Barriers to Veterans Health Administration Care in a Nationally Representative Sample of Women Veterans

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BACKGROUND: Women veterans are generally less healthy than their nonveteran female counterparts or male veterans. Accumulating evidence suggests there may be barriers to women veterans' access to and use of Veterans Health Administration (VHA) care.

OBJECTIVE: To document perceived and/or actual barriers to care in a nationally representative sample of women veterans and examine associations with VHA use.

DESIGN: Cross-sectional telephone survey.

PARTICIPANTS: Women who are current and former users of VHA from VA's National Registry of Women Veterans.

MEASUREMENTS: Assessments of perceptions of VHA care, background characteristics, and health service use.

RESULTS: Perceptions of VHA care were most positive regarding facility/physical environment characteristics and physician skill and sensitivity and least positive regarding the availability of needed services and logistics of receiving VHA care ($M=0.05$ and $M=-0.10$; $M=-0.23$ and $M=-0.25$, respectively). The most salient barrier to the use of VHA care was problems related to ease of use. Moreover, each of the barriers constructs contributed unique variance in VHA health care use above and beyond background characteristics known to differentiate current users from former VHA users (Odds ratio [OR]=4.03 for availability of services; OR=2.63 for physician sensitivity and skill; OR=2.70 for logistics of care; OR=2.30 for facility/physical environment). Few differences in barriers to care and their association with VHA health care use emerged for women with and without service-connected disabilities.

CONCLUSIONS: Findings highlight several domains in which VHA decisionmakers can intervene to enhance the care available to women veterans and point to a number of areas for further investigation.

KEY WORDS: women's health; veterans; access to care; health services research.

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Women veterans are less healthy than their nonveteran female counterparts and are in poorer emotional health relative to male veterans.¹⁻³ Moreover, women veterans report experiencing stressful and traumatic events at a higher rate than either nonveteran women or male veterans,^{3,4} and these exposures have well-established consequences for mental and physical health.³⁻⁶ Thus, access to high-quality health care is especially important for women veterans.

Although historically serving primarily male veterans, women are a growing proportion of the patients seeking Veterans Health Administration (VHA) care.^{1,7,8} The VHA offers a full continuum of comprehensive medical services, as well as a number of gender-specific services, to eligible women veterans.^{7,9,10} However, accumulating evidence points to a number of problems with women veterans' access to and use of VHA health care.^{8,11,12} In addition, there is some evidence that women underutilize VHA care relative to men.⁷ This may be at least partially explained by the finding that women veterans perceive or experience a number of barriers to VHA care.^{2,8,11,13,14} Although the literature upon which these findings are based is informative, the majority of studies of barriers to VHA care have been conducted on convenience samples and cannot speak to general trends within the broader population of women veterans.^{2,15-17} Thus, the primary goal of the current study was to document perceived and/or actual barriers to care in a nationally representative sample of women veterans who have accessed VHA care and examine associations between barriers to care and VHA use.

Although specific guidelines have evolved over time, in general, veterans with service-connected disabilities are considered higher priority patients at the VHA.^{18,19} Whereas there is some evidence that service-connected disability status is a positive predictor of VHA use,²⁰ one might expect that women with service-connected disabilities would perceive more barriers to care and barriers to care might be a stronger predictor of VHA use for women with service-connected disabilities.^{21,22} Thus, a secondary goal of this study was to examine the extent to which barriers to care differ and differentially influence VHA use for women with and without service-connected disabilities.

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Historically, barriers to care have been categorized as either individual/personal or structural/institutional in nature.²⁰ Investigators who have examined individual/personal barriers to care have focused on characteristics such as socioeconomic status, gender, patient age, and disease status.²⁰ One study that examined a number of potential individual/personal predictors found that women who were current VHA users were less likely to be ethnic minorities, had fewer children, had served more time in the military, had lower rates of insurance coverage, poorer health, more posttraumatic stress symptomatology, greater exposure to combat and assault, and were more likely to have a service-connected disability compared with former users.²³

Other investigators have considered structural/institutional factors that may serve as barriers to care, such as the availability of services, health care provider characteristics, and logistics of care.^{20,24,25} Findings indicate that structural/institutional barriers can substantially influence use of services and subsequent clinical outcomes.^{20,24–26} A number of structural/institutional barriers to care may be especially relevant for women veterans. One potential barrier relates to the perceived and/or actual availability of health care services,²⁰ particularly the availability of women-specific services.^{3,13} Access to care is not uniform across VHA facilities, with some facilities providing separate women's health clinics and some facilities integrating women's health care into the larger system.⁴ Another potential barrier to VHA care may be a perceived lack of sensitivity or skill among VHA staff with respect to women's unique health care needs. Perhaps in part due to the fact that the VHA has historically provided care to men, some staff may not be optimally sensitive or knowledgeable regarding aspects of women's health care.^{4,12,14,27,28} A final barrier that is likely to be salient for both women and men veterans relates to the ease of using VHA health care, both with regard to the logistical factors of receiving needed care,^{20,29} and the accessibility of VHA facilities and aspects of the physical environment.^{11,30}

In summary, the primary goal of the present study was to document perceived and/or actual barriers to care in a nationally representative sample of women veterans who had accessed VHA care and examine associations between barriers to care and VHA use. A secondary goal was to examine the extent to which barriers to care and their associations with VHA use differ for women with and without service-connected disabilities. We benefited from having a large, nationally representative sample and sample design weights to facilitate generalization to the population of women veterans.

METHODS

Participants

The current sample represents a subset of a larger sample obtained from National Registry of Women Veterans (NRWV), a VA database that was developed to track all U.S. women veterans. The larger sample on which this study was based was selected using a stratified random sampling design. This design yielded 12 strata, consisting of 3 age groups representing pre-Vietnam, Vietnam, and post-Vietnam cohorts (over 50, 35 to 49, and under 35 years), 2 racial groups (black and nonblack), and 3 user groups (current users within the previous 2 years, former users within 3 to 10 years, and nonusers). Smaller strata, such as African Americans in the less than 35-year age group, were

oversampled to allow for sufficient data to make comparisons among strata.

Of an original pool of 5,030 potential participants for the larger study, 3,071 could not be contacted via telephone or correspondence, 269 were ineligible for participation (120 current active duty, 52 deceased, deaf, or health-prevented participation, 97 ineligible for other reasons such as language barrier or no military service), and 28 were excluded because they could not be categorized according to study strata. From the remaining pool ($N=1,662$), 89% agreed to participate ($N=1,472$). Because the purpose of the present study was to document barriers for women veterans who had used VHA care, we included only current and former users of VHA care (total $N=942$; 543 current users, 399 former users). For further details regarding the sampling procedure and sample, please contact the first author.

Procedure and Measures

Prior to survey administration, 5 focus groups composed according to user status, era of service, and age group were conducted to generate information that could be used to inform the measurement of barriers to care. A trained moderator facilitated the group discussion using a guide that probed for potential problems in obtaining VHA care. Focus groups were audiotaped and later transcribed. Barrier themes were identified from the transcripts and items were developed to address each of the themes.

Measures of barriers to care, VHA use, as well as a number of background characteristics, were then administered to women veterans via a computer-assisted telephone interviewing system. Data were collected in 1997 and interviews averaged approximately 45 minutes. All participants were assured confidentiality and informed that their participation would not affect the services they receive at the VHA. Materials and procedures were approved by the facility's institutional review board.

Background Characteristics and Health Status. Respondents reported on a number of background characteristics. Table 1 presents descriptive statistics on background characteristics. Participants reported their perceived health status on a general health item from the SF-36 Health Survey using a 5-point scale from "excellent" to "poor."³¹

Ratings of VHA Care Relative to other Health Care Facilities. Participants compared their experiences and impressions of aspects of VHA care with other facilities (e.g., hospital outpatient department, physician's office, or health care center run by a health management organization) where they had received health care. Barrier categories included availability of services (5 items), physicians' skill and sensitivity (6 items), logistics of care (8 items), and facility/physical environment characteristics (5 items). The mean scores were calculated for each of the 4 scales such that a high score indicated a more positive perception of the VHA facility in comparison with other facilities. Please see the top of Table 2 for example items, response scale, and internal consistency reliability estimates.

Ratings of Extent to which Barriers Influence Use of VHA Care. Participants provided judgments of the extent to which problems with a number of structural/institutional characteristics, including problems accessing women-specific/women

Table 1. Background Characteristics of Women Veterans

	<i>n</i>	%	SE
Race			
White, nonhispanic	599	76	0.02
Black, nonhispanic	284	19	0.01
Asian/Pacific Islander/Native American/Alaskan Native	11	1	0.00
Hispanic	29	3	0.01
Other	13	1	0.00
Age			
Under 35	240	31	0.00
35 to 49	448	26	0.00
50 or older	254	43	0.00
Highest educational attainment			
High school graduate or less	260	29	0.02
Some college	415	44	0.02
4-year college graduate	161	16	0.02
Some postgraduate/professional school or above	105	12	0.02
VHA user status			
Former	399	74	0.00
Current	543	26	0.00
Current marital status			
Married	394	44	0.02
Divorced	204	22	0.02
Separated	36	3	0.01
Widowed	75	11	0.02
Single	233	20	0.02
Number of children younger than 19			
None	516	63	0.02
1	184	16	0.02
2	159	14	0.01
3 or more	83	7	0.01
Years of service in the military			
Less than 2 years	152	24	0.02
2 years	142	19	0.02
3 years	149	14	0.01
4 years	107	13	0.02
5 to 9 years	177	15	0.01
10 or more years	161	14	0.02
Insurance coverage			
Had in the past 2 years	631	74	0.02
Part of past 2 years	130	12	0.01
Not in past 2 years	179	13	0.01
Income			
Less than \$15,000	213	22	0.02
\$15,000 to \$29,999	324	36	0.02
\$30,000 to \$49,999	244	27	0.02
\$50,000 or more	123	16	0.02
Service-connected disability status			
None	457	62	0.02
10% to 50%	301	28	0.02
51% to 99%	45	3	0.01
100%	71	7	0.01

sensitive care (6 items), problems with VHA physicians/staff (6 items), and problems with the ease of using VHA facilities (8 items), kept them from seeking VHA care. The mean scores were calculated for the 3 scales such that a high score indicated more barriers to the use of VHA care. Please see the bottom of Table 2 for example items, response scale, and internal consistency reliability estimates.

Weighting and Analyses. As noted earlier, several demographic groups (e.g., African Americans in the less than 35-year age group) were oversampled to allow for meaningful comparisons among subgroups. Sample design weights were used to adjust for this oversampling and permit the projection of results to the larger population. Although the weights for other publica-

Table 2. Sample Items from Survey and Internal Consistency Reliability Estimates for Full Scales

	α
Comparisons of VHA care to other facilities	
Availability of services	0.84
(a) Availability of emergency medical services	
(b) Availability of separate clinics where women can get most of their care	
(c) Availability of mammograms	
Physician sensitivity and skill	0.89
(a) The doctor's knowledge of women's health care needs	
(b) The doctor's courtesy and respect toward patients	
(c) The skill of doctors	
Logistics of care	0.90
(a) Amount of privacy for women	
(b) The waiting time to get an appointment if you are really sick	
(c) The waiting time at the pharmacy	
Facility/physical environment characteristics	0.73
(a) The hours when the facility is open	
(b) The parking	
(c) The safety of the location	
Extent to which barriers influence use of VHA care	
Problems accessing women-specific care	0.78
(a) Have you ever had a problem in getting care because VHA doctors were not knowledgeable about women's health care needs?	
(b) Has it ever been a problem that you could not get care at a separate clinic for women at the VHA?	
(c) Has it ever been a problem that you could not get obstetric or child birth services at the VHA?	
Problems with VHA physicians/staff	0.68
(a) Have you ever had a problem in getting care because VHA doctors were not sensitive to women?	
(b) Have you ever had a problem in getting care because a VHA doctor was not courteous or respectful?	
(c) Has getting health care from residents and/or trainees (at the VHA) ever bothered you?	
Problems with ease of use	0.75
(a) Has the waiting time for a check-up at the VHA ever been a problem for you?	
(b) Has not being able to get in touch with VHA medical staff by telephone ever been a problem for you?	
(c) Have you ever had a problem with the VHA because the facility was not clean enough?	

tions from this larger data set were developed to match NRWV population distributions,^{23,32} sample design weights for this study were based on population value estimates from both the Bureau of Labor Statistics and the VA National Survey of Veterans to provide information that would be more broadly applicable to the larger population of women veterans. Weights were used to adjust responses of veterans so that the sum of the weights for cases in each group equaled the number of cases in the reference population. We also accounted for the stratified sampling design (i.e., 8 strata within this subsample of only current and former users) in our analyses. The application of sampling weights, combined with our recognition of stratification in the survey design, allowed for the computation of unbiased estimates and correct standard errors. For further details regarding the computation of weights for the current study, please contact the first author.

The STATA software package was employed for all analyses.³³ We first computed means to document perceptions of VHA care in an absolute sense, examining group averages along various continua of health care quality. We then docu-

Table 3. Women Veterans' Perceptions of VHA Care

	M	SE	95% CI		
Comparisons of VHA care to other facilities*					
Availability of services	−0.23	0.05	−0.32	—	−0.14
Physician sensitivity and skill	−0.10	0.04	−0.17	—	−0.03
Logistics of care	−0.25	0.04	−0.32	—	−0.17
Facility/physical environment characteristics	0.05	0.03	−0.01	—	0.10
Extent to which barriers influence use of VHA care†					
Problems accessing women-specific care	1.32	.03	1.26	—	1.38
Problems with VHA physicians/staff	1.23	.02	1.19	—	1.27
Problems with ease of use	1.46	.03	1.40	—	1.52

*Participants compared VHA care to other health care facilities using a 5-point Likert response format: −2 = much worse, −1 = somewhat worse, 0 = the same, 1 = somewhat better, and 2 = much better.

†Participants ranked the degree to which categories of VHA care were a barrier to their use: 1 = not at all, 2 = slightly, 3 = moderately, and 4 = greatly.

mented barriers to care separately for women with and without service-connected disabilities and applied *t*-tests to examine potential differences among these groups. We next used logistic regressions to examine the extent to which perceptions of care contributed unique variance in the prediction of VHA use above and beyond previously documented individual/personal factors.²³ We incorporated a term representing the interaction of perceptions of VHA care and service-connected disability status to examine the extent to which barriers to care differentially impact use for women with and without service-connected disabilities.

RESULTS

To document women veterans' perceptions of VHA care in an absolute sense, we examined where means fell on different barrier dimensions. Table 3 presents means, standard errors, and 95% confidence intervals for each of the barrier measures for the sample as a whole. As these findings indicate, women veterans generally reported that VHA care was about the same or slightly worse than the care offered at other facilities. Respondents reported that facility characteristics (e.g., hours, parking availability) were quite similar for VHA and non VHA health care facilities. Ratings were least positive with regard to the availability of services and logistics of care. With regard to the extent to which aspects of VHA care affect women veterans' likelihood to seek care, average scores generally fell between 1

(not at all) and 2 (slightly), suggesting only minimal effects on VHA use. Respondents reported that problems associated with ease of use were most likely to serve as a barrier to care and problems with physicians/staff were least likely to serve as a barrier to care. As the results in Table 4 indicate, there was only 1 significant difference in perceived barriers according to service-connected disability status. Specifically, women who had a service-connected disability reported a greater problem with the ease of using VHA health care facilities.

To examine the extent to which perceptions of VHA care contribute to women veterans' actual use of VHA health care, we next conducted a series of logistic regressions in which we examined the unique contribution of barriers to care to VHA use. For each logistic regression, we entered previously documented background characteristics that contribute to VHA use (i.e., ethnicity, number of children, years of military service, insurance coverage, PTSD status, service-connected disability status, history of sexual assault, combat exposure, and health status²³), along with one of the "perceptions of care relative to other facilities" barrier categories. We also incorporated a term representing the interaction of service-connected disability status (dichotomized as a yes/no variable) and each of the key barrier constructs. As the results in Table 5 indicate, after accounting for previously documented background characteristics, positive perceptions of each of the 4 domains of VHA care (availability of services, physician sensitivity and skill, logistics of care, and facility/physical environment char-

Table 4. Comparisons of Perceptions of VHA Care by Service-Connected Disability Status

	Service-Connected Disability		No Service-Connected Disability				
	M	SE	M	SE	t	df	P
Comparisons of VHA care to other facilities*							
Availability of services	−0.14	0.07	−0.30	0.07	−1.62	505	.11
Physician sensitivity and skill	−0.09	0.05	−0.10	0.05	−0.10	820	.96
Logistics of care	−0.24	0.06	−0.25	0.06	−0.25	788	.91
Facility/physical environment characteristics	0.00	0.05	0.06	0.04	0.91	844	.36
Extent to which barriers influence use of VHA care†							
Problems accessing women-specific care	1.31	0.04	1.35	0.03	0.67	795	.50
Problems with VHA physicians/staff	1.28	0.03	1.21	0.03	−1.79	844	.07
Problems with ease of use‡	1.61	0.05		0.04		839	.00

*Participants compared VHA care to other health care facilities using a 5-point Likert response format: −2 = much worse, −1 = somewhat worse, 0 = the same, 1 = somewhat better, and 2 = much better.

†Participants ranked the degree to which categories of VHA care were a barrier to their use: 1 = not at all, 2 = slightly, 3 = moderately, and 4 = greatly.

‡Italics indicate a significant difference, *P* < .05.

Table 5. Summary of Logistic Regression Analyses Examining Associations Between Barriers to Care and VHA Use

	B	SE	t	P	OR	95% CI for OR		
Model for availability of services ($F(11, 472)=7.77, P<0.001$)								
Ethnic minority status	-0.73	0.48	-1.50	.13	0.48	0.19	—	1.25
Number of children	0.02	0.11	0.15	.88	1.02	0.82	—	1.26
Years of service	0.00	0.00	0.20	.84	1.00	1.00	—	1.00
Insurance coverage*	0.64	0.21	3.10	.00	1.90	1.26	—	2.86
PTSD	0.00	0.01	0.56	.57	1.00	1.00	—	1.01
Disability rating	0.51	0.28	1.80	.07	1.66	0.96	—	2.89
Sexual assault exposure	0.30	0.29	1.03	.30	1.35	0.76	—	2.37
Combat	0.74	0.49	1.51	.13	2.09	0.80	—	5.48
Health status	-0.39	0.15	-2.59	.01	0.68	0.51	—	0.91
Availability of services	1.39	0.24	5.83	.00	4.03	2.51	—	6.43
Availability of services × Disability rating	-0.91	0.38	-2.38	.02	0.40	0.19	—	0.85
Model for physician sensitivity and skill ($F(11, 751)=9.19, P<0.001$)								
Ethnic minority status	-0.34	0.36	-0.95	.34	0.71	0.35	—	1.45
Number of children	0.07	0.08	0.83	.41	1.07	0.91	—	1.27
Years of service	0.00	0.00	1.74	.08	1.00	1.00	—	1.00
Insurance coverage	0.72	0.16	4.50	.00	2.05	1.50	—	2.80
PTSD	0.00	0.00	-0.56	.58	1.00	0.99	—	1.01
Disability rating	0.28	0.14	2.03	.04	1.33	1.01	—	1.74
Sexual assault exposure	0.39	0.23	1.65	.10	1.47	0.93	—	2.33
Combat	-0.34	0.38	-0.89	.38	0.71	0.34	—	1.51
Health status	-0.37	0.10	-3.52	.00	0.69	0.57	—	0.85
Physician sensitivity and skill	0.97	0.26	3.67	.00	2.63	1.57	—	4.41
Physician sensitivity and skill × disability rating	-0.24	0.31	-0.76	.45	0.79	0.43	—	1.46
Model for logistics of care ($F(11, 722)=7.15, P<0.001$)								
Ethnic minority status	-0.54	0.35	-1.54	.12	0.59	0.30	—	1.16
Number of children	0.10	0.09	1.13	.26	1.10	0.93	—	1.30
Years of service	0.00	0.00	1.63	.10	1.00	1.00	—	1.00
Insurance coverage	0.66	0.16	4.17	.00	1.94	1.42	—	2.65
PTSD	0.00	0.00	-0.93	.36	1.00	0.99	—	1.00
Disability rating	0.27	0.16	1.65	.10	1.31	0.95	—	1.80
Sexual assault exposure	0.29	0.24	1.21	.23	1.34	0.83	—	2.16
Combat	-0.49	0.40	-1.20	.23	0.61	0.28	—	1.36
Health status	-0.34	0.11	-3.06	.00	0.71	0.57	—	0.88
Logistics of care	0.99	0.30	3.33	.00	2.70	1.50	—	4.86
Logistics of care × disability rating	-0.53	0.34	-1.55	.12	0.59	0.30	—	1.15
Model for facility/physical environment characteristics ($F(11, 773)=9.14, P<0.001$)								
Ethnic minority status	-0.45	0.37	-1.22	.22	0.64	0.31	—	1.32
Number of children	0.08	0.08	0.99	.32	1.08	0.92	—	1.27
Years of service	0.00	0.00	1.73	.08	1.00	1.00	—	1.00
Insurance coverage	0.74	0.14	5.13	.00	2.10	1.58	—	2.79
PTSD	0.00	0.00	-0.26	.80	1.00	0.99	—	1.01
Disability rating	0.35	0.13	2.67	.01	1.42	1.10	—	1.84
Sexual assault exposure	0.21	0.24	0.89	.38	1.23	0.78	—	1.96
Combat	-0.38	0.36	-1.06	.29	0.68	0.34	—	1.38
Health status	-0.37	0.10	-3.80	.00	0.69	0.57	—	0.84
Facility/physical environment characteristics	0.83	0.20	4.20	.00	2.30	1.56	—	3.40
Facility/physical environment characteristics × disability rating	-0.50	0.29	-1.73	.08	0.61	0.35	—	1.07
Overall model ($F(17, 489)=10.15, P<0.001$)								
Insurance coverage	0.60	0.20	2.99	.00	1.82	1.23	—	2.69
Disability rating	0.43	0.29	1.48	.14	1.54	0.87	—	2.75
Health status	-0.47	0.15	-3.26	.00	0.62	0.47	—	0.83
Availability of services	-0.72	0.26	-2.82	.01	0.49	0.29	—	0.80
Physician sensitivity and skill	0.46	0.41	1.12	.26	1.58	0.71	—	3.55
Logistics of care	0.56	0.34	1.66	.10	1.75	0.90	—	3.40
Facility/physical environment characteristics	0.66	0.26	2.56	.01	1.93	1.16	—	3.19

*Italics indicate a significant difference, $P<.05$

acteristics) maintained significant negative associations with VHA use in each of the separate regressions. In addition, the interaction between perceptions of the availability of services and service-connected disability status was significant, indicating that the availability of services was a stronger predictor of VHA use for women without service-connected disabilities. Finally, we conducted an overall logistic regression in which we entered significant background characteristics along with each of the 4 barrier categories to examine the unique contri-

bution of specific barriers to VHA use. Favorable perceptions of the availability of services and facility/physical environment characteristics maintained their significant association with VHA use.

DISCUSSION

The primary goal of the present study was to document perceptions of VHA care in a nationally representative sample of

women veterans who have used VHA services and examine the extent to which barriers to care contribute to VHA use. Although other researchers have examined barriers to care among women veterans, the majority of these studies have been based on convenience samples that are not nationally representative and can not speak to general trends within the broader population of women veterans.^{2,15-17} To our knowledge, the current study is the first to address barriers to care in a nationally representative sample.

In general, the finding that women veterans generally perceive VHA care to be similar to the care provided at other facilities and that women with service-connected disabilities generally perceive no more barriers to VHA care than those without service-connected disabilities is encouraging. At the same time, results suggest several areas for improvement. Findings from our descriptive analyses of barriers to care indicate 2 areas that may deserve additional attention: the availability of needed services, including especially women-specific services, and factors related to the logistics of receiving care at the VHA, such as the waiting time to obtain care and issues relate to continuity of care. Problems with the ease of accessing VHA care was reported to be the most salient barrier to VHA use.

The importance of these barriers to care is underscored by the additional finding that each of our 4 barrier constructs contributed unique variance in VHA use above and beyond background characteristics known to differentiate current from former VHA users. When considered simultaneously, both availability of services and facility characteristics/physical environment maintained their significant associations with VHA use.

Although one of the major advantages of the current study was its ability to provide insight into the experiences of a nationally representative sample of women veterans, there may be sampling bias introduced by the self-selection of certain types of individuals into the study. For example, it is possible that women veterans who were less satisfied with their care might have been more inclined to participate in this study and thus, the results might somewhat overestimated barriers to care. Moreover, while we were able to gain insight into a number of important barriers, studies that can apply even more precise conceptualizations of barriers to care are needed. In particular, it will be useful to identify specific facets of barrier domains—for example, factors that contribute to greater or lesser ease of use—in future investigations.

The finding that women with service-connected disabilities perceived ease of use as a greater barrier points to another area for additional attention. This finding, coupled with results indicating that availability of services was a stronger predictor of VHA health care use for women without service-connected disabilities, suggests that barriers to care may differ for women with and without service-connected disabilities and highlights the need for additional exploration of barriers specific to particular subpopulations of women veterans (e.g., older and younger women, women with and without trauma histories). Especially useful will be research on how income is related to barriers to care given that women with lower incomes are considered higher priority patients within the VHA.

Overall, findings are consistent with the results of other studies of barriers to care,^{11,13} supporting the need for additional attention to structural/institutional barriers to women veterans' use of VHA services. These findings highlight areas in

which VHA decisionmakers can intervene to enhance the care that is available to women veterans. For example, given that women with service-connected disabilities are considered a "high priority" patient population, VHA efforts might be directed toward reducing barriers to care that are particularly salient for this population. Efforts such as these can ultimately contribute to better health outcomes for women veterans.

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REFERENCES

1. Skinner KM, Sullivan LM, Tripp TJ, et al. Comparing the health status of male and female veterans who use VA health care: results from the VA women's health project. *Women Health*. 1999;29:17-33.
2. Skinner KM, Furey J. The focus on women veterans who use Veterans Administration health care: the Veterans Administration women's health project. *Mil Med*. 1998;163:761-6.
3. Skinner KM. The VA women's health project: identifying the health care needs of women veterans. *Forum: VA Health Services Research and Development*. 2000;6.
4. Furey J. Changing role of women veterans raises issues about health care service delivery. *Forum: VA Health Services Research and Development*. 2000;6.
5. Skinner KM, Kressin N, Frayne S, et al. The prevalence of military sexual assault among female Veterans Administration outpatients. *J Interpersonal Violence*. 2000;3:289-304.
6. Suris A, Lind L, Kashner M, Borman PD, Petty F. Sexual assault in women veterans: an examination of PTSD risk, health care utilization, and cost of care. *Psychosom Med*. 2004;66:749-56.
7. Weiss TW. Improvements in VA health services for women veterans. *Women Health*. 1995;23:1-12.
8. Turpin RS, Darcy LA, Weaver FM, Kruse K. Assessing health care delivery to male versus female veterans. *Women Health*. 1992;18:81-95.
9. Yano EM, Washington DL, Goldzweig C, Caffrey C, Turner C. The organization and delivery of women's health care in Department of Veterans Affairs medical center. *Women's Health Issues*. 2003;13:55-61.
10. Washington DL, Caffrey C, Goldzweig C, Simon B, Yano EM. Availability of comprehensive women's health care through Department of Veterans Affairs medical center. *Women's Health Issues*. 2003;13:50-4.
11. Kressin NR, Skinner K, Sullivan L, et al. Patient satisfaction with Department of Veterans Affairs health care: do women differ from men? *Mil Med*. 1999;164:283-8.
12. Miller PM, King LA, Wolfe J, King DW. Gender ideology, sensitivity, and knowledge: a model of gender awareness in VA health care. *Veterans Health Syst J*. 1999;4:27-30.
13. Bean-Mayberry B, Chang C, McNeil M, Hayes P, Scholle SH. Comprehensive care for women veterans: indicators of dual use of VA and non-VA providers. *J Am Med Women's Assoc*. 2004;59:192-7.
14. Schuler MP, Barclay AG, Harrison B, Larson P. Psychological services offered to female veterans. *J Clin Psychol*. 1986;42:668-75.
15. Kazis LE, Miller DR, Clark J, et al. Health-related quality of life in patients served by the Department of Veterans Affairs: results from the Veterans Health Study. *Arch Intern Med*. 1998;158:626-32.
16. Washington DL. Challenges to studying and delivering care to special populations: the example of women veterans. *J Rehabil Res Dev*. 2004;41:7-9.
17. Wolfe J, Stern A, Daley J, Zaslavsky A, Roper SF, Wilson K. Changing demographic characteristics of women veterans: results from a national sample. *Mil Med*. 2000;165:773-80.
18. Department of Veterans Affairs. Disabled veterans get health care priority from VA. Available at: <http://www1.va.gov/opa/pressrel/PressArtInternet.cfm?id=715>. Accessed June 24, 2005.

19. **Department of Veterans Affairs.** VA announces record budget, health care changes. Available at: <http://www1.va.gov/visns/visn03/newsletter/pr11703.asp>. Accessed June 24, 2005.
20. **Melnyk KAM.** Barriers: a critical review of recent literature. *Nurs Res.* 1988;37:196-201.
21. **Neri MT, Kroll T.** Understanding the consequences of access barriers to health care: experiences of adults with disabilities. *Disabil Rehabil.* 2003;25:85-96.
22. **Scheer J, Kroll T, Neri MT, Beatty P.** Access barriers for persons with disabilities: a consumer's perspective. *J Disabil Policy Stud.* 2003;13:221-30.
23. **Ouimette P, Wolfe J, Daley J, Gima K.** Use of VA health care services by women veterans: findings from a national sample. *Women Health.* 2003;38:77-91.
24. **Fiscella K, Franks P, Clancy CM, Doescher MP, Bantlin JS.** Does skepticism towards medical care predict mortality? *Med Care.* 1999;37:409-14.
25. **Rosenheck R, Stolar M.** Access to public mental health services: determinants of population coverage. *Med Care.* 1998;36:503-12.
26. **Holm CJ, Frank DI, Curtin J.** Health beliefs, health locus of control, and women's mammography behavior. *Cancer Nurs.* 1999;22:149-56.
27. **Salgado DM, Vogt DS, King LA, King DW.** Gender Awareness Inventory-VA: a measure of ideology, sensitivity, and knowledge related to women veteran's health care. *Sex Roles.* 2002;46:247-62.
28. **Vogt DS, Stone ER, Salgado DM, King LA, King DW, Savarese VW.** Gender awareness among Veterans Administration health care workers: existing strengths and areas for improvement. *Women Health.* 2001;34:65-83.
29. **Yeung RYT, Leung GM, McGhee SM, Johnston JM.** Waiting time and doctor shopping in a mixed medical economy. *Health Econ.* 2004;13:1137-44.
30. **Damron-Rodriguez J, White-Kazemipour W, Washington D, Villa VM, Dhanani S, Harada ND.** Accessibility and acceptability of the department of veteran affairs health care: diverse veterans' perspectives. *Mil Med.* 2004;169:243-50.
31. **Ware JE, Snow KK, Kosinski M, Gandek B.** SF-36 Health Survey: manual & interpretation, The Health Institute, New England Medical Center, Boston, 1993;3-13.
32. **Stern A, Wolfe J, Daley J, Zaslavsky A, Roper SF, Wilson K.** Changing demographic characteristics of women veterans: results from a national sample. *Mil Med.* 2000;165:773-80.
33. **STATA 7.0.** College Station, TX STATA Corporation, 1999.

Voices of Women Veterans (continued)

VETERAN IDENTITY

"It was difficult because I was a single mom. I know my family and friends respect what I did. I will have great stories to tell my children and grandchildren. I feel very proud. You get thanked quite frequently from elders for protecting our country. Not a lot of women could do it. It was very easy to get accepted for VA benefits."

"It was wonderful! I was given amazing responsibility at 22; I was stationed in exciting and exotic places, worked with great, dedicated people of varied backgrounds. I was one of the first 50 women on sea duty, and was always treated with respect and professionalism, even by the sailors who had never seen a woman officer. I was given every job I asked for, including many collateral duties above and beyond my primary ones. We only had 4-6 women officers with a crew of 45 male officers, and 1,000 sailors. I could write a book on how being a veteran has affected my life. I have learned about working with all kinds of people, seeking and accepting responsibility, making decisions, and setting and attaining high goals. I often draw on my experiences in my current work, and I fondly reminisce of great duty stations and good friends. I will tell others about it, particularly if an experience has bearing on my current work. As my current organization grows, I find that much of my military organization and communication skills are very useful! I have learned to adapt to stressful situations and communicate with so many different people."