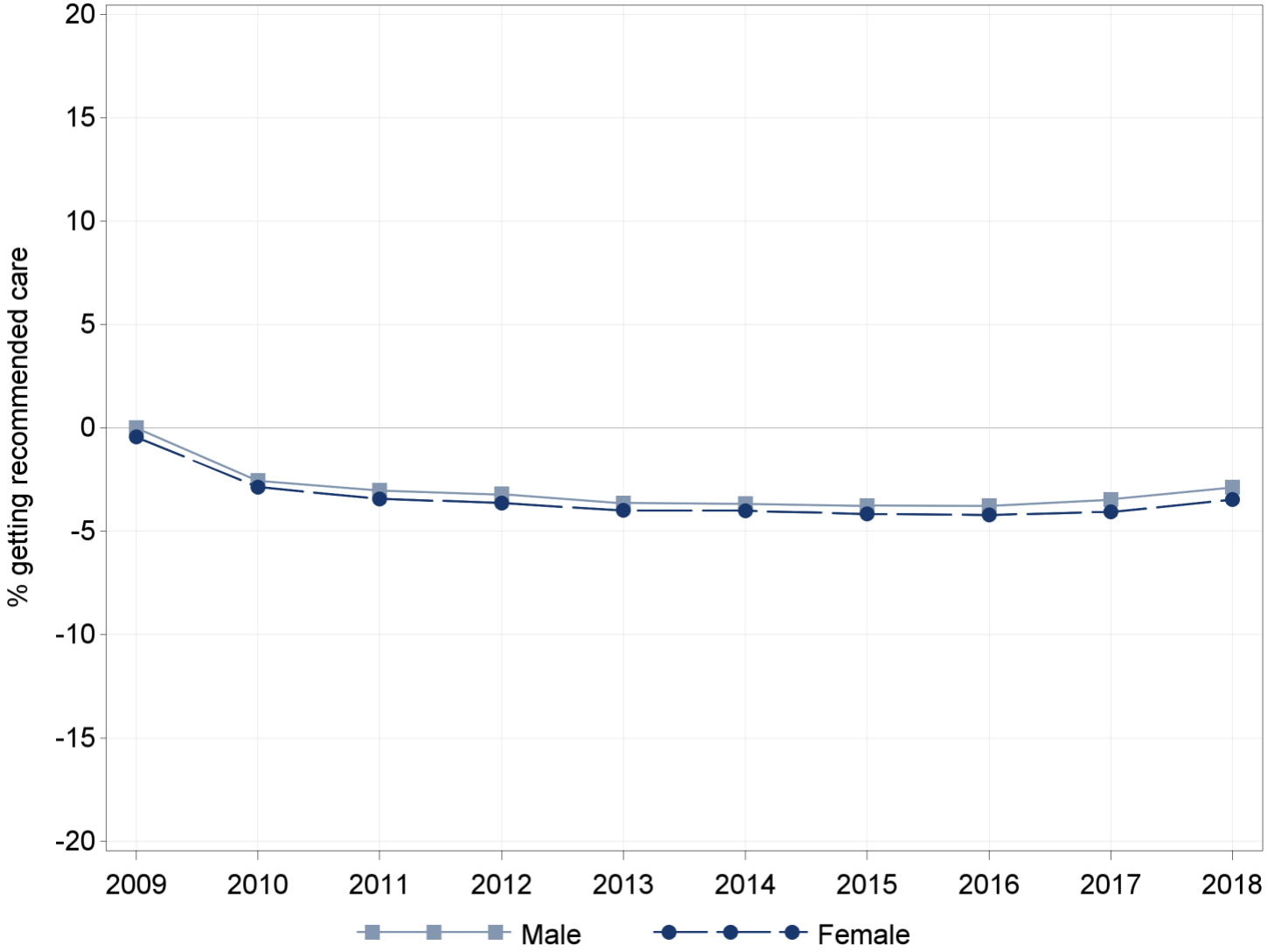
Follow-Up After Hospital Stay for Mental Illness (within 30 days of discharge)

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (51.1)



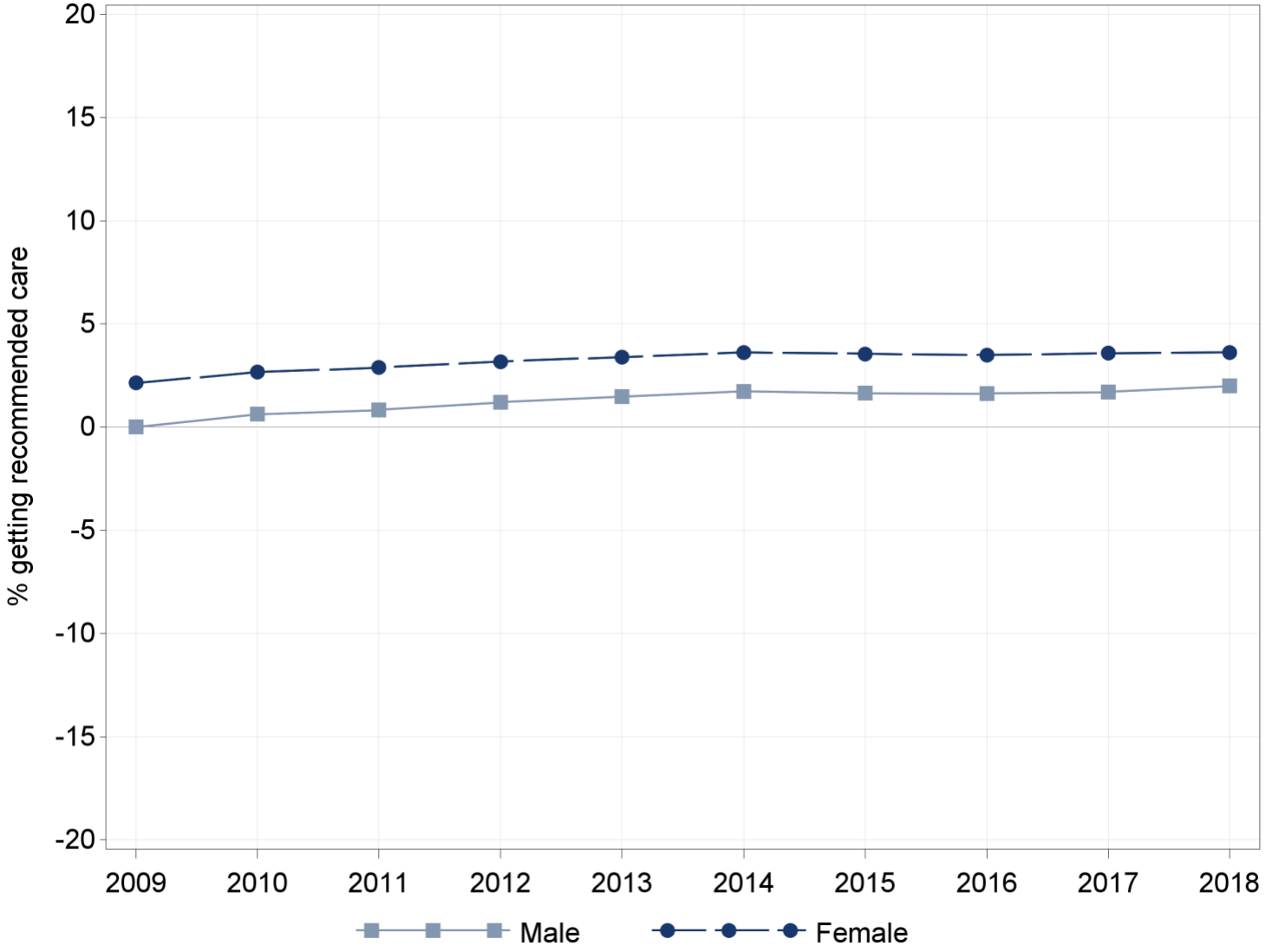
Engagement of Alcohol or Other Drug Treatment

2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (6.3)



Older Adults' Access to Preventive/Ambulatory Services

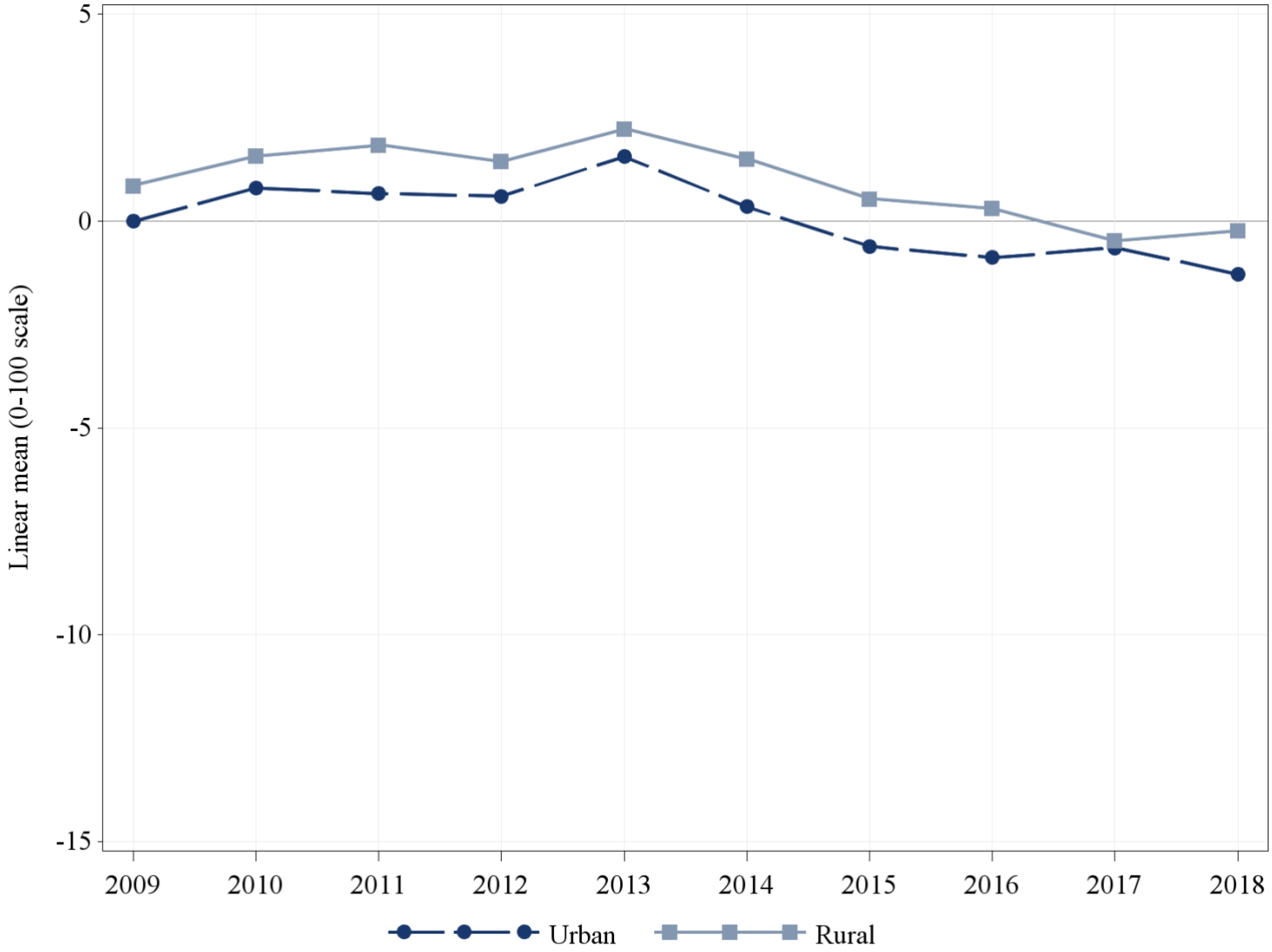
2009–2018 trend, by sex, subtracted from the 2009 mean among male beneficiaries (93.3)



Appendix 3:
Graphs of Scores on Patient Experience and Clinical Care Measures by Geography: 2009–2018

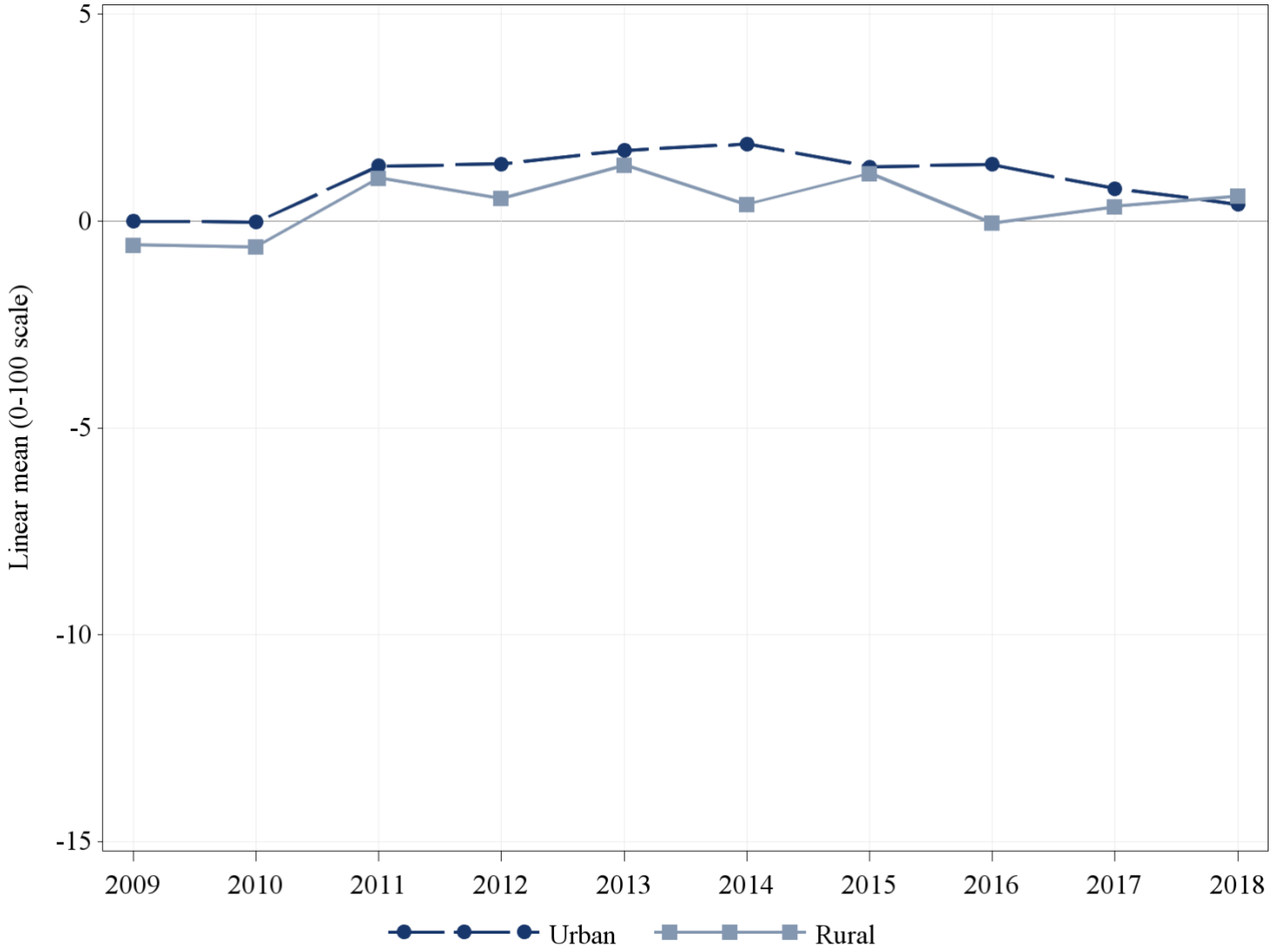
Getting Needed Care

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (84.2)



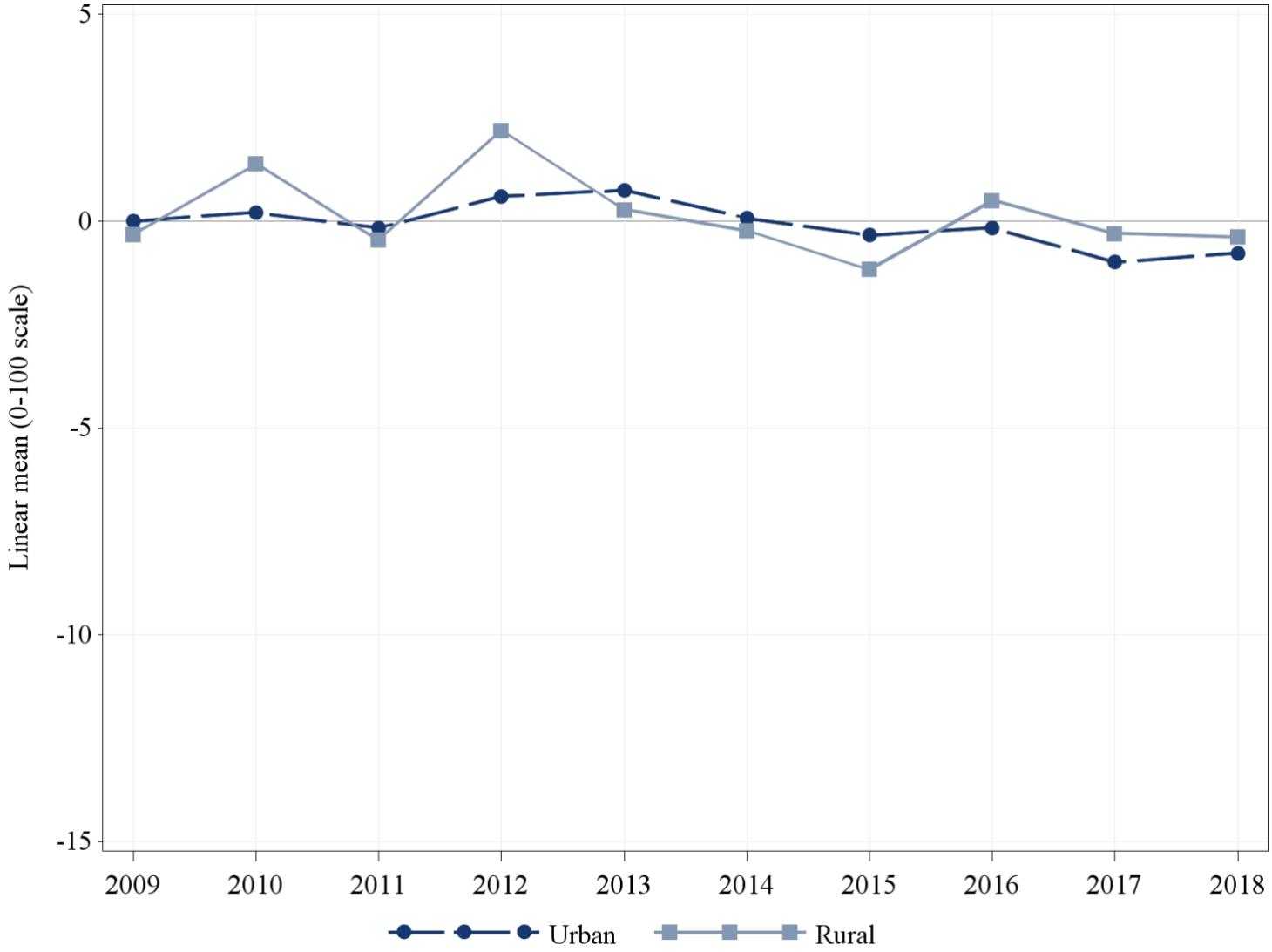
Getting Appointments and Care Quickly

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (73.8)



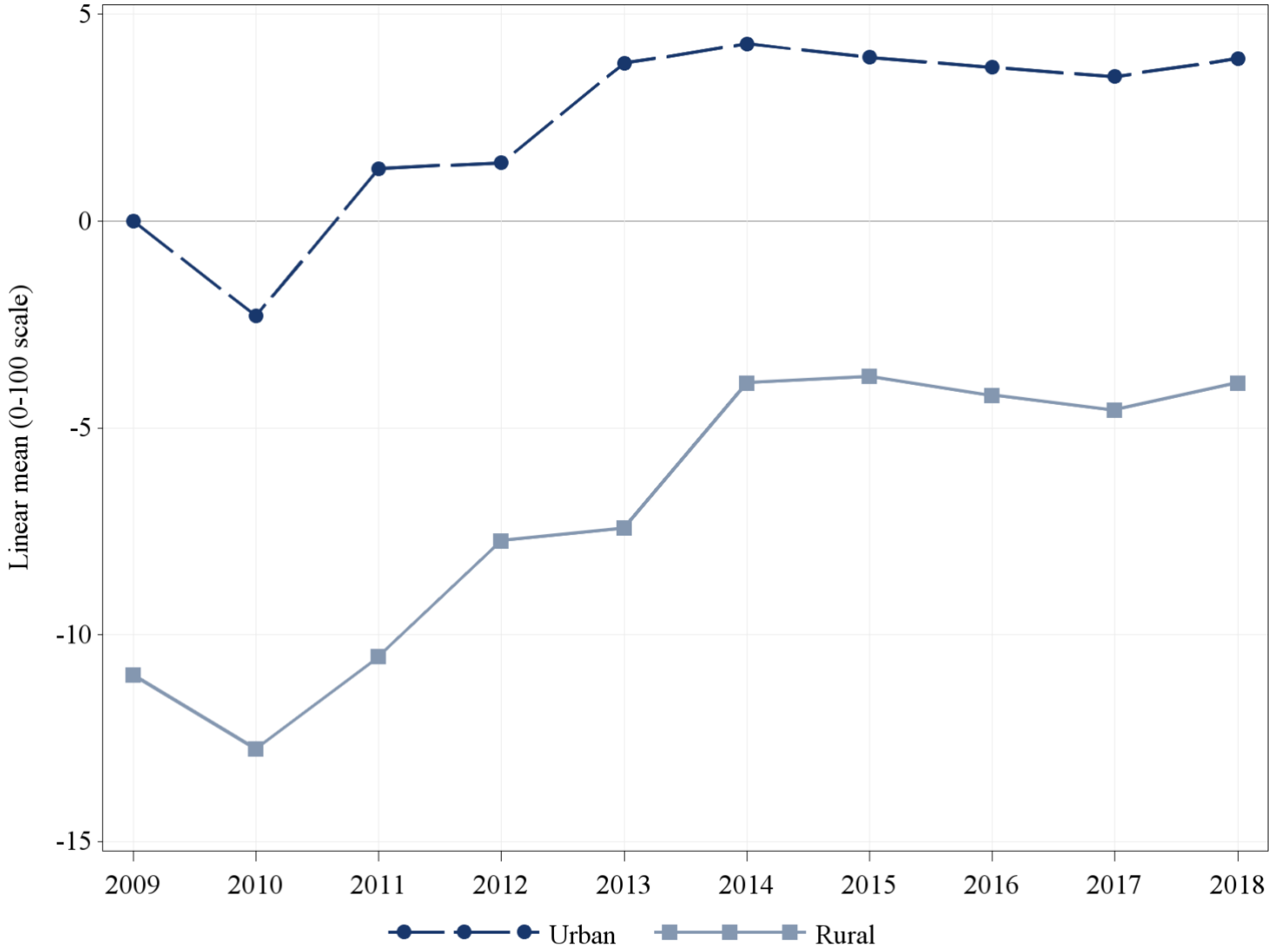
Customer Service

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (81.3)



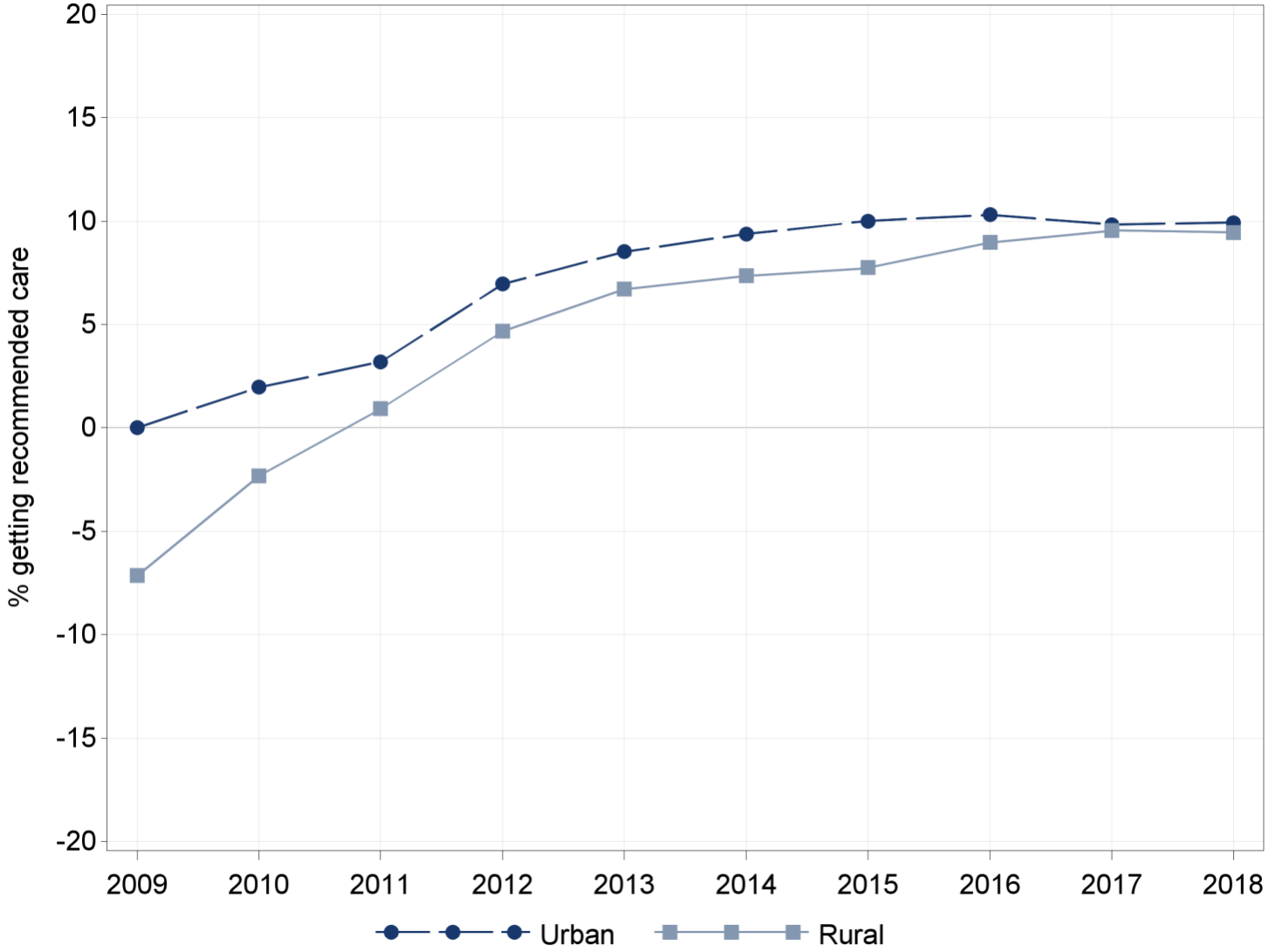
Annual Flu Vaccine

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (70.3)



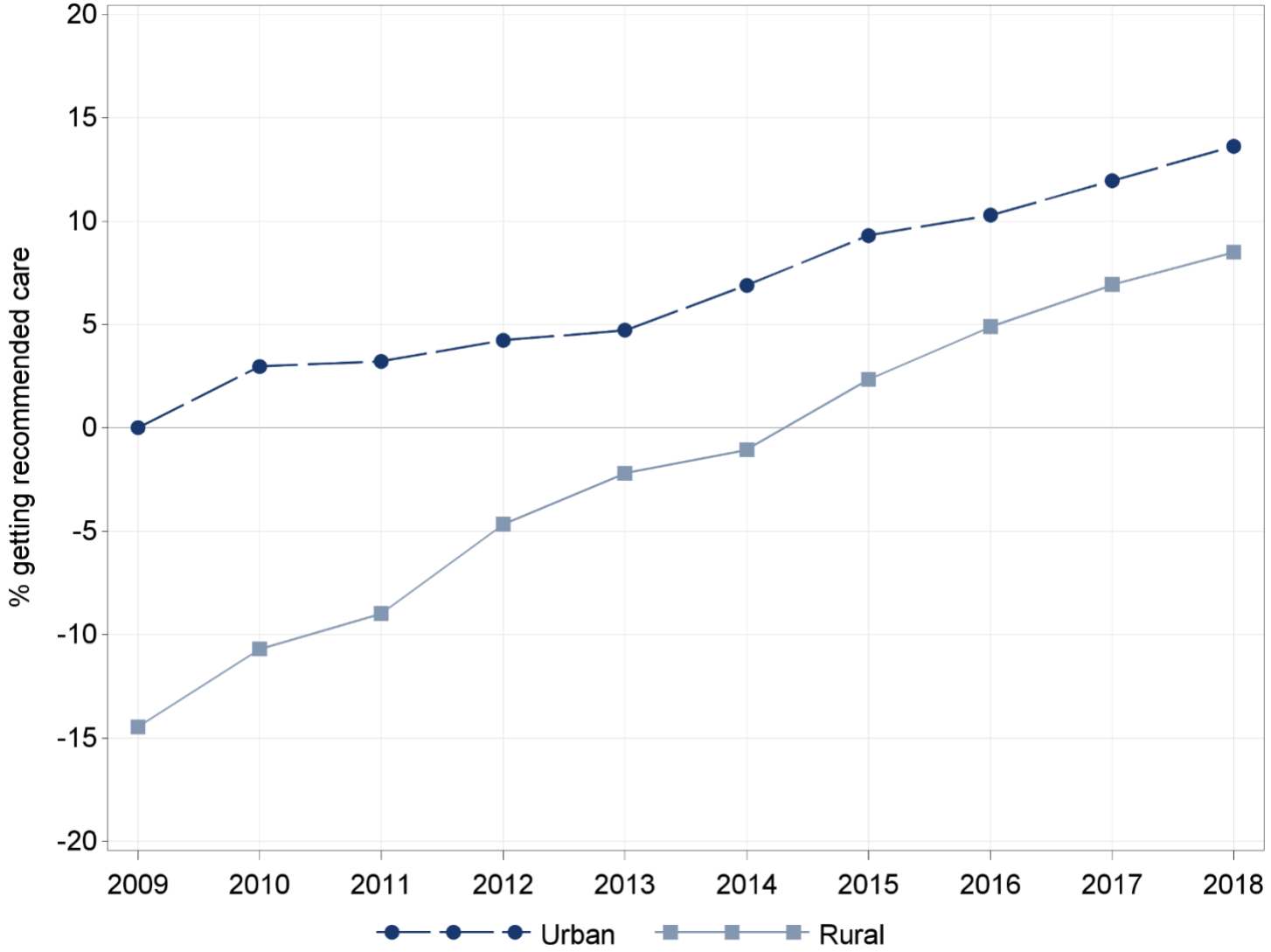
Continuous Beta-Blocker Treatment

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (80.9)



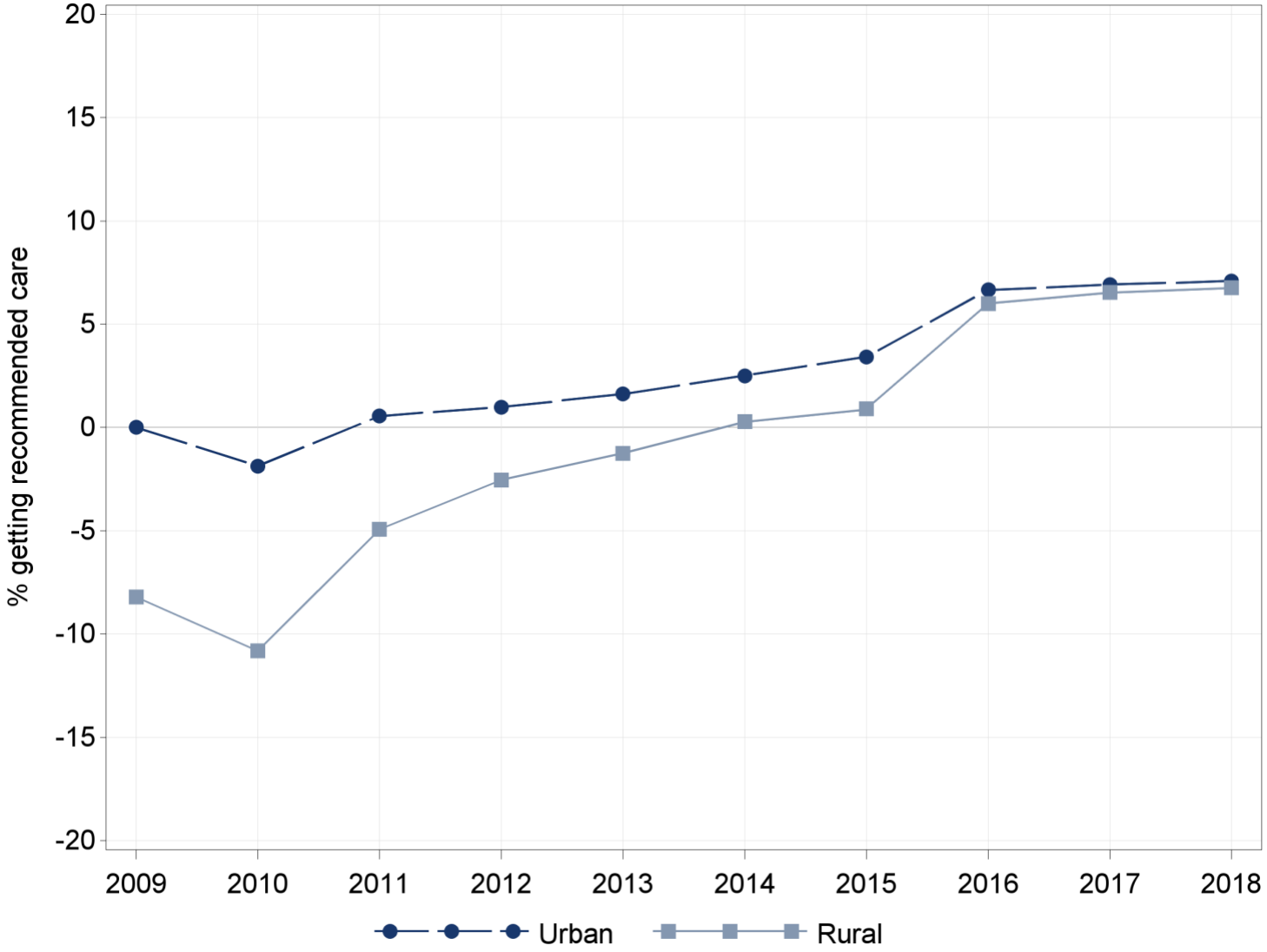
Diabetes Care—Eye Exam

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (63.6)



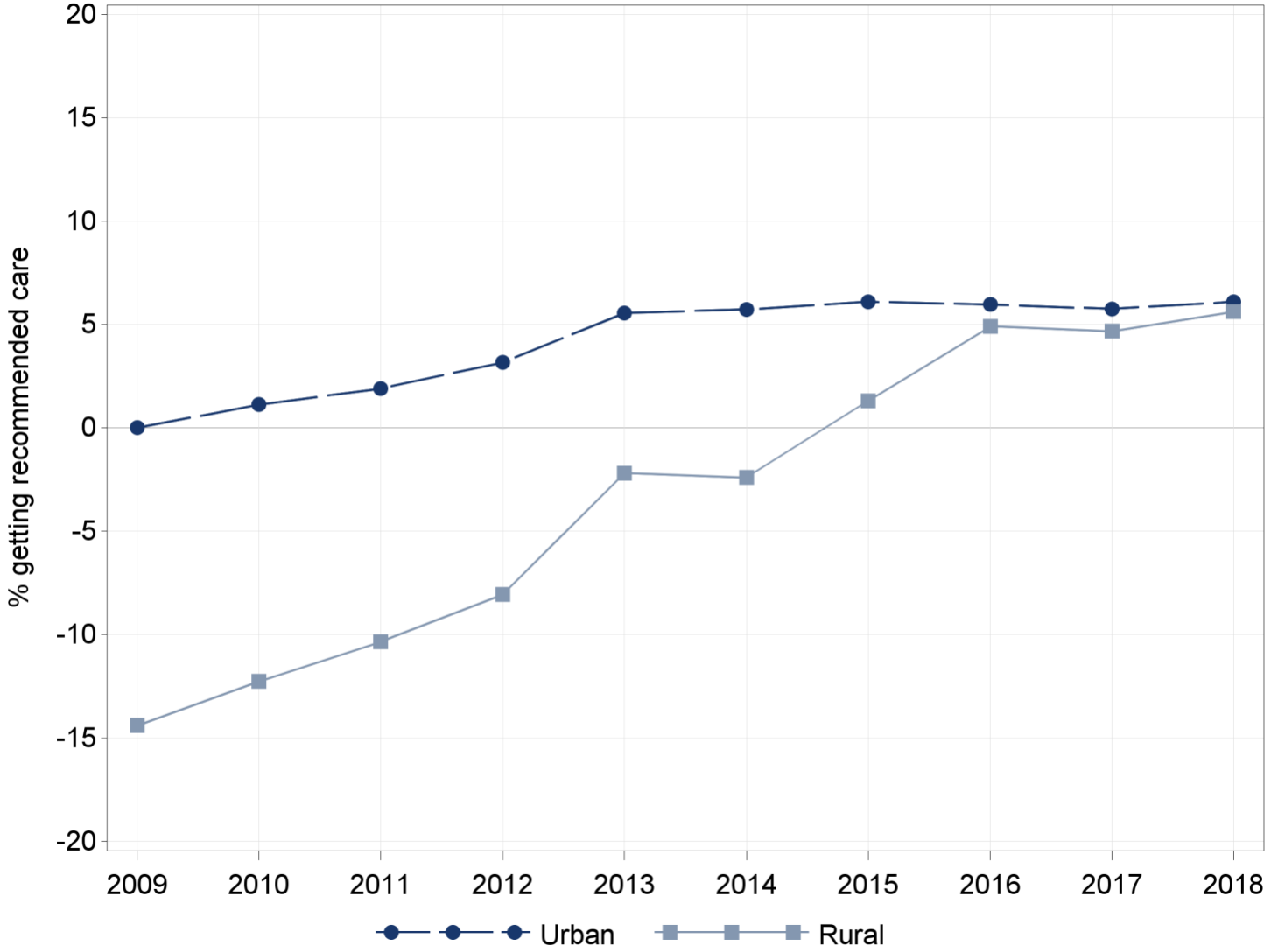
Diabetes Care—Kidney Disease Monitoring

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (89.6)



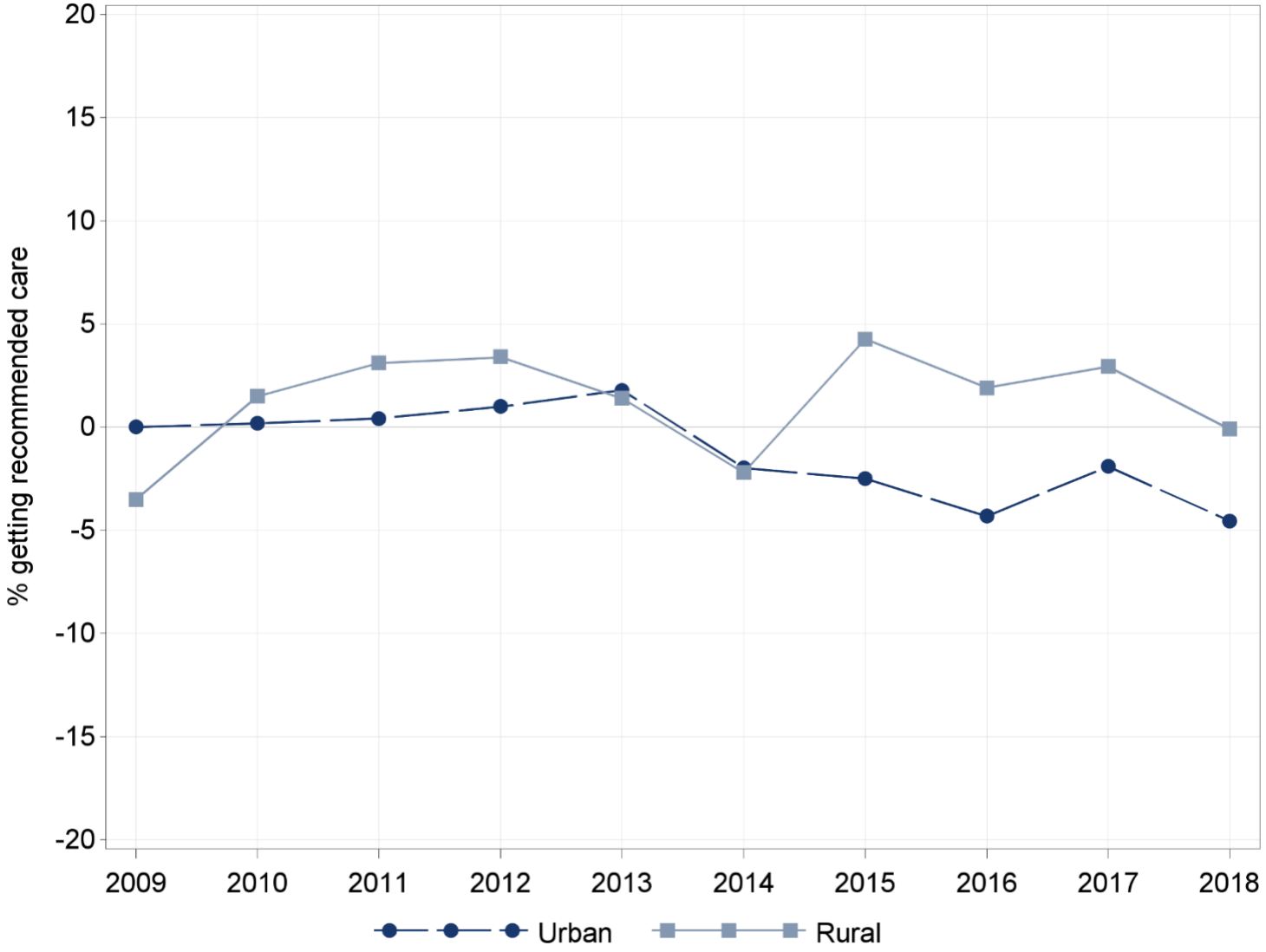
Rheumatoid Arthritis Management

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (72.8)



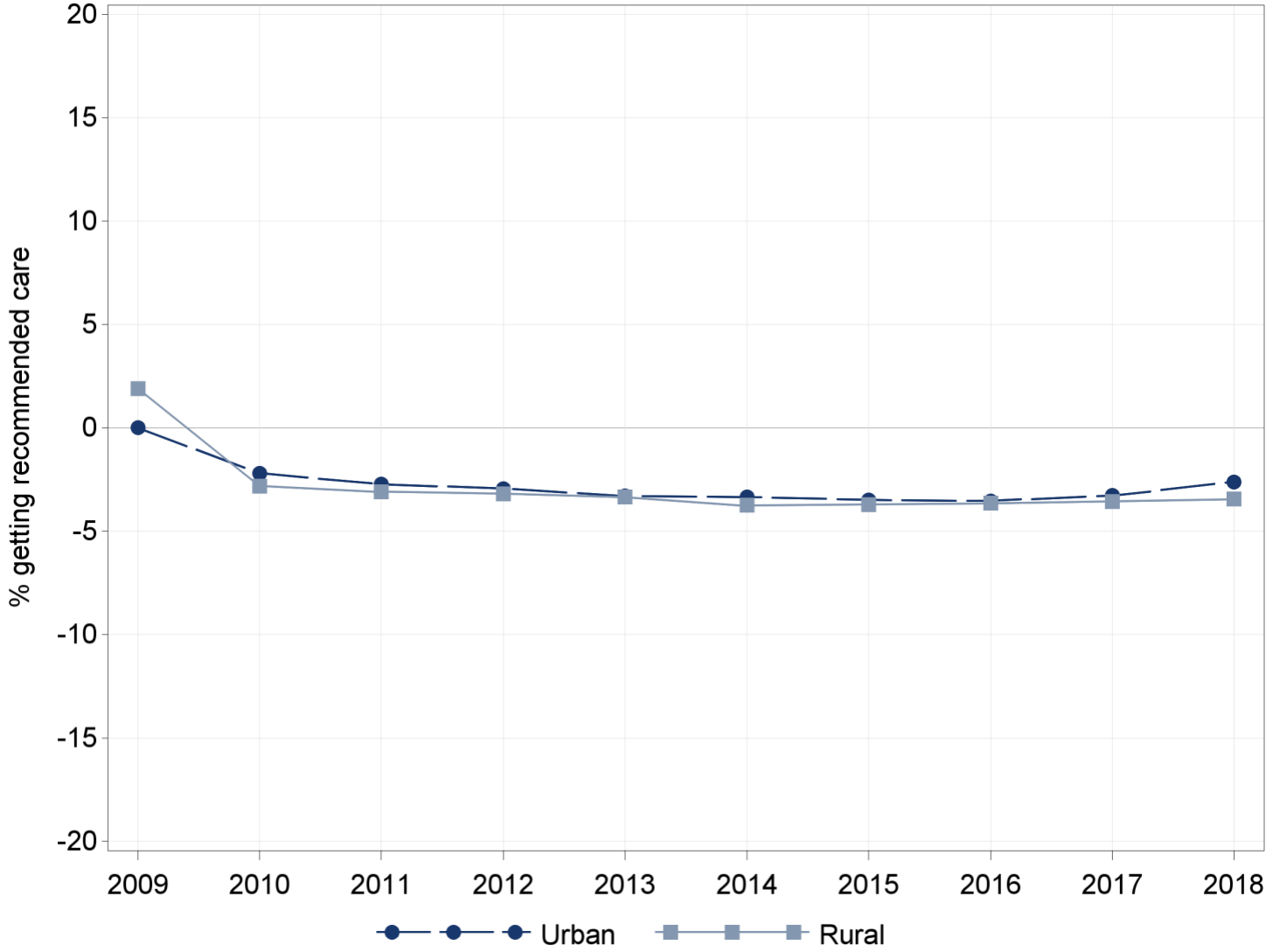
Follow-Up After Hospital Stay for Mental Illness (within 30 days of discharge)

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (55.9)



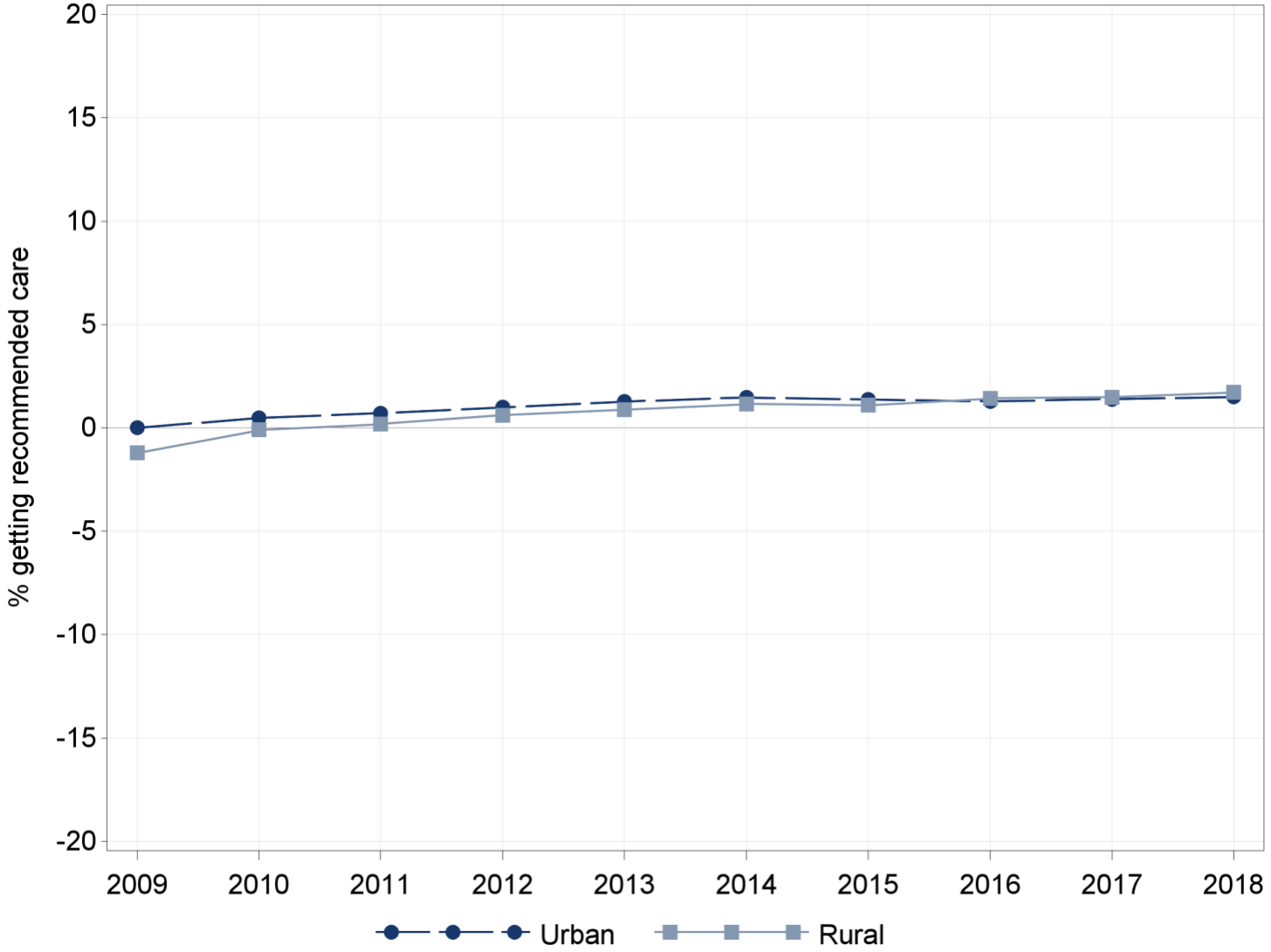
Engagement of Alcohol or Other Drug Treatment

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (5.9)



Older Adults' Access to Preventive/Ambulatory Services

2009–2018 trend, by geography, subtracted from the 2009 mean among urban beneficiaries (94.7)



Appendix 4:
Tables of Average Scores on Patient Experience and Clinical Care Measures by Race and Ethnicity, Sex, and Geography, 2009–2018

Average Scores by Race and Ethnicity for Patient Experience Measures, 2009–2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Getting Needed Care										
API	78.7	78.9	80.1	77.4	80.3	79.2	79.7	78.4	73.3	73.6
Black	83.0	83.7	83.5	84.6	85.4	83.7	81.9	82.6	84.3	84.1
Hispanic	82.9	83.8	84.0	84.5	85.5	84.1	83.1	83.1	82.1	81.7
White	85.4	86.0	86.1	85.7	86.6	85.6	84.7	84.4	84.8	84.4
Getting Care Quickly										
API	65.2	65.5	67.2	67.1	66.2	66.0	66.4	66.6	64.5	65.5
Black	69.8	69.9	72.1	72.3	72.7	73.4	71.6	71.9	72.9	72.5
Hispanic	70.0	68.6	70.1	71.3	71.3	70.4	71.0	70.5	70.9	70.2
White	75.6	75.6	77.2	76.8	77.3	77.6	77.2	77.1	76.4	76.4
Customer Service										
API	75.4	75.5	74.7	75.3	73.7	73.2	76.5	75.5	71.5	72.8
Black	80.4	80.1	81.6	82.3	83.1	81.1	80.7	81.6	80.9	81.9
Hispanic	81.4	82.8	82.6	83.1	82.0	82.2	81.6	81.3	81.6	81.2
White	82.1	82.3	81.4	82.5	82.6	82.0	81.2	81.8	80.8	81.0
Annual Flu Vaccine										
API	79.3	77.1	80.3	79.2	82.1	82.3	80.0	82.2	81.3	81.9
Black	56.0	53.2	58.6	59.7	62.1	61.6	63.0	63.3	63.7	64.3
Hispanic	55.9	54.2	57.4	59.6	62.5	64.5	66.6	65.6	65.9	65.9
White	72.0	69.7	72.6	73.3	75.1	76.4	75.8	75.3	75.1	75.9

NOTE: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Average Scores by Race and Ethnicity for Clinical Care Measures, 2009–2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Continuous Beta-Blocker Treatment										
API	84.5	81.4	83.4	88.2	89.6	91.0	90.1	92.6	90.2	90.8
Black	75.1	77.8	78.3	84.0	85.8	87.2	88.6	87.5	86.7	87.6
Hispanic	76.6	79.0	79.2	84.4	85.9	84.7	85.7	86.0	87.8	88.3
White	82.1	84.2	85.4	89.0	90.5	91.6	92.0	92.3	92.3	92.5
Diabetes Care—Eye Exam										
API	75.9	76.3	77.6	77.5	80.4	80.2	82.3	83.1	84.4	85.5
Black	62.0	67.4	68.9	68.9	69.2	75.1	76.3	77.4	78.2	78.7
Hispanic	56.9	61.5	62.2	66.1	66.7	71.2	74.3	76.4	79.6	80.0
White	64.2	67.3	67.7	68.7	68.9	71.4	72.5	73.4	74.9	76.8
Diabetes Care—Kidney Disease Monitoring										
API	91.3	89.4	92.4	93.5	94.4	95.4	94.7	96.2	97.4	97.7
Black	91.3	90.9	94.3	94.1	94.1	95.6	95.5	97.6	98.1	97.9
Hispanic	87.3	88.8	89.8	92.1	92.6	93.8	94.6	98.1	98.1	98.1
White	89.0	85.4	88.8	89.0	90.3	91.4	92.4	95.3	96.1	96.2
Rheumatoid Arthritis Management										
API	71.8	74.3	76.7	77.4	79.4	82.0	78.8	81.6	81.8	81.7
Black	66.2	67.1	68.9	70.7	73.5	78.0	77.4	79.1	78.8	78.9
Hispanic	57.4	58.3	59.3	62.6	66.5	68.6	73.4	78.8	78.9	80.2
White	73.5	75.2	76.0	76.9	78.9	80.6	79.8	80.4	79.8	79.3

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Follow-Up After Hospitalization for Mental Illness (within 30 days of discharge)										
API	62.8	59.6	59.7	62.6	63.3	64.6	57.4	60.0	56.9	59.6
Black	43.9	44.9	42.6	42.0	42.7	41.3	39.5	40.3	44.1	39.7
Hispanic	53.8	56.6	60.8	62.3	59.6	56.1	62.6	61.7	63.0	58.5
White	59.3	59.6	57.7	58.0	58.0	56.9	54.7	54.8	56.6	53.1
Engagement of Alcohol or Other Drug Treatment										
API	3.6	2.1	1.5	1.4	1.3	1.3	1.2	1.3	1.3	1.0
Black	5.4	2.4	1.7	1.8	1.7	1.8	1.7	1.2	1.6	2.3
Hispanic	3.7	2.3	1.9	1.7	1.8	1.5	1.6	1.9	1.8	1.7
White	6.1	3.0	2.7	2.6	2.2	2.4	2.2	1.9	2.1	2.8
Older Adults' Access to Preventive/Ambulatory Services										
API	93.6	94.0	94.7	95.0	95.0	95.4	95.2	94.8	95.1	95.1
Black	92.3	93.4	94.0	94.5	95.0	95.5	95.4	95.5	95.6	96.0
Hispanic	93.5	94.1	94.7	95.2	95.8	95.9	95.9	95.6	95.7	95.9
White	95.2	95.8	95.8	96.0	96.2	96.4	96.3	96.4	96.5	96.6

NOTE: API = Asian or Pacific Islander. The racial groups API, Black, and White are non-Hispanic. Hispanic ethnicity includes all races.

Average Scores by Sex for Patient Experience and Clinical Care Measures, 2009–2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Patient Experience Measures										
Getting Needed Care										
Female	84.2	85.0	84.9	84.7	85.7	84.4	83.4	83.2	83.9	83.2
Male	84.5	85.3	85.4	85.3	86.1	85.2	84.3	84.0	83.3	83.0
Getting Care Quickly										
Female	74.0	74.0	75.3	75.4	75.7	75.7	75.4	75.3	74.7	74.5
Male	73.3	73.2	74.8	74.5	75.0	75.1	74.6	74.4	74.2	73.8
Customer Service										
Female	81.8	82.1	81.7	82.5	82.1	81.9	81.0	82.1	81.0	81.1
Male	80.5	81.1	80.3	81.6	81.8	80.6	80.7	80.1	79.7	79.9
Annual Flu Vaccine										
Female	68.0	65.7	68.8	69.7	71.4	72.5	72.3	72.1	71.6	72.5
Male	69.3	67.1	70.2	71.2	73.9	74.2	74.2	73.6	73.9	73.8
Clinical Care Measures										
Continuous Beta-Blocker Treatment										
Female	82.6	83.4	85.1	88.6	90.4	90.8	91.4	91.6	91.1	91.2
Male	78.7	81.4	82.7	86.6	88.3	89.4	89.9	90.6	90.4	90.5
Diabetes Care—Eye Exam										
Female	64.8	66.5	66.9	68.4	69.4	71.6	73.7	75.4	76.9	78.4
Male	59.9	61.8	62.0	64.0	64.6	66.4	69.6	70.3	72.3	74.1

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Diabetes Care—Kidney Disease Monitoring										
Female	89.5	86.8	89.4	90.1	90.6	91.6	92.5	96.1	96.5	96.9
Male	88.9	85.7	89.1	89.9	91.0	91.9	92.8	96.2	96.4	96.4
Rheumatoid Arthritis Management										
Female	73.7	72.7	73.5	74.8	77.0	77.9	78.8	79.2	78.9	79.4
Male	70.2	69.4	70.0	72.3	74.0	74.9	75.7	76.6	76.6	77.0
Follow-Up After Hospitalization for Mental Illness (within 30 days of discharge)										
Female	59.0	59.9	60.3	60.8	61.0	57.5	57.9	55.8	58.1	55.9
Male	51.1	51.8	52.2	52.9	52.7	49.5	50.3	48.6	50.7	47.5
Engagement of Alcohol or Other Drug Treatment										
Female	5.9	3.5	2.9	2.7	2.4	2.3	2.2	2.1	2.3	2.9
Male	6.3	3.8	3.3	3.2	2.7	2.7	2.6	2.6	2.9	3.5
Older Adults' Access to Preventive/Ambulatory Services										
Female	95.5	96.0	96.2	96.5	96.7	96.9	96.8	96.8	96.9	96.9
Male	93.3	93.9	94.2	94.5	94.8	95.0	95.0	94.9	95.0	95.3

Average Scores by Geography for Patient Experience and Clinical Care Measures, 2009–2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Patient Experience Measures										
Getting Needed Care										
Rural	85.1	85.8	86.1	85.7	86.5	85.8	84.8	84.5	83.8	84.0
Urban	84.2	85.0	84.9	84.8	85.8	84.6	83.6	83.4	83.6	83.0
Getting Care Quickly										
Rural	73.2	73.2	74.8	74.3	75.1	74.2	74.9	73.7	74.1	74.4
Urban	73.8	73.8	75.1	75.2	75.5	75.6	75.1	75.2	74.6	74.2
Customer Service										
Rural	81.0	82.7	80.9	83.5	81.6	81.1	80.2	81.8	81.0	80.9
Urban	81.3	81.5	81.2	81.9	82.1	81.4	81.0	81.2	80.3	80.5
Annual Flu Vaccine										
Rural	59.3	57.5	59.8	62.6	62.9	66.4	66.5	66.1	65.7	66.4
Urban	70.3	68.0	71.6	71.7	74.1	74.6	74.3	74.0	73.8	74.2
Clinical Care Measures										
Continuous Beta-Blocker Treatment										
Rural	73.8	78.6	81.9	85.6	87.7	88.3	88.7	89.9	90.5	90.4
Urban	80.9	82.9	84.1	87.9	89.5	90.3	90.9	91.3	90.8	90.9
Diabetes Care—Eye Exam										
Rural	49.1	52.9	54.6	58.9	61.4	62.5	65.9	68.5	70.5	72.1
Urban	63.6	66.5	66.8	67.8	68.3	70.5	72.9	73.8	75.5	77.2

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Diabetes Care—Kidney Disease Monitoring										
Rural	81.4	78.8	84.7	87.1	88.4	89.9	90.5	95.6	96.2	96.4
Urban	89.6	87.8	90.2	90.6	91.3	92.1	93.1	96.3	96.6	96.7
Rheumatoid Arthritis Management										
Rural	58.4	60.5	62.4	64.7	70.6	70.4	74.1	77.7	77.4	78.4
Urban	72.8	73.9	74.7	75.9	78.3	78.5	78.9	78.7	78.5	78.9
Follow-Up After Hospitalization for Mental Illness (within 30 days of discharge)										
Rural	52.5	57.5	59.1	59.4	57.4	53.8	60.3	57.9	59.0	55.9
Urban	55.9	56.2	56.4	57.0	57.8	54.1	53.3	51.7	54.1	51.5
Engagement of Alcohol or Other Drug Treatment										
Rural	7.8	3.1	2.8	2.7	2.6	2.2	2.2	2.3	2.4	2.5
Urban	5.9	3.7	3.2	3.0	2.6	2.6	2.4	2.4	2.6	3.3
Older Adults' Access to Preventive/Ambulatory Services										
Rural	93.5	94.6	94.9	95.3	95.6	95.9	95.8	96.1	96.2	96.4
Urban	94.7	95.2	95.4	95.7	96.0	96.2	96.1	96.0	96.1	96.2

Appendix 5: Data Sources and Methods

The Medicare Consumer Assessment of Healthcare Providers and Systems Survey

The Medicare CAHPS Survey consists of a set of mail surveys with telephone follow-ups based on a stratified random sample of Medicare beneficiaries, with contracts serving as strata for MA beneficiaries and for Medicare Fee-for-Service (FFS) beneficiaries enrolled in prescription drug plans (PDPs) and states serving as strata for FFS beneficiaries not enrolled in a PDP. The data presented in this report pertain only to MA beneficiaries. MA survey response rates decreased from 64.8 percent in 2009 to 40.9 percent in 2018. The focus of this analysis is on non–Part D 2021 Star Rating measures that were consistently specified over the 10 years that are the focus of this analysis, 2009–2018, and that do not use a 0–10 rating scale (Martino et al., 2013; Weinick et al., 2011).

The Healthcare Effectiveness Data and Information Set

The HEDIS consists of more than 90 measures across six domains of care (National Committee for Quality Assurance, undated a). These domains are effectiveness of care, access to/availability of care, experience of care, utilization and risk-adjusted utilization, relative resource use, and health plan descriptive information. HEDIS measures are developed, tested, and validated under the direction of the National Committee for Quality Assurance. Although CAHPS data are collected only via surveys, HEDIS data are gathered both via surveys and via medical charts and insurance claims or encounter data for hospitalizations, medical office visits, and procedures. HEDIS measures get added, dropped, or substantially changed over time; this analysis was limited to seven measures that were consistently available and similarly defined across the 10 HEDIS years that are the focus of this analysis, 2009–2018.

Information on Race and Ethnicity

The Medicare CAHPS Survey asks beneficiaries, “Are you of Hispanic or Latino origin or descent?” The response options are: “Yes, Hispanic or Latino” and “No, not Hispanic or Latino.” The survey then asks, “What is your race? Please mark one or more,” with response options of “White,” “Black or African American,” “Asian,” “Native Hawaiian or other Pacific Islander,” and “American Indian or Alaska Native.” Following a U.S. Census approach, answers to these two questions were used to classify respondents into one of seven mutually exclusive categories: American Indian or Alaska Native, API, Black, Hispanic, Multiracial, White, or unknown.

- Respondents who endorsed Hispanic ethnicity were classified as Hispanic regardless of races endorsed.
- Non-Hispanic respondents who endorsed two or more races were classified as Multiracial, with a single exception: Those who selected both “Asian” and “Native Hawaiian or other Pacific Islander” but no other race were classified as API.
- Non-Hispanic respondents who selected exactly one race were classified as American Indian or Alaska Native, API, Black, or White, according to their responses.
- Respondents without data regarding race and ethnicity were classified as unknown.
- Unknown cases (5.7 percent) were dropped from the analysis. The American Indian or Alaska Native and Multiracial groups were included in the analysis, but estimates for these groups are not presented in this report.

HEDIS data, unlike CAHPS data, do not contain the patient's self-reported race and ethnicity. Therefore, we imputed race and ethnicity for the HEDIS data using a methodology that combines information from administrative data, surname, and residential location (Haas et al., 2019). This methodology—which is called Medicare Bayesian Improved Surname Geocoding (MBISG)—is recommended for estimating racial and ethnic inequities for API, Black, Hispanic, and White beneficiaries (Haas et al., 2019). MBISG 2.0 imputations, which are used for this report, are strongly predictive of self-reported race and ethnicity for these four racial and ethnic groups. Predictive accuracy is measured using the C-statistic, also called the Concordance Statistic or Area Under the Curve, a common metric for the performance of classification models. The C-statistic ranges from 0.5 (no predictiveness) to 1.0 (perfect predictiveness). C-statistics for the MBISG methodology range from 0.96 to 0.99 for the aforementioned four racial and ethnic groups (Martino et al., 2021).

Information on Sex

Information on the sex of MA beneficiaries is gathered from administrative records. In the CAHPS data, no cases were missing data on sex; in the HEDIS data, 0.6 percent of cases were missing data on sex and were thus omitted from the trend analysis of HEDIS scores by sex.

Information on Geography

Beneficiaries were classified as living in a rural or urban area based on the zip code of their mailing address and the corresponding Census Bureau core-based statistical area (CBSA). CBSAs consist of the county or counties or equivalent entities associated with at least one core urban area plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties with the counties that make up the core. Metropolitan statistical areas contain a core urban area of 50,000 or more population. Micropolitan statistical areas contain a core urban area of at least 10,000 but less than 50,000 population. For this report, any beneficiary residing within a metropolitan statistical area was classified as an urban resident; any beneficiary living in a micropolitan statistical area or outside a CBSA was classified as a rural resident. In the CAHPS data, no cases were missing data on geography; in the HEDIS data, 1.6 percent of cases were missing data on geography and were thus omitted from the trend analysis of HEDIS scores by geography.

Analytic Approach

The CAHPS measures presented in this report are composite measures that summarize, through averaging, the answers to two or more related CAHPS survey questions, or items. The annual flu vaccine measure is included in the CAHPS survey and is thus grouped with other CAHPS measures in this report. It is, however, considered to be an HEDIS measure. This is a single-item measure rather than a composite.

For the two diabetes measures included in this analysis, MA contracts may choose between administrative (complete case) and hybrid (chart-based sampling) reporting. To account for contracts' chosen reporting method, we developed sampling weights for each measure equal to a contract's eligible population divided by the number of HEDIS patient-level records we received from the contract within each year; these weights were used in all analyses.

Trend analyses of the three CAHPS composite measures were case-mix-adjusted using a standard set of adjusters (age, education, self-reported general and mental health, proxy response, eligibility for a low-income subsidy to purchase prescription medication, and dual eligibility for Medicare/Medicaid). No

adjustment was made for survey language. To match official scoring, *Annual Flu Vaccine* was not case-mix-adjusted. All trend analyses for CAHPS measures were weighted with raking weights that adjust the marginal distributions of a variety of characteristics among respondents to match the distributions among all Medicare beneficiaries (Purcell and Kish, 1980).

Using 2009 and 2018 data, we ran a series of linear models for each outcome and stratifying variable (race and ethnicity, sex, and geography). These models estimated and tested (1) changes in measure scores over time for each group, (2) initial differences and ending differences between groups cross-sectionally, and (3) differences in differences over time to look at convergence or divergence in groups' measure scores.

Predictors in the models examining trends by race and ethnicity included (1) an indicator for 2018, which estimates the change since 2009 for the reference group (White beneficiaries); (2) indicators for the other racial and ethnic groups (or race and ethnicity probabilities, in the case of analyses of HEDIS scores), which estimate the difference in scores by group compared to White beneficiaries in 2009; and (3) interactions between 2018 and indicators of race and ethnicity (or race and ethnicity probabilities), which estimate the difference in differences over time.

Predictors in the models examining trends by sex included (1) an indicator for 2018, which estimates the change since 2009 for the reference group (male beneficiaries); (2) an indicator for female sex, which estimates the difference in scores for female versus male beneficiaries in 2009; and (3) an interaction between 2018 and female sex, which estimates the difference in differences over time.

Predictors in the models examining trends by geography included (1) an indicator for 2018, which estimates the change since 2009 for the reference group (urban residents); (2) an indicator for rural residence, which estimates the difference in scores for rural versus urban residents in 2009; and (3) an interaction between 2018 and rural residence, which estimates the difference in differences over time.

For the purposes of visualizing changes in both scores and inequities over time, graphs were generated showing scores as differences from the reference group's score in 2009 (White beneficiaries for race and ethnicity, male beneficiaries for sex, urban residents for urbanicity). For the three CAHPS composite measures, we ran models that fully interact year and the stratifying variable and include the case-mix adjustors. We estimated covariate-adjusted means ("recycled predictions") from these models—that is, the estimated score for each year and each level of the stratifying variable normalized to the entire sample used in the model. For HEDIS measures, estimated scores are the percentage of beneficiaries who received the recommended care, except the *Follow-Up After Hospitalization for Mental Illness* measure, for which multiple events per person are considered. For that outcome, the score is the percentage of eligible events that met the measure criteria.

All outcome measures were scaled 0–100. Non–statistically significant differences and statistically significant differences of less than 1 point in magnitude are characterized as being "similar." Differences of 1, 3, and 5 or more points are considered small, medium, and large, respectively, for CAHPS measures (Quigley et al., 2018). These same thresholds are applied for HEDIS measures.

Interpreting API CAHPS Scores

One complication in comparing the three CAHPS composites by race and ethnicity is differential scale use by members of different groups. Except for 0–10 rating items not included here, Black, Hispanic, and White survey respondents have been found to use response scales for CAHPS items similarly (Weinick et

al., 2011). However, Asian respondents have been found to display lower extreme response tendency (ERT) for CAHPS items compared to White respondents; that is, when asked to evaluate care that is objectively of similar quality, Asian respondents are less likely to use response options at either the bottom or top of the scale compared to White respondents (Mayer et al., 2016). Mean CAHPS scores are generally high, so this difference in scale use generally manifests as lower mean responses among Asian beneficiaries compared to White beneficiaries (Mayer et al., 2016). No comparison of CAHPS response scale use between Pacific Islander and Asian respondents has been published. However, since Pacific Islander beneficiaries constitute a small proportion of the API group (8.4 percent of these beneficiaries endorse only "Pacific Islander," 1.5 percent both "Pacific Islander" and "Asian," and 90.1 percent only "Asian"), means for this group are largely determined by responses from Asian beneficiaries, and the API group, as a whole, displays lower ERT than White beneficiaries. While we report the differences in mean CAHPS composites between API and White beneficiaries at the beginning and end of the 10-year period used in trending, differential scale use means that it is difficult to test whether API and White beneficiaries report similar quality of care. Differential scale use does not affect trending patterns, including changes in mean adjusted scores within the Asian or Pacific Islander group over time and differential trending compared to White beneficiaries. Concerns related to differential scale use do not apply to *Annual Flu Vaccine*, which has a yes/no response scale.

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