

# Sex Differences in Medicare Beneficiaries' Experiences by Low-Income Status

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Measures of patient experience evaluate aspects of care that can best be assessed by patients themselves (eg, whether a doctor has spoken to a patient in a way that they understand). Data primarily from the United States show that better patient experiences may facilitate better health outcomes.<sup>1,2</sup> The patient experiences of Medicare beneficiaries are assessed annually through the Medicare Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys.<sup>3</sup> Based on higher levels of health literacy<sup>4,5</sup> (ie, the ability to obtain, process, and understand basic information in order to make health decisions<sup>6</sup>) and patient activation<sup>7</sup> (ie, the level of involvement patients have in their health and health care<sup>8</sup>), one might expect better patient experience for female patients. On the other hand, one might expect better patient experience for male patients, given the evidence that physicians treat the concerns and symptoms of males more seriously.<sup>9,10</sup> Such differences may in part underlie the poorer care that female patients receive for cardiovascular and some other conditions.<sup>11</sup> Studies in emergency department and hospital settings and studies among Medicare beneficiaries have generally found small sex and gender differences in patient experience, with differences present in both directions.<sup>9,12,13</sup>

Less is known about sex differences in patient experience among low-income populations. Both mechanisms—differential provider regard for patient input by patient sex and different patient approaches to health care by sex—may be more or less present in low-income patient populations than higher-income ones. Studies documenting these 2 mechanisms have not considered differences by socioeconomic status. We consider the question of whether sex differences in patient experience differ by low-income status among Medicare beneficiaries using dual eligibility for Medicaid and Medicare and receipt of the low-income subsidy (LIS) (hereafter referred to as “dual/LIS” status) as an indicator of low socioeconomic position. Further, there is evidence from primarily US-based studies<sup>14,15</sup> of poor patient health care for dual/LIS beneficiaries,<sup>16</sup> including problems accessing needed prescription drugs<sup>15</sup> and unmet needs for health care.<sup>17</sup> Among those engaged in care, studies report confusion about the enrollment process

## ABSTRACT

**OBJECTIVES:** Medicare beneficiaries dually eligible for Medicaid are a low-income group who are often in poor health. Little research has examined sex differences in patient experience by dual/low-income subsidy (LIS) status.

**STUDY DESIGN:** Cross-sectional comparison by sex and low-income status.

**METHODS:** We used linear regression to compare 6 case mix-adjusted patient experience measures (on a 0-100 scale) by sex within non-dual/LIS and dual/LIS beneficiary groups among 549,603 respondents 65 years and older to the 2016-2017 Medicare Consumer Assessment of Healthcare Providers and Systems surveys of beneficiary experience with Medicare (mail with telephone follow-up of nonrespondents, 42% response rate).

**RESULTS:** Dual/LIS male beneficiaries reported worse patient experiences on all 6 measures than female beneficiaries, with scores 1 to 2 percentage points lower for 3 measures and less than 1 percentage point lower for the other 3 measures. For 4 of the 6 measures, sex differences among dual/LIS beneficiaries were significantly larger than those among non-dual/LIS beneficiaries. In all 4 instances, the gaps between men and women among dual/LIS beneficiaries favored women;  $P < .05$  for all differences discussed.

**CONCLUSIONS:** Low-income male Medicare beneficiaries are more likely to report poor patient experiences, possibly because of lower health literacy, less patient activation, and smaller social networks, along with provider responses to these characteristics. Efforts to address these patient-level factors should happen in parallel with structural-level approaches to train and prepare providers to ensure attentive, respectful patient-centered care for all patients. Additionally, targeted use of ombudsmen and interventions may help reduce inequities.

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## TAKEAWAY POINTS

Low-income male Medicare beneficiaries—those who are dually eligible for Medicaid—are more likely than their female counterparts to report poor patient experiences.

- ▶ Male dual-eligible beneficiaries may be relatively more challenged in navigating Medicare and Medicaid programs because of lower health literacy, less patient activation, and smaller social networks. Efforts to address these patient-level factors should happen in parallel with structural-level approaches to train and prepare providers to deliver attentive, respectful, patient-centered care to all patients.
- ▶ Additionally, targeted use of ombudsmen and interventions may help reduce these inequities.

and how the Medicare and Medicaid systems work together,<sup>14</sup> high hospitalization and readmission rates,<sup>18,19</sup> and poor coordination of continuous care. In addition to having poor health and low incomes, dual/LIS beneficiaries must navigate 2 complex public programs (Medicare and Medicaid). Out of concern for this challenge, the Medicare-Medicaid Coordination Office was established in 2011 to address fragmented and inefficient health care.<sup>20</sup> Given these challenges, we examined how sex differences in patient experience might vary by dual/LIS status.

## METHODS

## Data

We employed data from the 2016 and 2017 MCAHPS surveys. MCAHPS is administered annually to a nationally representative sample of Medicare beneficiaries to assess their experiences with health care. It is a mail survey with telephone follow-up for mail nonrespondents and can be completed in English, Spanish, or Chinese. Although a minority of Medicare beneficiaries are younger than 65 years and qualify for coverage because of disability or end-stage renal disease, we restricted our analyses to beneficiaries 65 years and older. This group includes nearly all older adults in the United States and is representative of the general population in that age group.

The dependent variables for this study included all 6 MCAHPS composite measures of patient experience: getting needed care, getting care quickly, customer service, doctor communication, coordination of care, and getting needed drugs. Each composite is calculated as the mean of 2 or more survey items with ordinal response options: 1 (never), 2 (sometimes), 3 (usually), or 4 (always). All composites were linearly transformed from these 4 ordinal responses to a 0-100 scale, so that differences in scores could be interpreted as percentage points (PP). Based on existing literature, this also facilitated the use of guidelines for interpreting the magnitude of PP differences in CAHPS scores as small, medium, or large effect sizes (1, 3, and 5 PP, respectively).<sup>21</sup> A threshold of  $P < .05$  was used to designate statistical significance.

The independent variables of primary interest for this study were sex and a low-income indicator (Medicaid coverage [dual eligibility] or LIS status). The sex variable had 2 values, “female” and “male”; information on transgender or nonbinary identities

was unavailable. The low-income indicator is based on CMS criteria for low income and limited assets.<sup>22</sup>

With respect to covariates, all analyses employ an indicator of year, an indicator of coverage type (Medicare Advantage [MA] or Medicare fee-for-service [FFS]), and the standard MCAHPS case-mix adjustors (CMAs) needed for valid scoring of MCAHPS measures<sup>23-25</sup>: age (65-69, 70-74, 75-79, 80-84,  $\geq 85$  years); self-reported education (eighth grade or less,

some high school, high school diploma, some college or 2-year degree, 4-year college degree, more than 4-year college degree); self-reported general and mental health status (2 items, with response options of excellent, very good, good, fair, poor); proxy assistance with the survey (any proxy assistance, proxy answered survey questions); and a Chinese-language survey indicator. Secondary models included additional beneficiary-level demographic and health covariates: an indicator of rural residence (micropolitan or not within a core-based statistical area); a Spanish-language survey indicator; self-reported race and ethnicity (categorized as American Indian or Alaska Native; Asian or Pacific Islander [API]; Black; Hispanic; multiracial; unknown; White<sup>26</sup>); indicators of 6 chronic health conditions (heart attack; angina or coronary heart disease; hypertension or high blood pressure; cancer [other than skin]; emphysema/asthma/chronic obstructive pulmonary disease; diabetes or high blood sugar); chronic condition count (0, 1, 2,  $\geq 3$ ); an indicator of living alone; an indicator of not having a personal doctor; and hospital referral region (HRR; 306 total). HRRs correspond to health care markets and here control for unobserved geographic differences between low-income and other beneficiaries.<sup>27</sup>

## Analysis

We compared beneficiary characteristics for women and men within 2 groups: non-dual/LIS and dual/LIS beneficiaries, using linear or logistic regression according to the form of the covariate. Two sets of linear regressions then compared patient experience scores by sex and dual/LIS status, predicting the 6 MCAHPS composite measures of patient experience from (1) female and dual/LIS indicators, (2) a female\*dual/LIS interaction, and (3) a set of covariates (the reduced set of covariates noted above for the primary model and the expanded set for the secondary model). All independent variables and covariates were modeled as fixed effects except HRR, which was modeled as a random effect. We computed adjusted scores for female beneficiaries and male beneficiaries by dual/LIS status, tested the significance of the female-minus-male difference within each group, and tested the difference-of-differences. Following standard MCAHPS practice, missing CMAs and chronic condition indicators were imputed as the mean within the beneficiary's health plan (MA) or geounit (FFS).<sup>28</sup> No dependent variables were imputed. All analyses used poststratification weights to account for sample design and nonresponse.<sup>25</sup> Analyses were implemented using SAS

software version 9.4 (SAS Institute); SAS survey procedures adjusted SEs of estimates for the design effect of the weights.<sup>29</sup>

To illustrate the results from the 2 sets of patient experience models, we created bar graphs presenting the adjusted difference in scores for non-dual/LIS male beneficiaries, dual/LIS female beneficiaries, and dual/LIS male beneficiaries relative to a reference group of non-dual/LIS female beneficiaries.

## RESULTS

There were 256,682 respondents 65 years and older to the 2016 MCAHPS surveys and 306,191 to the 2017 surveys (response rate, 42% in both years). We excluded beneficiaries from the 34 MA plans that existed in 2016 but not 2017 (n=13,270; 5.2% of 2016 data). This left 549,603 respondents in the analytic data set. **Table 1** presents beneficiary characteristics by sex and dual/LIS status. Overall, compared with their non-dual/LIS counterparts, dual/LIS beneficiaries were much less likely to be White (44%-50% for dual/LIS vs 82% for non-dual/LIS), had lower educational attainment (eighth grade or less: 22%-24% vs 3%, respectively), were approximately 3 to 4 times more likely to report poor general and mental health, and were more likely to live alone (7%-12% vs 4%-6%).

Among non-dual/LIS recipients, men and women had similar characteristics; differences were generally small, even when statistically significant. Although dual/LIS men and women were also similar on many characteristics, there were some exceptions. For example, fewer dual/LIS men than women reported poor general health (10.1% vs 12.0%;  $P = .02$ ) or hypertension (61.9% vs 70.2%;  $P < .001$ ). In addition, more dual/LIS men than dual/LIS women were API (12.2% vs 8.4%;  $P < .001$ ).

**Figure 1** and the upper panel of **Table 2** present adjusted MCAHPS scores by sex, separately for dual/LIS and non-dual/LIS beneficiaries from the primary regression models. Dual/LIS male beneficiaries reported worse experiences than their female counterparts, whereas differences by sex were minimal in the non-dual/LIS population. Among the non-dual/LIS beneficiaries, women reported worse experiences than men for 3 measures (getting needed care, coordination of care, and

**TABLE 1.** Beneficiary Characteristics (weighted percentages) by Dual/LIS and Sex, 2016-2017 MCAHPS Data

	Non-dual/LIS		Dual/LIS			
	Female (n = 250,980)	Male (n = 203,639)	Female (n = 64,927)	Male (n = 30,057)		
Medicare Advantage coverage	21.1	20.4	**	23.2	24.8	*
Age in years						
65-69	24.1	26.6	***	24.9	34.9	***
70-74	26.4	28.9	***	22.8	25.5	**
75-79	18.9	19.6	*	17.1	16.9	
80-84	13.4	12.7	**	14.7	12.6	*
≥ 85	17.3	12.2	***	20.5	10.1	***
Education						
Eighth grade or less	2.7	3.3	***	22.2	24.3	*
Some high school	5.7	5.2	**	18.6	15.6	***
High school diploma	32.7	25.0	***	31.4	27.1	***
Some college or 2-year degree	29.6	26.3	***	18.5	18.2	
4-year college degree	12.1	15.9	***	4.7	7.3	***
More than 4-year college degree	17.2	24.3	***	4.6	7.5	***
General health						
Excellent	9.7	9.8		5.0	6.5	*
Very good	32.9	32.8		14.9	17.6	**
Good	37.8	37.4		34.7	35.6	
Fair	16.4	16.5		33.5	30.1	**
Poor	3.2	3.6	**	12.0	10.1	*
Mental health						
Excellent	28.0	31.1	***	14.3	17.0	**
Very good	36.4	35.6	*	25.2	24.7	
Good	26.2	24.4	***	33.5	34.2	
Fair	7.9	7.5	*	21.7	19.6	*
Poor	1.5	1.4		5.2	4.6	
Any proxy assistance	8.1	9.5	***	27.7	28.4	
Proxy answered questions	3.5	3.9	**	8.9	7.2	**
Survey language <sup>a</sup>						
English	98.3	98.4		93.4	91.4	**
Spanish	1.4	1.4		6.0	7.8	**
Rural (micropolitan or non-CBSA)	19.8	20.4	*	22.4	21.6	
Race/ethnicity						
AIAN	0.4	0.4		1.5	1.3	
API	2.7	2.4	**	8.4	12.2	***
Black	5.8	5.6		16.0	15.0	
Hispanic	4.5	4.9	**	17.6	20.8	***
Multiracial	1.4	1.5	*	2.7	2.6	
Unknown	3.2	3.5	*	3.9	4.0	
White	82.0	81.7		49.8	44.0	***

(continued)

**TABLE 1.** (Continued) Beneficiary Characteristics (weighted percentages) by Dual/LIS and Sex, 2016–2017 MCAHPS Data

	Non-dual/LIS			Dual/LIS		
	Female (n = 250,980)	Male (n = 203,639)		Female (n = 64,927)	Male (n = 30,057)	
Chronic conditions						
Heart attack	5.7	13.1	***	10.9	15.7	***
Angina or coronary heart disease	10.3	19.1	***	17.3	18.0	
Hypertension or high blood pressure	60.4	62.0	***	70.2	61.9	***
Cancer (except skin)	15.3	17.6	***	12.9	12.0	
Emphysema, asthma, or COPD	14.6	13.4	***	24.3	21.7	*
Diabetes or high blood sugar	21.3	28.2	***	35.7	35.3	
Chronic condition count						
0	25.2	20.8	***	16.1	20.6	***
1	37.7	32.6	***	30.6	28.9	
2	24.6	26.8	***	28.9	26.8	*
≥3	12.4	19.7	***	24.4	23.7	
Live alone	37.4	20.1	***	53.1	43.2	***
Do not have personal doctor	4.2	6.0	***	7.1	11.7	***

AIAN, American Indian/Alaska Native; API, Asian/Pacific Islander; CBSA, core-based statistical area; COPD, chronic obstructive pulmonary disease; LIS, low-income subsidy; MCAHPS, Medicare Consumer Assessment of Healthcare Providers and Systems.

\* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ .

<sup>a</sup>Less than 0.1% of surveys were completed in Chinese (data not shown).

getting needed drugs) and better experiences for 2 (getting care quickly and customer service), with all differences 1.0 PP or less in magnitude, indicating negligible-to-small effect sizes.<sup>21</sup>

In contrast, among dual/LIS beneficiaries, women reported consistently better experiences than men for all 6 measures ( $P < .05$  for all), with small-to-medium differences (1.2 to 3.4 PP). The largest sex differences were for getting needed drugs (+3.4 PP) and doctor communication (+2.2 PP;  $P = .002$  and  $P < .001$ , respectively), followed by customer service (+1.8 PP), getting needed care (+1.5 PP), getting care quickly (+1.3 PP), and coordination of care (+1.2 PP).

Tests of female\*dual/LIS interactions (Table 2) confirmed that the difference in patient experience patterns by sex are significantly different for dual/LIS and non-dual/LIS beneficiaries for 5 of 6 measures ( $P < .05$  for all but customer service), all corresponding to positive female\*dual/LIS interaction terms. Figure 1 generally indicates worse experiences for dual/LIS male beneficiaries than for other groups.

When additional personal and health characteristics were added as adjustors in secondary models, sex differences were reduced but not eliminated (Figure 2 and lower panel of Table 2). Among non-dual/LIS beneficiaries, women reported better experiences for 4 measures and worse experiences for 1, with all differences 1.0 PP or less. Dual/LIS women still reported better experience than

their male counterparts on all 6 measures, with differences greater than 1.0 PP for getting needed drugs (+2.0 PP), doctor communication (+1.9 PP), and customer service (+1.2 PP;  $P < .001$  for each). Female\*dual/LIS interactions remained significantly positive for 4 of 6 measures (Table 2). Figure 2 generally indicates worse experiences for dual/LIS male beneficiaries than for other groups.

## DISCUSSION

In this study, we investigated sex differences in patient experience among low-income Medicare beneficiaries (dual/LIS). Although sex differences were negligible to small (differences of 1 PP or less) and inconsistent in direction among non-dual/LIS beneficiaries, dual/LIS male beneficiaries consistently fared worse than their female counterparts (small-to-moderate differences of 1.2 to 3.4 PP) with respect to patient experience. Our finding that worse experiences for men than women were largely limited to low-income adults may help explain variation in this literature.<sup>13,28,30-34</sup>

Several mechanisms may explain our finding that dual/LIS men fared worse than their female counterparts. Patient activation and health literacy are associated with better patient

experiences and health care outcomes,<sup>5,35</sup> and although they are important in all health care experiences, they may be especially important for dual/LIS beneficiaries who must navigate both the Medicare and Medicaid programs. Although, on average, women are more likely than men to report high levels of patient activation<sup>35</sup> and health literacy,<sup>36</sup> we do not find notable sex differences in patient experiences among non-dual/LIS beneficiaries. It might be the case that sex differences in patient activation and health literacy are especially large or of a similar magnitude but especially consequential in the dual/LIS population. Future research should directly assess these factors by sex in the dual/LIS population.

Future research might also investigate whether sex differences in support received from social networks differ by dual/LIS status. Beneficial and harmful health-related behaviors (eg, health screening and smoking) appear to spread through such networks.<sup>37</sup> Social networks affect health through several mechanisms, including support (both perceived and actual), influence (eg, norms, social control), engagement, contact (eg, exposure to germs), and resources (eg, money, information).<sup>38</sup> Consistent with this functioning of social networks, strong relationships may have health benefits for older adults in particular.<sup>39</sup> In relation to this study, low-income men may have had limited or weak social networks or, alternatively, networks that propagated harmful health behaviors.<sup>40</sup> Further research using

**TABLE 2.** Adjusted Mean Patient Experience Scores by Dual/LIS and Sex, 2016-2017 MCAHPS Data

	Non-dual/LIS			Dual/LIS			Test for whether female – male difference is equal for dual/LIS and non-dual/LIS			
	Female (n = 250,980)	Male (n = 203,639)	Female – male difference	Female (n = 64,927)	Male (n = 30,057)	Female – male difference		P		
<b>Adjusted for standard case mix, year, and coverage</b>										
Getting needed care	86.1	86.5	-0.3	**	84.3	82.7	1.5	**	.0002	***
Getting care quickly	73.8	73.6	0.3	*	71.8	70.6	1.3	**	.0360	*
Customer service	80.4	79.3	1.0	***	80.9	79.1	1.8	*	.3238	
Doctor communication	91.3	91.2	0.1		90.9	88.7	2.2	***	<.0001	***
Coordination of care	85.7	86.3	-0.6	***	85.7	84.5	1.2	***	<.0001	***
Getting needed drugs	89.3	90.0	-0.7	*	89.4	85.9	3.4	**	.0020	**
<b>Adjusted for all beneficiary characteristics</b>										
Getting needed care	85.9	86.0	-0.1		85.0	84.1	0.9	***	<.0001	***
Getting care quickly	74.1	73.7	0.4	***	73.0	72.4	0.6	**	.3468	
Customer service	82.2	81.2	1.0	***	83.4	82.2	1.2	***	.5889	
Doctor communication	91.3	91.0	0.3	***	91.1	89.2	1.9	***	<.0001	***
Coordination of care	86.0	86.4	-0.4	***	86.1	85.3	0.8	***	<.0001	***
Getting needed drugs	89.7	89.5	0.2	**	90.8	88.8	2.0	***	<.0001	***

LIS, low-income subsidy; MCAHPS, Medicare Consumer Assessment of Healthcare Providers and Systems.

\* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ .

network analysis specific to these populations would be helpful to ascertain the role of social networks in patient experience.<sup>41</sup>

Our data set lacked information on whether patients interacted with male or female physicians; future research should explore how patient-provider concordance may influence patient experience. This form of patient-physician concordance has been highlighted as a potential factor in the sex differences in patient experience.<sup>42,43</sup> For example, Derosé and colleagues<sup>43</sup> found that although female patients were more satisfied with female physicians, male patients were not more satisfied with male physicians, suggesting that the benefits of having a physician of the same sex may be greater for female patients. Rates of seeing female physicians may vary by dual/LIS status. In addition, the benefits of seeing a female physician may be greater for dual/LIS than non-dual/LIS female beneficiaries.

Another possibility is that patient activation, health literacy, social support, and female physicians have more positive effects on patient experience for female than male beneficiaries regardless of dual/LIS status, but the greater deference that physicians may extend to male than female patients may not hold for dual/LIS patients. The absence of this countervailing factor among dual/LIS beneficiaries would be consistent with several findings observed here: (1) similar experiences for male and female beneficiaries who are not dual/LIS, (2) worse experiences for male than female dual/LIS beneficiaries, and (3) generally worse experiences for male dual/LIS beneficiaries than other groups.

## Limitations and Strengths

There are both limitations and strengths to this study. With respect to limitations, sex was coded as male vs female from administrative data and thus may not accurately represent beneficiaries' gender identity; improved data collection is needed to measure the patient experiences of the 0.5% of adults 65 years and older who identify as transgender<sup>44</sup> and others who identify as nonbinary. Further, additional data on patient literacy and activation, patients' social networks, patient-physician concordance, and physician behavior may help explain if and how different factors influence our results. Finally, because the response rate was 42%, our findings may be affected by nonresponse bias. However, we employed poststratification weights to address survey design and nonresponse, and response rates are not necessarily correlated with nonresponse bias of estimates.<sup>45,46</sup> These limitations are balanced by significant strengths. To our knowledge, this analysis is one of the first to examine the relationship among sex, dual eligibility, and patient experience in a large national data set.

## CONCLUSIONS

Using MCAHPS data, our study examined the intersection of sex and dual/LIS status and found especially poor patient experiences for dual/LIS men. We found worse health care experiences for men than women among the low-income dual/LIS Medicare population but found no such sex differences for the non-dual/LIS Medicare population. Although understanding the mechanisms behind

these patterns requires further research, our results suggest a need to improve the health literacy of low-income men and to make care more accessible to those with lower health literacy. These efforts should integrate existing research that suggests male health literacy can be improved by addressing dominant concepts of masculinity (eg, reluctance to seek care generally, seeking treatment rather than preventive services<sup>47</sup>). Regarding patient activation, the World Health Organization, citing evidence-based interventions to promote male engagement, has emphasized the need to shift from interventions that are accommodating (eg, engaging men in their roles as husbands, sexual partners, and community members) to those that are transformative (eg, using social and behavioral change strategies to question the adverse effects of traditional gender norms, roles, and relationships) interventions.<sup>48</sup> Still, although the causes of the sex differences highlighted in our study are not yet known, our results suggest that there may be value in testing interventions that include educational outreach and ombudsman efforts that recognize lower health literacy and patient activation, in tandem with efforts to improve and intervene through social networks (eg, creating patient support groups). These efforts should happen in parallel with structural-level efforts to train and prepare providers to ensure attentive, respectful, patient-centered care for all patients. Further, these efforts should consider the ways in which patient-provider concordance may directly or indirectly influence interactions, with special attention to the unique challenges presented by those who are low-income and have to navigate 2 complex systems of health care. Only with a comprehensive approach that addresses multilevel factors can progress be made in tackling ongoing inequities. ■

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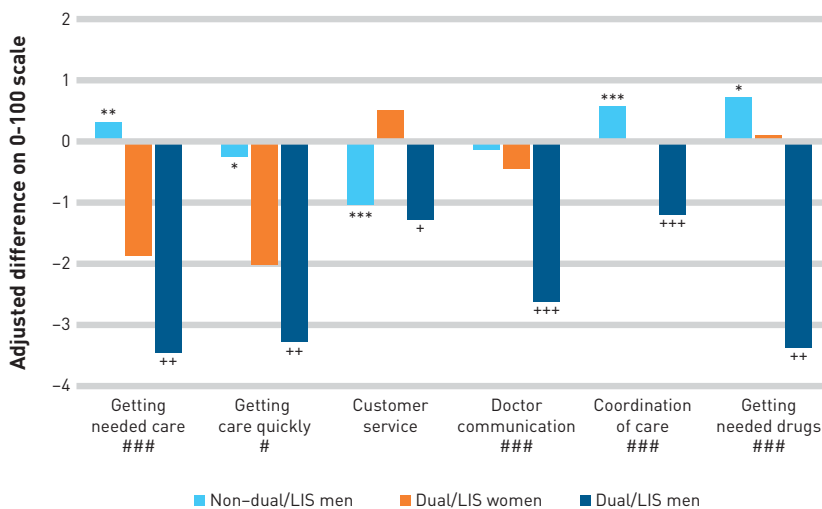
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**FIGURE 1.** 2016-2017 Differences in Mean Patient Experience Scores From Non-Dual/LIS Women, Adjusted for Standard Case Mix\*



LIS, low-income subsidy.

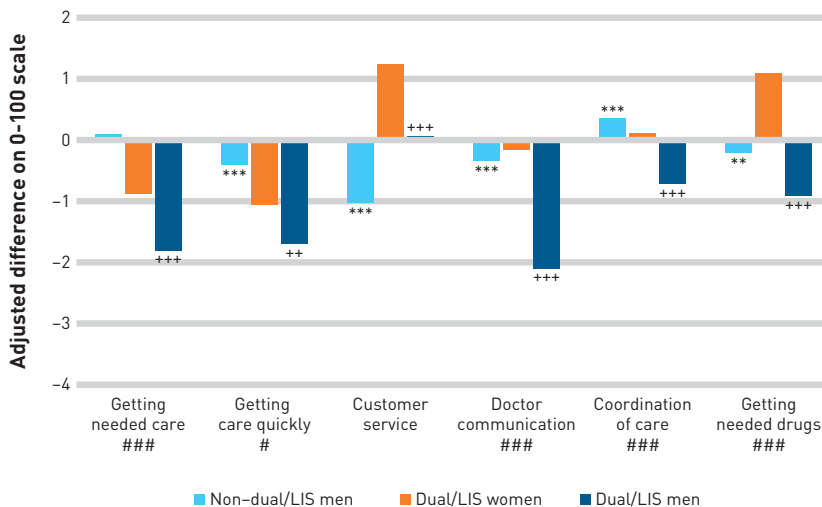
\* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$  for difference from non-dual/LIS women.

+ $P < .05$ ; ++ $P < .01$ ; +++ $P < .001$  for difference from dual/LIS women.

# $P < .05$ ; ## $P < .01$ ; ### $P < .001$  for difference of differences.

\*Standard case-mix adjustors include age, education, general and mental health status, proxy assistance with the survey, and Chinese survey language. Differences are also adjusted for survey year and Medicare Advantage coverage type.

**FIGURE 2.** 2016-2017 Differences in Mean Patient Experience Scores From Non-Dual/LIS Women, Adjusted for All Beneficiary Characteristics\*



LIS, low-income subsidy.

\*\* $P < .01$ ; \*\*\* $P < .001$  for difference from non-dual/LIS women.

++ $P < .01$ ; +++ $P < .001$  for difference from dual/LIS women.

### $P < .001$  for difference of differences.

\*In addition to standard case-mix adjustors, survey year, and Medicare Advantage coverage type, differences are adjusted for rural residence, Spanish-language survey, race/ethnicity, 6 chronic health conditions, chronic condition count (0, 1, 2, ≥3), an indicator of living alone, an indicator of not having a personal doctor, and hospital referral region.

**Authorship Information:** Concept and design (SM, MLM, MNE); acquisition of data (SG, LT, MNE); analysis and interpretation of data (SM, MLM, QB, AH, JWD, SG, LT, MNE); drafting of the manuscript (SM, QB); critical revision of the manuscript for important intellectual content (SM, MLM, AH, JWD, SG, LT, MNE); statistical analysis (QB, AH, MNE); obtaining funding (MNE); administrative, technical, or logistic support (JWD); and supervision (MNE).

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