BRIEF REPORT: Lack of a Race Effect in Primary Care Ratings Among Women Veterans

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OBJECTIVE: To explore the effect of race on primary care quality and satisfaction among women in the Department of Veterans Affairs (VA).

METHODS: We used a mail survey to measure primary care quality and satisfaction. We focused on 4 primary care domains: patient preference for provider, interpersonal communication, accumulated knowledge, and coordination. We performed univariate analyses to compare variables by race and multiple logistic regression analysis to examine the effect of race on the probability of reporting a perfect score on each domain, while adjusting for patient characteristics and site.

RESULTS: Black women were younger, unmarried, educated, of higher income, and reported female providers and gynecological care in VA more often. In regression analysis, race was not significantly associated with any primary care domain or satisfaction. Gynecological care from VA provider was associated with perfect ratings on patient preference for provider (odds ratio [OR] 2.0, 95% confidence intervals [CI] 1.3, 3.1), and satisfaction (OR 1.6, 95% CI 1.2, 2.3), while female provider was associated with interpersonal communication (OR 1.9, 95% CI 1.4, 2.6).

CONCLUSIONS: While demographics and health experiences vary by race among veterans, race had no effect on primary care ratings. Future studies need to determine whether this racial equity persists in health outcomes among women veterans.

KEY WORDS: patient satisfaction; primary care; race; veterans; women.

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United States veterans total 24.8 million persons nationally and include over 1.7 million women. The Department of Veterans Affairs (VA) Healthcare System remains the largest integrated health system in the nation, composed of 157 medical centers and over 862 ambulatory care and community-based outpatient clinics. In 2004, it served over 5 million individual patients and had a growing subpopulation of over 400,000 women.¹ Within the veteran population, women are the fastest-growing subgroup and are expected to increase from 5% to 10% of VA users by 2010.² Half of these women veterans are less than age 50, and within this younger cohort, 30% are U.S. racial and ethnic minorities.^{3,4}

In spite of these rising numbers, minimal information exists on minority women and their use of the VA system, patient satisfaction ratings, or quality of care received. The VA offers a unique opportunity to study quality of care and equity specific to gender and race. First, the VA system determines health

care access according to military discharge status and military-related exposures separate from, and in addition to, economic status. This VA access may potentially mitigate other social determinants of health across racial and gender subgroups. Second, the VA consistently monitors quality measures for preventive care, chronic disease care, and satisfaction with VA care among its users, while setting optimal performance goals for the national VA system. While prior research documents consistent improvements in VA health care with quality measures (e.g., preventive care and chronic disease indicators) among the predominantly male veteran population,⁵ little is known about women in the VA regarding quality measures⁶ or patient satisfaction.^{7,8} This paper examines the effect of race on women veteran ratings of primary care domains and patient satisfaction. We focus on the best performance ratings perceived by patients to understand what factors are associated with optimal ratings of care. From our review of the primary care and satisfaction literature, this paper is 1 of the first analyses by race within the context of gender among veterans.⁹

METHODS

Study Design

We mailed an anonymous survey to a stratified random sample of 3,483 women veterans using VA traditional primary care or women's clinics across 5 states (e.g., Delaware, Kentucky, Pennsylvania, Tennessee, and West Virginia) to measure primary care quality and overall satisfaction in VA. We used a 3-step mailing process modified from the total design method.¹⁰ Completed surveys were scanned into an Access database using Teleform software (Cardiff Software Inc., Vista, CA). Additional detailed procedures for the survey are reported previously.⁵ We obtained IRB approval at each local or parent medical center for 16 of 17 medical centers.

Measures

We used the original, validated components of Primary Care Index, to focus on 4 domains of primary care delivery: patient preference for provider, interpersonal communication, accumulated knowledge, and coordination of care.¹¹ Multiple items comprise each domain and demonstrate a level of internal consistency ranging from 0.68 to 0.79¹¹ and are associated with receipt of prevention measures in primary care settings.¹² We also used the overall satisfaction item in outpatient VA

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customer satisfaction surveys.¹³ We queried veterans on demographics, overall health status, and health care experiences during the past 12 months. We asked each veteran to identify her VA regular provider, gender of VA provider, use of VA provider for general gynecological services, and the local VA site for outpatient care.

Data Analysis

To compare women veterans by race, we categorized racial groups into white, black, and other (nonwhite/nonblack), and included Hispanic ethnicity as a covariate. We examined the distributions across racial groups using the χ^2 statistic for categorical variables. Multiple logistic regression models were used to examine the effect of race on the probability of reporting a perfect score in each primary care domain and satisfaction, while adjusting for patient demographics, health status, health care experience, and clustering by site. For each domain, we calculated the probability of a perfect score (i.e., the maximal score vs all others) based on race with adjustment for all covariates. Preliminary analyses revealed a natural cut-point at perfect versus all other levels for primary care ratings and satisfaction. All values were considered significant if the associated *P* value was $<.05$. Data analyses were performed using SPSS, version 10 (SPSS Inc., Chicago, IL) and STATA, version 7 (STATA Corp., College Station, TX).

RESULTS

The survey included 1,907 respondents (response rate 55%). As we could not identify nonrespondents due to anonymity, we compared our respondent sample with the original random sample to identify differences and found that the overall respondents were more likely older (mean age 56.7 vs 50.1 years; $P<.0001$), more likely white (85% vs 81.1%; $P=.0008$), and more likely to report income above \$20,000 annually (39.7% vs 28.7%; $P<.0001$) but not more likely to be married (33.7% vs 35.4%; $P=.2271$). These results are similar to our prior study of women veterans in a single VA region covering 10 medical centers.⁷ The analytic sample was then restricted to veterans

who identified each of the following: outpatient VA site, a regular VA provider, gender of VA provider, and use of VA provider for routine gynecological services ($n=1,447$). Some of this sample decrement occurred with initial missing self-reports of race and then missing patient identification of a regular VA provider. We found no statistical differences between the final analytic sample and the overall respondent sample along patient demographics (i.e., age, race, income, marital status, and education), overall health status, or use of female providers ($P>.30$ for each comparison). We found a slight trend of patients in the analytic sample more likely to report excellent satisfaction (33.3% vs 30.2%; $P=.061$). Of the 1,447 patients in the analytic sample, 85% ($n=1,234$) of women self-identified as white, 11.3% ($n=164$) as black, and 3.4% ($n=49$) as other. Hispanic ethnicity was similar among all 3 groups, notably whites and blacks. Nonwhite (i.e., black and other) women were significantly younger, more often achieved education beyond high school, and more often reported military-related health conditions (i.e., VA service-connected disabilities; see Table 1). Black women were less likely to be married and less likely to have low incomes. However, the majority of women had incomes less than or equal to \$20,000. Overall health status and report of excellent satisfaction with VA care were not different between the racial groups. However, black women reported different health care experiences, including a greater proportion with a female VA provider and a greater proportion who received routine gynecological care from their VA provider.

In the multiple logistic regression models (Table 2), race had no association with any of the 4 primary care domains or with excellent overall satisfaction. However, health care experiences showed significant associations with primary care ratings and satisfaction. Patients with female providers were significantly more likely to give perfect ratings on interpersonal communication (odds ratio [OR] 1.9, 95% confidence intervals [CI] 1.4, 2.6). Patients with VA providers who managed routine gynecological care were significantly more likely to give perfect ratings on patient preference for provider (OR 2.0, 95% CI 1.3, 3.1) and excellent overall satisfaction (OR 1.6, 95% CI 1.2, 2.3). The patient-specific factors significantly associated with

Table 1. Characteristics of Veteran Women by Race ($N=1,447$)

Factor	White ($n=1,234$) (%)	Black ($n=164$) (%)	Other ($n=49$) (%)	<i>P</i> Value
Demographics and health status				
Ethnicity, Hispanic	1.7	1.3	6.2	.058
Age (y)				.000
18 to 39	13.7	24.8	17.0	
40 to 64	46.4	64.0	61.7	
65+	39.9	11.2	21.3	
Marital status, married	35.1	22.3	31.2	.006
Education				.000
$\leq$ High school	30.8	14.8	10.6	
Some college or technical training	46.3	54.9	53.2	
College graduate	22.8	30.2	36.2	
Annual income, $\leq$ \$20,000	62.5	50.3	55.8	.012
Overall health status, very good/excellent	28.7	32.7	28.6	.587
VA service connection, yes	64.1	80.4	81.0	.000
Health care experiences				
Overall excellent satisfaction with VA care	33.3	30.6	31.2	.774
Female VA regular provider	68.2	81.1	67.3	.003
VA provider covers gynecological care	49.5	63.9	51.1	.003

VA indicates Department of Veterans Affairs. Because of rounding, percentages may total more than 100.

Table 2. Predictors of Perfect Scores for Primary Care Domains and Excellent Satisfaction

Factor	Adjusted OR (95% CI)				
	Patient Preference for Provider	Interpersonal Communication	Accumulated Knowledge	Coordination of Care	Excellent Satisfaction
Demographics and health status					
Race					
White (referent group)	—	—	—	—	—
Black	0.7 (0.4, 1.3)	0.7 (0.5, 1.1)	1.9 (0.8, 4.4)	0.7 (0.3, 1.2)	0.7 (0.4, 1.1)
Other	0.5 (0.1, 2.1)	0.7 (0.4, 1.4)	0.9 (0.2, 4.9)	0.9 (0.5, 1.6)	1.0 (0.6, 1.6)
Ethnicity, Hispanic	0.5 (0.1, 1.6)	0.8 (0.2, 3.1)	*	1.3 (0.3, 5.0)	0.5 (0.2, 1.5)
Age (y)					
40 to 64	1.7 (0.8, 3.7)	1.4 (1.0, 2.1)	1.0 (0.4, 3.0)	2.0 (1.2, 3.3)	1.4 (0.9, 2.1)
65+	1.9 (0.9, 4.0)	1.3 (1.0, 1.8)	1.1 (0.4, 3.0)	2.5 (1.5, 4.3)	1.5 (0.9, 2.5)
Married	1.0 (0.6, 1.4)	1.1 (0.8, 1.5)	1.5 (0.7, 3.0)	1.2 (0.9, 1.6)	0.9 (0.6, 1.2)
Education					
Some college or technical training	0.9 (0.7, 1.3)	0.7 (0.5, 0.8)	0.7 (0.4, 1.3)	0.7 (0.5, 1.1)	0.6 (0.5, 0.7)
College graduate	0.8 (0.5, 1.2)	0.7 (0.5, 1.0)	1.0 (0.6, 1.7)	0.5 (0.3, 0.8)	0.5 (0.4, 0.7)
Income >\$20,000	1.1 (0.7, 1.7)	0.8 (0.6, 1.2)	1.0 (0.6, 1.8)	0.9 (0.6, 1.3)	1.2 (0.9, 1.7)
Overall health status, very good/excellent	1.2 (0.9, 1.7)	1.3 (0.9, 1.8)	0.3 (0.2, 0.5)	1.0 (0.6, 1.5)	1.8 (1.4, 2.2)
VA service connection	0.7 (0.5, 1.0)	0.9 (0.7, 1.1)	0.7 (0.5, 1.1)	0.8 (0.5, 1.2)	0.9 (0.7, 1.1)
Health care experiences					
Female VA regular provider	1.2 (0.8, 1.9)	1.9 (1.4, 2.6)	1.3 (0.5, 3.5)	1.5 (0.9, 2.6)	1.0 (0.7, 1.5)
VA regular provider covers gynecological care	2.0 (1.3, 3.1)	1.3 (0.9, 1.8)	1.2 (0.7, 2.1)	1.1 (0.7, 2.0)	1.6 (1.2, 2.3)

*Hispanic was dropped from the model and the few observations were not used.

OR, odds ratio; CI, confidence interval; VA, Department of Veterans Affairs. The OR includes adjustment for all covariates and clustering at the site level.

multiple primary care ratings were higher education, older age, and health status (see Table 2).

DISCUSSION

Race displayed no significant association with primary care ratings in the multivariable model. These findings vary from regional and national comparisons of racial/ethnic groupings, which show lower or varied ratings of quality of care or satisfaction.^{14–17} In fact, national comparisons with some racial/ethnic groups displaying some higher ratings of care indicated that these same groups had ongoing disparities in health care access and utilization.¹⁵ In our study of veteran women, use of a female VA provider and obtaining routine gynecological care from the VA provider were both strongly associated with optimal ratings on at least 1 primary care domain. Female provider displayed findings consistent with prior research on patient-provider communication,^{18,19} and provision of gynecological care by VA provider demonstrated a significant association with patient preference for maintaining a relationship with the health care provider as in prior work.²⁰ The lack of a race difference in the primary care ratings points to the possibility that nonwhite women (black or other) veterans show similar perceptions of primary care and may possibly receive (or perceive) equitable health care in the VA.⁹

Our findings are limited by the regional sampling of veterans and the predominant composition of only white and black women. In spite of these limitations, the data demonstrate that the women veterans surveyed do not exhibit differences in primary care ratings or overall satisfaction by race for this region of the VA. This finding stands as a major accomplishment and starting point for the discussion of equity according to race and gender. While the findings are quite promising, the next step requires that we validate the percep-

tions of equity with clinical endpoints that serve as process or outcome measures of quality.

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