

Person-Centered Care:
**Why Taking Individuals' Care
Preferences into Account Matters**



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Person-Centered Care: Why Taking Individuals' Care Preferences into Account Matters

Introduction

Person-centered care has been recognized as an integral part of a high-quality system of care by the National Academy of Medicine and the Department of Health and Human Services' National Quality Strategy.^{1,2} Person-centered care takes the whole person into account and aims to address individuals' preferences, needs and values.³

In our [recent study](#) of person-centered care, we used data from the Health and Retirement Study (HRS) to measure the extent to which older adults experience the health care system as taking into account their preferences for care.⁴ That analysis, based on data from 2014 and 2016, found large disparities in older adults' experiences based on race, income, and other demographic factors. One-third of older adults reported that their preferences were never or only sometimes taken into account, with Hispanics being twice as likely and African-Americans being three times as likely to say that the system does not account for their preferences. When preferences were ignored, older adults were more likely to forgo medical care and report lower satisfaction with their health care.

In this report, we re-examine the issue of person-centered care using new data available from the 2018 wave of the HRS. In addition to exploring trends in person-centered care in this extended time period, we expand on our previous analysis by analyzing the impact of not receiving person-centered care on health care utilization and health care outcomes. Our prior research demonstrated decreased utilization, but was unable to discern whether this decrease affected high value preventive care services. To further explore the utilization effects of not having one's preferences taken into account, we develop a new measure that predicts future costly health care use and analyze its association with receipt of person-centered care. We further examine the association between receipt of person-centered care and health outcomes, as measured through biomarkers, and receipt of preventive care, including flu vaccination. Through these analyses, we seek to define trends in who receives person-centered care and to understand better the impact of such care.

Study Data and Methods

DATA AND MEASURE

The data utilized for this study is from the 2014 through 2018 waves of the Health and Retirement Study (HRS) (conducted by the University of Michigan). This nationally representative, panel study of middle-aged and older adults (50 years of age and older) in the U.S. contains longitudinal data collected biennially since 1998. It has detailed information gathered on a variety of sociodemographic, health, economic, family/support, and lifestyle factors as well as physical measurements and certain lab test results. To achieve a representative sample, the HRS has an oversample of African-Americans and Hispanics. The variables that we draw from are obtained from both the core HRS survey and from data files created by the RAND Center for the Study of Aging. The sample size for this study included those who completed the core survey for all three waves (2014 to 2018) and responded to the person-centered care question below (N= 12,853).

As part of the core survey, the HRS asked the following question: “When thinking about your experiences with the health care system over the past year, how often were your preferences for care taken into account – never, sometimes, usually or always?” This question at the center of our analyses focuses on the most fundamental component of person-centeredness – the ability of the health care system to consider individuals’ preferences regarding how they want to experience care.

In this study, we build on prior work by adding the most recent 2018 data wave from the HRS in order to observe trends in person-centered care over a longer span of time and to gain greater insight into the longitudinal impacts of not having one’s care preferences taken into account. We also expanded our analyses to examine the association between person-centered care and physical health measurements (biomarkers) and preventative care utilization, which allows a more comprehensive exploration of the health care utilization findings from our prior study. The most recent HRS biomarker data available is from 2014 and 2016 and the most recent preventative care data is from 2016.

In addition, we examined the relationship of receipt of person-centered care with scores on the What Matters Index (WMI). The What Matters Index has been prospectively validated to predict emergency and inpatient use.^{5, 6} We used variables available in the HRS to create a version of the WMI. The HRS version of the WMI was derived from core survey questions about low health management confidence, severe/moderate pain, emotional disturbance, and polypharmacy. These questions align with four of the measures used to create the original WMI: 1) insufficient confidence to self-manage health problems, 2) pain, 3) bothersome emotions, and 4) polypharmacy. The WMI also included a fifth measure on adverse medication effects. Because the HRS did not have a variable aligned with this measure, we developed a 4-point instead of 5-point index. Our HRS version of the WMI had good reliability/internal consistency with a Cronbach Alpha of 0.87.

METHOD

Our analyses include both descriptive and bivariate analyses (i.e., frequencies, cross-tabs, and t-test analyses to determine significance) on selected key sociodemographic, economic and health variables along with multivariate modeling to analyze the relationship between such variables and the probability of having experienced a health system responsive to one's needs and preferences. Multivariate modeling was also employed to analyze associations between having one's health care preferences considered and health care service and preventative care utilization as well as physical health measurements (biomarkers). For certain longitudinal analyses, we employed a lagged variables approach. We did this to determine the impact of having had one's preferences considered in 2014 and 2016 and on subsequent health services utilization in 2018. Finally, we explore whether having a usual source of care moderates the impact of non-receipt of person-centered care across different racial and ethnic populations and also examine how being dually eligible for Medicare and Medicaid, as well as participating in a managed care program, is related to whether one's care preferences are considered.

We report findings from our analysis of the 2014 through 2018 waves of the HRS to answer the following research questions:

1. What percentage of individuals age 50 and over in 2014, 2016, and 2018 indicate that the health care system has or has not taken into account their preferences for care?
2. What is the relationship between selected sociodemographic, health, and economic characteristics and the likelihood of an individual reporting that their preferences were taken into account?
3. How does the health care system not taking into account individuals' preferences affect those individuals' subsequent use of health care services?
4. Does the health care system not taking into account individuals' preferences affect their health outcomes (as assessed through biomarker data) and their use of preventive care?
5. How does having a usual source of care affect these relationships?
6. Does being a Dual Eligible in either a managed or non-managed care arrangement influence whether care preferences are taken into account?

Study Results

PERSON-CENTERED CARE RATING TRENDS FROM 2014 TO 2018

For receipt of person-centered care, the 2018 survey data revealed substantially similar findings to those presented in the prior study for the 2016 wave. Approximately two-thirds of individuals over age 50 reported that, over the past year, the health care system "usually" or "always" took their preferences for care into account. One-third of respondents reported that their care preferences were "sometimes" or "never" considered. With the exception of those ages 50 to 54 being somewhat less likely to report that their care preferences were always taken into account – 43% compared to 50% for other age groups – there was little variation across age groups.

As in prior years, there were significant disparities by race/ethnicity for the 2018 data. About one-in-four Hispanics (24%) reported never having their preferences considered compared to less than one-in-ten Non-Hispanic whites (7%) and one in six Non-Hispanic Blacks (17%). As seen in Figure 1, between 2014 and 2018 Non-Hispanic Blacks and Hispanics were more likely to report never having their preferences taken into account, even as Non-Hispanic Whites and Non-Hispanic Other respondents experienced decreases in the percentage reporting that their preferences were never taken into account. In fact, growing percentages of Hispanics and Non-Hispanic Blacks reporting never ratings were observed during the study period whereas the percentages of Non-Hispanic Whites reporting that their preferences were never taken into account steadily declined. These findings indicate that race/ethnic disparities in care preference ratings have widened over time.

FIGURE 1: PERCENTAGE OF THOSE AGE 50+ REPORTING THEIR CARE PREFERENCES ARE NEVER TAKEN INTO ACCOUNT BY RACE/ETHNICITY (2014 TO 2018)

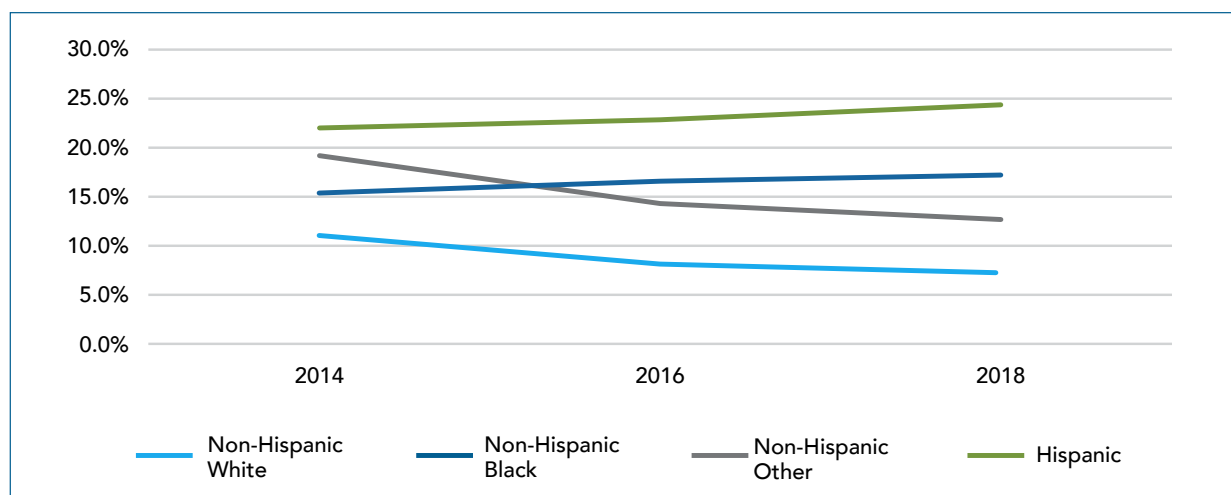


Table 1 summarizes the relationship between various financial and health characteristics and the extent to which people feel that the health care system has considered their care preferences. As shown, the 2018 survey results are consistent with previously reported 2016 results. Lower household income and wealth are associated with a higher chance that the health care system does not take into account one’s preferences for care. Further, individuals who reported that the system never accounts for their preferences were twice as likely to have incomes below the Federal Poverty Line (FPL) compared to those reporting that the system always takes account of their preferences (23.5% versus 12.3% respectively).

In terms of health insurance status, among those reporting that the system only sometimes or never considers their preferences, higher proportions were on Medicaid compared to those reporting that their preferences are considered. The opposite was true for those with Medicare: a higher proportion of those who reported the system “always” considered their preferences were receiving Medicare. The pattern of responses for beneficiaries with both Medicare and Medicaid coverage (dually eligible beneficiaries) is more similar to that of Medicaid-only beneficiaries than of Medicare-only beneficiaries.

There were also significant findings for health characteristics. Higher proportions of people who only sometimes or never have their preferences considered reported their health as fair or poor, had a greater likelihood of reporting depression, and were more likely to be smokers.

TABLE 1: RELATIONSHIP BETWEEN FINANCIAL AND HEALTH CHARACTERISTICS AND EXTENT TO WHICH PREFERENCES FOR CARE WERE TAKEN INTO ACCOUNT (2018)

FINANCIAL AND HEALTH CHARACTERISTICS	HOW OFTEN PREFERENCES WERE TAKEN INTO ACCOUNT			
	NEVER (N=1,658)	SOMETIMES (N=2,455)	USUALLY (N=3,175)	ALWAYS (N=5,565)
Total Sample	12.9%*	19.1%*	24.7%*	43.3%*
Financial Characteristics				
Mean Household Income	\$53,411*	\$55,583*	\$90,395*	\$89,387 *
Mean Net Wealth	\$266,973*	\$309,940*	\$612,343*	\$636,021*
% of responders with income below FPL	23.5%*	21.8%*	10.3%*	12.3%*
% receiving government benefits	16.2%	17.8%	13.4%	16.1%
Insurance Status				
% with Medicare	42.0%	42.7%	50.6%	52.1%*
% with Medicaid	5.0%	8.7%*	4.1%	5.6%
% dually eligible for Medicare and Medicaid	8.6%	10.7%*	5.8%*	8.1%
% with Veteran health plan	0.9%*	1.5%	1.4%	2.4%*
% with private insurance	43.4%*	36.3%	38.2%	31.9%*
Health Characteristics				
Mean score for self-rated health (1 to 5 scale; 1=poor, 5=excellent)	3.0	3.3*	3.0	2.8*
% rating health as Poor/Fair	34.9%*	43.8%*	27.8%*	24.8%*
% indicating health has improved	12.5%*	10.2%*	11.9%*	13.0%*
% indicating health has worsened	16.3%*	26.9%*	24.9%*	21.4%*
% with Depression	21.4%*	32.6%*	20.8%*	16.8%*
% with Chronic Conditions (Mean)	2.1	2.5	2.4	2.4
% with Impaired Cognition	2.0%	1.4%	1.0%	1.4%
% who are current smokers	17.6%*	16.7%*	11.3%*	11.2%*
% exercising moderately/vigorously >once/week	65.2%*	63.5%	68.4%	70.0%*
Health care Utilization				
% with hospital stay (last 2yrs)	17.2%*	25.0%*	25.4%*	24.7%*
% with nursing home stay (last 2yrs)	1.7%*	3.6%*	4.0%*	3.4%*
Mean number of doctor visits (last 2yrs)	5.8*	9.3*	10.8*	9.4*
% utilizing home health care (last 2yrs)	4.4%*	9.0%*	10.5%*	9.5%*
% utilizing specialized health facility (last 2yrs)	7.8%*	16.6%*	20.8%*	18.0%*
% who had outpatient surgery (last 2yrs)	10.7%*	16.0%*	21.1%*	19.4%*
% currently taking regular prescription drugs	70.9%*	82.7%*	85.3%*	85.1%*
% with Usual Source of Care	65.9%*	81.2%*	91.0%*	91.4%*

Census Region				
% living in Northeast	15.0%	16.2%	16.4%	15.2%
% living in Midwest	16.6%	17.3%	21.6%*	22.9%*
% living in South	51.1%*	46.0%*	40.0%	40.1%
% living in West	17.3%	20.5%	22.0%	21.8%*
Mean Health Care Satisfaction Rating (0 to 4; 0=very dissatisfied and 4=very satisfied)	2.1*	2.7*	3.1*	3.5*

*T-test between groups significant at $p < 0.05$.

Patterns regarding health care utilization in 2018 also remain the same as in the prior study. Individuals reporting that the system never or only sometimes takes account of their preferences were less likely to have used hospital care over the preceding two years, and they reported far fewer doctor visits, home care use, specialty visits and outpatient surgeries. They were also less likely to be taking prescription medications. In addition, individuals who reported that the health care system never takes into account care preferences were far less likely to have a usual source of care – 65.9% compared to 91.4% of those who reported that their care preferences are always taken into account.

Finally, as was the case in 2016 data, there is a strong association in 2018 between people’s overall satisfaction with health care and the extent to which their preferences are considered. Respondents were asked, “Thinking about the quality, cost and convenience of your health care, how satisfied are you overall? Very satisfied, somewhat satisfied, neutral, somewhat dissatisfied, or very dissatisfied.” Using a satisfaction scale ranging from 0 (very dissatisfied) to 4 (very satisfied), individuals who reported that the health care system never takes into account their preferences for care had an average score of 2.1 (towards the dissatisfied end of the scale) compared to 3.5 for those who reported that the system always takes into account their preferences.

Table 2 below shows the odds ratio as well as significance level for the impact of having a specific sociodemographic characteristic on the probability of having one’s preferences for care considered over time (in 2018), while holding other variables constant. To estimate this, we employed lagged variables logistic regression analysis. We examined sociodemographic factors at baseline (2014) that were associated with subsequent reporting in 2018 that one’s care preferences were never considered. An odds ratio that is significant and less than 1 means that having a particular characteristic reduces the odds that one’s care preferences were never taken into account; this would be a positive result. An odds ratio greater than 1 indicates that having a particular trait increases the odds of reporting that the system never considered care preferences, which would be a negative result. The reference groups in the analysis for categorical variables include Non-Hispanic White, Non-Married (Divorced/ Separated, Widowed, Never Married), Income above \$75,000, and the Northeast Region.

All other variables held constant, people who are more satisfied with their health care are 1.25 times more likely to report in both the current and subsequent years that they had their preferences considered at least sometimes. Racial and ethnic disparities remain prominent, even when controlling for other variables. Compared to Non-Hispanic Whites, communities of color are roughly 1.91 to 2.98 times more likely to report that their care preferences were

never taken into account. Similarly, compared to those with incomes above \$75,000, those with lower incomes are 1.85 (for incomes between \$30,000 and \$74,999) and 2.20 (for incomes less than \$30,000) times more likely to have experienced the system as never accounting for their health care preferences. The same is true of individuals living below the federal poverty level (FPL): being below the FPL makes one 1.47 times more likely to report that care preferences were never accounted for. Consistent with our prior study, relative to all other variables, race and income have the largest impact on the odds of reporting that the health system never considered one's care preferences. Finally, having a usual source of care at baseline was associated with 49% lower odds of reporting that the system never took care preferences into account. (The relationship between the utilization of specific health care services and having preferences considered is examined in more detail in the next analysis.

TABLE 2: IMPACT OF HAVING A CHARACTERISTIC OR ATTITUDE IN 2014 ON THE ODDS THAT THE HEALTH SYSTEM NEVER TOOK ACCOUNT OF CARE PREFERENCES IN 2018 (LAGGED VARIABLE LOGISTIC REGRESSION)

2018 ODDS THAT HEALTH SYSTEM NEVER TOOK ACCOUNT OF CARE PREFERENCES IN PRECEDING YEAR (N= 12,853)		
INDEPENDENT VARIABLES (2014)	ODDS RATIO	SIGNIFICANCE LEVEL
Satisfaction with Health care (0=Very Dissatisfied; 4= Very Satisfied)	0.80	0.01
Has Usual Source of Care	0.51	0.00
Age	1.02	0.00
Female	0.65	0.00
Non-Hispanic Black	2.45	0.00
Non-Hispanic Other	1.91	0.00
Hispanic	2.98	0.00
Education Years	0.97	0.00
Married/Partnered	0.98	1.00
Household Income \$0 to\$ 29.9K	2.20	0.00
Household Income \$30k to \$74.9K	1.85	0.00
Below Federal Poverty Level	1.47	0.00
Retired	0.88	0.07
Receives Government Assistance Benefits	0.95	0.52
Self-Rated Health (0=Poor and 4= Excellent)	0.94	0.07
Chronic Conditions Count	0.85	0.00
Depression	1.19	0.02
Current Smoker	1.28	0.00
Medicare Beneficiary	0.10	0.27
Dual Eligible Beneficiary	0.84	0.28
Medicaid Beneficiary	0.99	0.94
Midwest Region	1.10	0.40
South Region	1.16	0.11
West Region	0.78	0.22

HEALTH CARE SERVICE UTILIZATION

The prior study found that health care service utilization in subsequent years was significantly lower for those who reported never having their care preferences taken into account. Here we explore the same phenomenon over the longer study period (2014 to 2018). Table 3 presents the findings from a series of lagged variable regressions (ordinary least squares and logistic) which analyzed the association between having reported care preferences were never considered in both 2014 and 2016 and subsequent health care service use in 2018.

TABLE 3: IMPACT OF SELECTED VARIABLES IN 2014 ON SUBSEQUENT USE OF HEALTH CARE SERVICES IN 2018 (LAGGED VARIABLE REGRESSION RESULTS)

N=12,853 IN 2018	DOCTOR VISITS	HOME CARE	OUTPATIENT SURGERY	SPECIALIZED CARE FACILITY	PRESCRIPTION DRUG USE
INDEPENDENT VARIABLES (2014)	COEFFICIENT	ODDS RATIO	ODDS RATIO	ODDS RATIO	ODDS RATIO
Health Care Preferences "Never Rating" in 2014 & 2016 (1=yes, 0=no)	-1.93*	0.63*	0.66*	0.40*	0.62*
Usual Source of Care	1.46*	1.24*	1.37*	1.36*	1.99*
Age	0.07*	1.05*	1.21*	1.01*	1.03*
Female	0.58*	1.15*	0.85	1.37*	1.15*
Non-Hispanic Black	-1.82*	1.18*	0.67*	0.88*	1.05
Non-Hispanic Other	-0.46*	0.86	0.67*	0.80	0.92
Hispanic	-2.72*	0.74*	0.50*	0.60*	0.83
Education Years	0.03*	1.01	1.00	1.01*	1.00
Married/Partnered	-0.14	0.91	0.99	0.83	1.36
HH Income \$0 to \$29.9K	-1.96*	1.07	0.67*	0.68*	0.85*
HH Income \$30k to \$74.9K	-0.05	1.01	0.87*	0.75*	0.88*
Below FPL	-0.32	0.98	1.14	0.96	0.95
Retired	0.66	1.27*	1.12	1.24*	1.19
Receives Government Assistance	0.39	1.17	0.93	1.18*	0.95
Self-Rated Health	2.85*	0.70*	1.11	0.81*	1.54*
Chronic Conditions Count	1.78*	1.26*	1.13*	1.19*	2.86*
Depression	1.53*	1.15*	1.16*	1.41*	0.94
Current Smoker	0.04	1.09	0.90	0.87	0.69*
Medicare Beneficiary	1.34*	1.39*	1.53*	1.31*	1.19*
Dual Eligible Beneficiary	0.95	2.09*	1.27*	1.53*	1.73*
Medicaid Beneficiary	0.10	1.56*	1.22	1.29*	1.17*
Midwest Region	-2.16	0.69	0.99	0.90	0.99
South Region	-1.09	0.74*	1.01	0.71*	1.14
West Region	-0.55	0.57	1.12	0.85	0.89

*Significant at $p < 0.05$

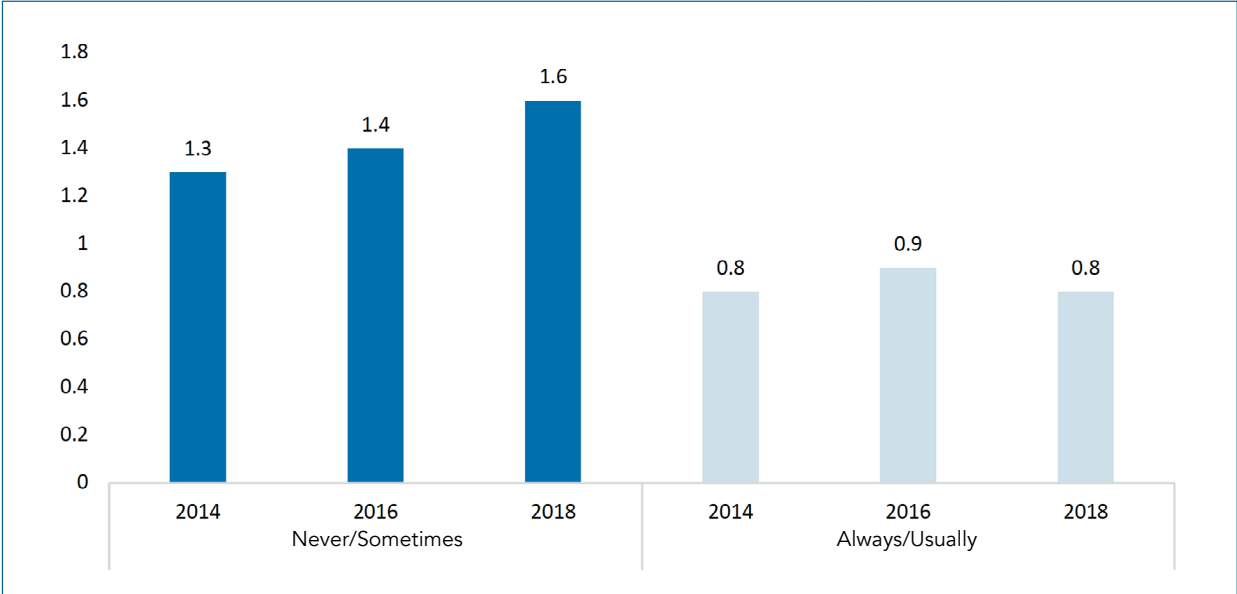
Results from the lagged variable regressions in Table 3 show that, compared to those who at least sometimes had their care preferences taken into account, individuals who felt their care preferences were never taken into account in both 2014 and 2016 had 37% lower odds of using home care in 2018. They also had 34% lower odds of having outpatient surgery, 60% lower odds of using a specialized care facility, 38% lower odds of using prescription drugs, and had 1.9 fewer doctor visits in 2018.

We conducted a similar series of regression analyses (not shown) to analyze the association between the change in care preference ratings from 2014 to 2016 and subsequent health care utilization in 2018. Findings from these additional regressions revealed that those whose ratings improved from 2014 to 2016 had modest utilization increases in all measured health care services in 2018, whereas those whose ratings worsened showed decreased utilization of all measured health care services. This suggests that a health system that more consistently took account of people’s preferences for care would see immediate effects on health care system engagement.

Projecting Future Health Care Costs using the “What Matters Index” (WMI)

The WMI is a validated tool for predicting high health care costs. In our version of the WMI constructed using variables available in the HRS, scores range from 0 to 4 with higher values indicating the increased likelihood of high cost health care utilization. Figure 2 presents mean WMI scores from 2014 to 2018 by care preference rating.

FIGURE 2: THE RELATIONSHIP BETWEEN HAVING CARE PREFERENCES TAKEN INTO ACCOUNT AND PROJECTED HEALTH CARE COSTS AS MEASURED BY THE WHAT MATTERS INDEX (2014-2018)

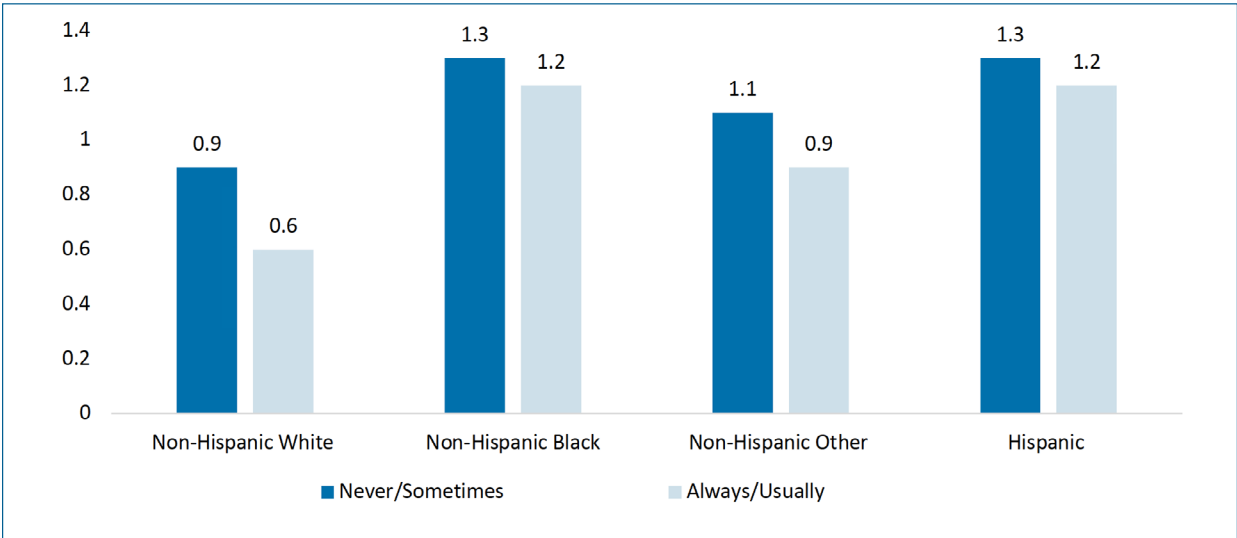


The 2018 mean WMI score for those whose preferences are never or only sometimes considered, was 1.6 – double the mean score of 0.8 for those who more consistently feel heard. Further, WMI scores are slightly increasing over time for those whose preferences are never or only sometimes considered, whereas the scores for those with always or usually ratings have remained relatively stable. These findings indicate that those whose preferences are not taken into account are at higher risk for costly health care utilization than those who report having their care preferences considered more often.

We also analyzed whether the WMI score in future years is influenced when individuals feel that their care preferences are never taken into account in a preceding year. We do this by employing a lagged variable ordinary least squares (OLS) regression to examine the association between whether someone’s care preferences were never considered in 2016, and their WMI score in 2018. We find that when health care preferences are not taken into account in 2016, the WMI score in 2018 is higher, indicating higher predicted health care costs. Individuals who reported lower levels of satisfaction with the health care system in 2016 also had higher WMI scores in 2018. Women, Non-Hispanic Blacks, Hispanics, those with lower income, those with poorer health, Medicaid beneficiaries, and dually eligible individuals were more likely to score higher on the WMI compared to their respective counterparts. Further, having a usual source of care was associated with lower WMI scores.

Given the racial/ethnic disparities we have noted in all our regression findings, we also looked at 2018 mean WMI scores by care preference rating and by race/ethnicity. As seen in Figure 3, the mean WMI scores are higher when care preferences are only sometimes or never considered and the scores are highest among older adults of color.

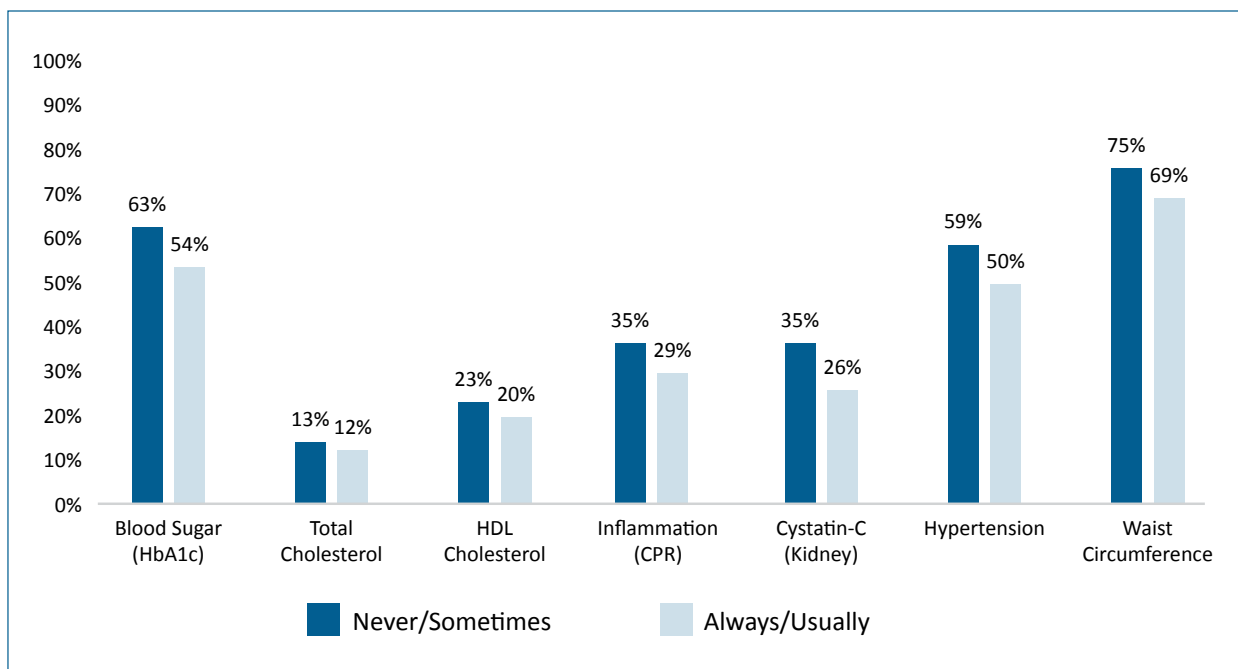
FIGURE 3: PROJECTED HEALTH CARE COSTS AS MEASURED BY THE WMI MEAN SCORE BY RACE/ETHNICITY AND HOW OFTEN CARE PREFERENCES ARE TAKEN INTO ACCOUNT (2018)



HIGH RISK BIOMARKERS

Using the most recently available HRS biomarker data, we examined the relationship between the percentage of people with high risk biomarkers and whether care preferences are taken into account. As displayed in Figure 4, those who report never or only sometimes having their care preferences considered are more likely to have high-risk biomarker values compared to those with always or usually care preference ratings. More specifically, greater percentages of those with never or sometimes care preference ratings fall into high-risk categories for blood sugar (HbA1c of 5.7mg/dL or greater), blood pressure (Systolic Blood Pressure of 130mmHg or higher or Diastolic Blood Pressure of 80mmHg or higher), inflammation (C-Reactive Protein of 3mg/L or higher), kidney function (Cystatin-C of 1.3mg/L or higher), and waist circumference (35 inches or greater for women; 40 inches or greater for men). We did not find any statistically significant differences across groups in the percentage of those with elevated cholesterol levels (Total Cholesterol of 240mg/dL or higher or HDL (good cholesterol) of 40mg/dL or lower).

FIGURE 4: PERCENTAGE OF THOSE WITH HIGH RISK BIOMARKERS BY HOW OFTEN THEIR CARE PREFERENCES ARE TAKEN INTO ACCOUNT (2016)

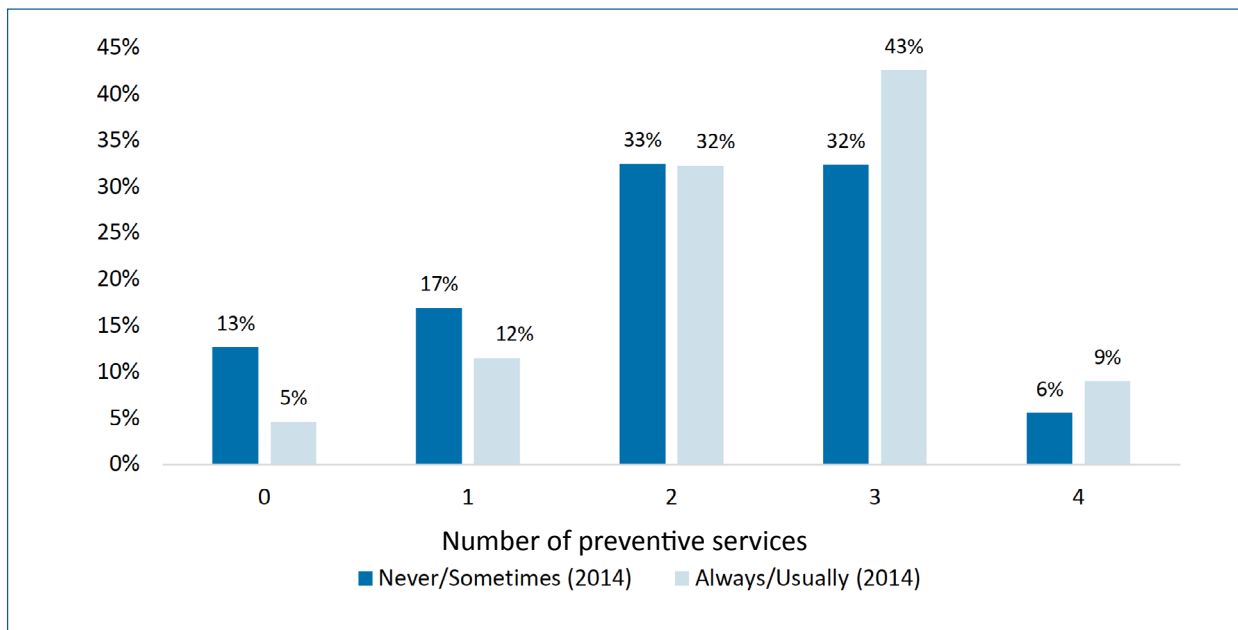


We conducted a series of lagged variable logistic regressions analyzing the association between never having care preferences considered in 2014 and high-risk biomarker measures in 2016. When controlling for demographic, financial, and health characteristics, those reporting a “never” rating had higher odds of uncontrolled blood sugar (12%), hypertension (16%), and high-risk waist circumference (18%). There were no statistically significant regression results for cholesterol, inflammation, and kidney function related to health care preferences being taken into account. In line with our previous findings, older adults of color and those with lower income had higher odds of high-risk biomarkers. As expected, those with a usual source of care were less likely to have high-risk biomarkers.

PREVENTIVE CARE

We examined the relationship between whether one’s care preferences were taken into account and the receipt of preventive care, specifically cholesterol testing, colonoscopy, pneumonia vaccination, mammography, PAP smear, and prostate examination. Because some of the preventive care documented in the HRS may not be recommended for the oldest individuals, depending on a personalized assessment of risks and benefits, we focused our analysis on receipt of these preventive services among respondents aged 50 to 75. Cholesterol testing, mammography, PAP smear, and prostate examination were based on receipt of service within the last two years, while colonoscopy was based on receipt within the last four years. Pneumonia vaccination was based on whether an individual had ever received the vaccine to date. Figure 5 presents the sample distribution of the number of reported preventive services in 2016 – the most recent year data is available – by how often care preferences were taken into account in 2014. Findings show that those whose preferences were never, or only sometimes, considered make up higher proportions of those who report receiving fewer preventive services and they represent lower proportions of those who report receiving more services that are preventive.

FIGURE 5: NUMBER OF PREVENTIVE SERVICES REPORTED IN 2016 BY HOW OFTEN CARE PREFERENCES WERE TAKEN INTO ACCOUNT IN 2014, FOR INDIVIDUALS AGED 50-75



We completed longitudinal OLS Linear Regression based on a lagged variables approach to examine the association between care preferences being taken into account in 2014 and preventive care usage in 2016.¹ Having a “never” rating in 2014 was associated with less preventive care utilization in 2016. Moreover, greater satisfaction with health care in 2014 was associated with more preventive care utilization in 2016, as was having a usual source of care.

¹ The index of preventative care services used ranges between 0 and 4.

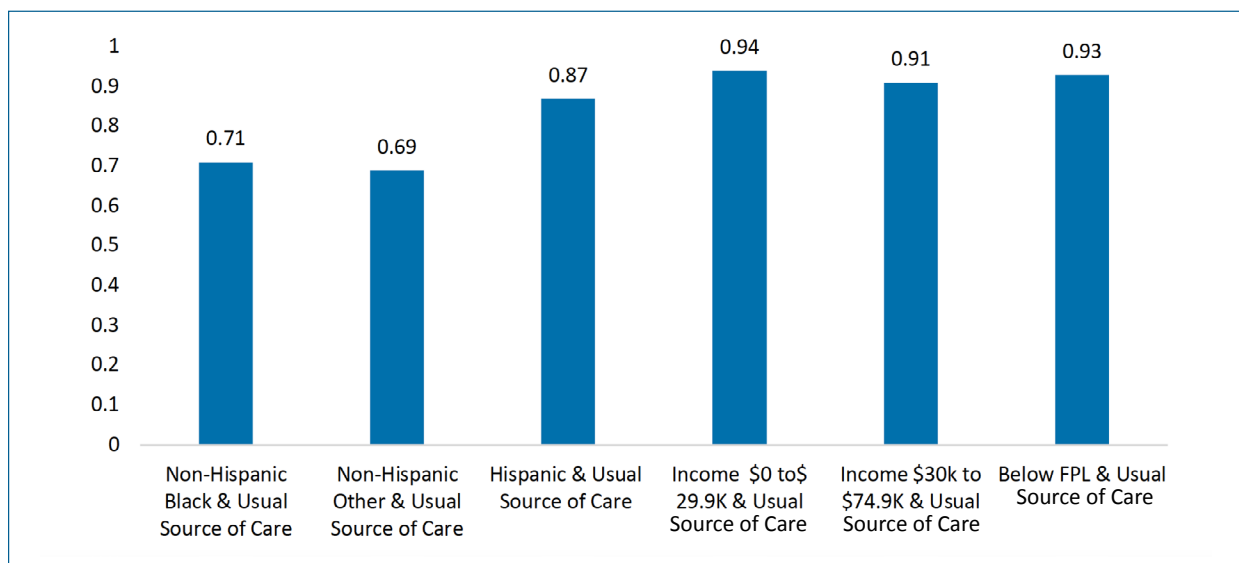
Getting a flu shot was examined separately as it is recommended annually for all ages. Both in bivariate analysis and regression models, those who reported that their care preferences were “never” or “sometimes” considered were less likely to get a flu shot than those with an always or usually rating. Only about half (56.3%) of individuals who reported their care preferences are never or only sometimes considered in 2014 got a flu shot in 2016 compared to three-quarters (74.9%) of those with an always or usually care preference rating.

These associations remain even when controlling for other variables. When controlling for demographic, financial, and health characteristics, those who reported in both 2014 and 2016 that their care preferences were never taken into account had 29% lower odds of getting a flu shot in 2016.

THE MODERATING EFFECT OF HAVING A USUAL SOURCE OF CARE

A consistent finding across our analyses was the association of having a usual source of care with a range of positive outcomes. Having a usual source of care made it more likely that care preferences were considered, WMI scores would be lower, there would be lower likelihood of high-risk biomarkers, and there would be higher levels of preventive care and care utilization. We performed an additional analysis to explore whether having a usual source of care could mitigate the disparities in receipt of person-centered care based on race/ethnicity and economic characteristics. That is, we examined whether and to what extent having a usual source of care weakens the association between being a person of color and reporting that one’s care preferences were never taken into account.

FIGURE 6: IMPACT OF HAVING A USUAL SOURCE OF CARE AND BEING A PARTICULAR RACIAL/ETHNIC GROUP OR INCOME GROUP AND WHETHER CARE PREFERENCES WERE NEVER CONSIDERED (ODDS RATIOS)



To test this, we use a lagged variable logistic regression approach and include additional variables called “interaction terms.” An example would be testing both the impact of being a person of color and being a person of color with a usual source of care (interaction term). In our analysis, we add in interaction terms for racial/ethnic groups and lower income/poverty with usual source of care.² Figure 6 displays the odds ratios for the interaction terms included in the regression analysis.

Results show that all of the interaction terms are statistically significant. Moreover, they all have odds ratios of less than one. This means that having a usual source of care weakens the associations between being a person of color and reporting that one’s care preferences were never considered. Put another way, having a usual source of care can decrease the likelihood of never having care preferences considered among older people of color. The same is true for individuals with low incomes. Having a usual source of care can decrease the likelihood of never having care preferences taken into account among those with lower income and poverty. Taken together with the race/ethnicity findings noted above, these findings highlight the important role of having a usual source of care in achieving a person-centered health care system.

DUAL ELIGIBILITY

It is widely known that individuals who are eligible for both Medicare and Medicaid (Dual Eligibles) represent a particularly vulnerable population in terms of their higher rates of poverty and greater prevalence of health conditions, due in part to social drivers of health. Not surprisingly, they account for a disproportionate share of health care resources, and are a major target of policy initiatives designed to improve care and reduce costs. We find that a higher percentage of Dual Eligibles report that their preferences were only sometimes or never taken into consideration (39%) compared to non-Duals (24%). Moreover, they also had significantly higher WMI scores compared to non-Duals. Somewhat surprisingly, among Dual Eligibles, race and poverty are no longer associated with the likelihood of reporting that the system never considers care preferences. This is likely related to the fact that two-thirds of all Duals are ethnic minorities compared to only 25% of non-Dual populations and more than one-third have incomes below the federal poverty line compared to only 6% for non-Duals. Thus, to some degree the high concentration of minorities and poorer individuals among Duals, diminishes the independent effect of these variables on the likelihood of having preferences taken into account.

A growing number of Dual Eligibles receive their care from managed care plans. In fact, roughly 48% of the Dual Eligibles in our sample are enrolled in managed care plans. We find that Dual Eligibles enrolled in managed care plans are more satisfied with their health care and more likely to feel that their preferences are taken into account. Moreover, they are more likely to have a usual source of care and engage in preventive care activities. This is true even though there are no significant differences in health status and both groups score equally on the WMI. This suggests that managed care plans are having a positive effect on these key parameters, which cannot be explained away by claims that the population of Duals served by managed care plans differs in relevant respects from Duals not enrolled in managed care plans.

² This is the same model presented in Table 2, and we present here the interaction terms added to the model.

Discussion and Policy Implications

This study explores a core component of person-centered care: do older adults feel that the health care system is taking their preferences for care into account? This study longitudinally builds upon previous research of findings from 2014 and 2016 by incorporating the most recent (2018) wave of survey data, and delves more deeply into the consequences of having one's preferences taken into account on one's risk of high-cost care, poor health outcomes and not receiving preventive care.

Our results confirm a disturbing, persistent and growing racial and economic divide in receipt of person-centered care, with minorities and low-income individuals being twice as likely to report that their care preferences are never considered. These disparities appear to be worsening over time, with more minorities reporting that their care preferences are never considered, even as these rates are decreasing for non-minority populations.

Additionally, we find that not having one's preferences taken into account is associated with higher risk of future high-cost care (based on scores on the What Matters Index) and worse health outcomes (as measured through biomarker data). Individuals who report not having their preferences considered also have lower likelihood of receiving preventive care, including vaccinations.

These additional findings reinforce the importance and urgency of ensuring that older adults' care preferences are considered. Many providers, plans and policymakers are focused on improving outcomes such as avoiding unnecessary emergency or inpatient care, controlling diabetes or blood pressure, and encouraging receipt of vaccinations and preventive care. Our study suggests that a key link to achieving these positive outcomes is making sure that patients' care preferences are considered.

How can this be done? Our previous paper suggested some promising avenues focused on training, measurement and engagement. These can be built into the design of programs serving older adults, including payment and delivery system reform initiatives, such as models that emerge from the Center for Medicare and Medicaid Innovation, quality measurement initiatives in Medicare and Medicaid, and programs serving dually eligible individuals. We believe these strategies remain timely and important, as does an approach that is focused on addressing disparities in patients' experiences of the health care system.

Our new research further suggests an additional opportunity to advance person-centered care, and that is through strengthening patients' connections to a primary care or other provider who can provide longitudinal care in the context of a trusting relationship. Our analysis shows that having a usual source of care increases the likelihood that one's preferences are taken into account, and can mitigate some of the deep racial and economic inequities found in who receives person-centered care.

Thus, as we emerge from the COVID-19 pandemic, rebuilding primary care should be a key priority. This system should foster the trusting, longitudinal relationships that would enable individuals to feel that their preferences are being taken into consideration. Additionally,

policymakers should ensure this system addresses the needs of individuals and communities of color, and low-income communities. Health care programs should measure whether individuals have a usual source care, the continuity and duration of that relationship, patients' satisfaction with their usual source of care, and whether patients report that their care preferences are considered. Delivery system reform efforts should include a focus on strengthening a primary care or similar relationship at their core.

One important limitation of this research is that it relies primarily on self-reported data, including for utilization of services, and could be subject to recall bias. Another limitation is that we assume that use of preventive services is a positive outcome, but the data do not enable us to make a detailed assessment as to whether a particular preventive service would be in fact be appropriate for a given individual.

We hope that future studies can build on this work by using claims data to more fully explore the effects of receiving person-centered care on health care utilization. In our previous work, we established that not having one's care preferences taken into account was associated with decreased health system utilization. However, we were not able to establish whether that utilization was "good" utilization — i.e., high value care — or "bad" utilization, such as unnecessary or otherwise preventable care. This current study identifies intriguing patterns related to a limited set of health outcomes and preventive care utilization, suggesting that not having one's care preferences considered decreases "good" utilization. We hope that future studies can build on these findings and use claims data to further explore the differences in health outcomes, utilization and costs associated with whether or not one's care preferences were taken into account. In so doing, such a study could provide the foundation for building a strong business case to invest the necessary effort and resources to assuring that person-centered care is integral to strategies for health system improvements.

In addition, our research would benefit from further characterization of what it means (and what it takes) for individuals to report that their care preferences are taken into account. This could be explored through qualitative approaches, to see what factors are most impactful. Is it, for example, the amount of time a provider spent with a patient; use of specific questions or strategies to elucidate preferences (such as the [4M framework](#) — which includes asking patients what matters to them);⁷ the presence of a longitudinal relationship with a provider; or cultural or racial concordance of provider and patient? This exploration could support broader scaling of person-centered care initiatives, in order to make person-centered care a reality for all.

Taken together, these additional lines of inquiry would further contribute to the evidence base for why person-centered care is so important, how person-centered care can be achieved and what needs to be done to reduce racial inequities.

Endnotes

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