# Patient Satisfaction in Women's Clinics Versus Traditional Primary Care Clinics in the Veterans Administration

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OBJECTIVE: To compare patient satisfaction in women's clinics (WCs) versus traditional primary care clinics (TCs).

DESIGN: Anonymous, cross-sectional mailed survey.

SETTING: Eight Department of Veterans Affairs (VA) medical centers in 3 states.

PATIENTS: A random sample of women stratified by site and enrollment in WC versus TC (total response rate = 61%).

MEASURES: Overall satisfaction and gender-specific satisfaction as measured by the Primary Care Satisfaction Survey for Women (PCSSW).

ANALYSIS: We dichotomized the satisfaction scores (excellent versus all other), and compared excellent satisfaction in WCs versus TCs using logistic regression, controlling for demographics, health status, health care use, and location.

RESULTS: Women enrolled in WCs were more likely than those in TCs to report excellent overall satisfaction (odds ratio, 1.42; 95% confidence interval, 1.00 to 2.02; P = .05). Multivariate models demonstrated that receipt of care in WCs was a significant positive predictor for all 5 satisfaction domains (i.e., getting care, privacy and comfort, communication, complete care, and follow-up care) with the gender-specific satisfaction instrument (PCSSW).

CONCLUSIONS: This study is the first to consistently show higher satisfaction in WCs versus TCs despite age and race differences and comparable health status. Since these WCs show better quality in terms of satisfaction, other quality indicators should be evaluated. If WCs reduce fragmentation and improve health care delivery, the model will be applicable in VA and non-VA outpatient settings.

KEY WORDS: patient satisfaction; primary health care; quality of health care; veterans; women.

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Women's concerns about outpatient care may differ from those of men in regard to content, 1

Received from the Center for Health Equity Research and Promotion, VA Pittsburgh Healthcare System (BAB-M, MAM, PMH); the Center for Research on Health Care, Division of General Medicine (BAB-M, C-CHC, MAM), and the Department of Psychiatry (SHS), University of Pittsburgh, Pittsburgh, Pa; the Kansas City VA Hospital (JW), Kansas City, Mo; and the Kansas University Medical Center (JW), Kansas City, Kan.

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Address correspondence and requests for reprints to Dr. Bean-Mayberry: Center for Health Equity Research and Promotion, VA Pittsburgh Healthcare System, University Drive C (130-U), Pittsburgh, PA 15240 (e-mail: bevanne.bean-mayberry@med.va.gov). comprehensiveness,<sup>2</sup> or communication within the patient–physician relationship.<sup>3–5</sup> In fact, evidence suggests that a greater percentage of women compared to men change physicians due to dissatisfaction.<sup>6</sup> In response to women's concerns about their health care, hospital-associated women's health centers have grown from 19% in 1990 to 42.5% in 2000.<sup>7</sup> These programs vary in their organization, ranging from comprehensive gender-specific primary care delivered by women's health specialists to strictly reproductive care for women.<sup>8</sup>

Despite the increasing numbers, few data demonstrate whether specialized women's health centers improve the quality of primary care for women. Two recent studies compared satisfaction, 1 aspect of quality, in specialized women's clinics (WCs) versus traditional primary care clinics (TCs)<sup>1.9</sup> and found similar ratings of overall satisfaction between patients in the 2 settings. While 1 study did find differences along items specific to patient-physician communication, <sup>1</sup> the findings did not impact overall outcomes. However, these studies were limited to a small number of academic practices in a single city serving primarily higher-income women.

In contrast, medical centers within the Department of Veterans Affairs (VA) offer the opportunity to compare WCs and TCs in multiple locations with a less affluent population. Since 1992, when the VA began encouraging the development of specialized women's health programs to address disparities for women veterans, <sup>10</sup> a majority (62%) of VA sites report a women's health program or center. 11 We initiated this study to evaluate patient satisfaction among women veterans in WCs versus TCs. On the basis of the concept that comprehensive centers or single systems with multispecialty services<sup>12</sup> provide higher satisfaction, we hypothesized that patient satisfaction would be higher in VA women's clinics. Our study attempted to address some of the methodological concerns discussed in previous studies. First, we used tools that would assess general and gender-specific domains of satisfaction. Second, we sampled patients from multiple sites covering a large geographical region. Some sites had a university affiliation and others did not. Third, we choose the VA to minimize selection bias. Assignment to VA clinics is done administratively, not by self-selection. While the process is not random, it is usually independent of patient preferences.

## **METHODS**

#### Setting

This study uses data from a 10-site survey of women veterans conducted in the VA integrated service network comprised of Pennsylvania, Delaware, and West Virginia. Clinics exist in the following locations: Altoona, Butler, Coatesville, Erie, Lebanon, Pittsburgh, Philadelphia, and Wilkes-Barre, all in Pennsylvania, as well as Clarksburg, West Virginia, and Wilmington, Delaware. Two sites (Butler and Clarksburg) were excluded from this analysis because they had no WC during the study period. The scope of services and staffing in each clinic varied. Of the sites included, 2 are located in urban areas and provide comprehensive, integrated internal medicine and gynecological facilities with allied health staff on site. The other sites are smaller and provide services ranging from primary care to focused gender-specific screening (e.g., pap smear, mammogram, or osteoporosis screening).

In general, women veterans are assigned to a clinic on the basis of the services available at their clinical site rather than patient preferences. At locations where a comprehensive WC is present, the VA administration assigns all women to the WC. At locations that may have a limited WC (i.e., screening clinic), patients are uniformly assigned to a TC and then are referred to the WC for gender-specific screening.

# **Study Population**

We used the National Patient Care Database (NPCD) maintained by the Austin Automation Center for the Veterans Health Administration. We drew our selected population from the Outpatient Care Files in the NPCD, with stratification by site and clinic stop code. We pulled all unique female veterans who attended 1 of the 10 VA medical centers in our regional area during the designated 12-month period from March 1, 1999, to March 1, 2000. We assigned women to priority groups by clinic visits.

Women who had at least 1 visit to a WC were assigned to the first group. Women who had at least 1 TC visit and no WC visits during the same period were in the comparison group. Some of the patients in the WC group may have also had a visit to another clinic during this period (e.g., traditional primary care, specialty clinic, or other). However, no women in the TC group had visits to a WC. From the sample of women who met inclusion criteria (i.e., veteran status, clinic enrollment, and outpatient visit during the designated time period), we selected a stratified random sample. In general, the target sample was 170 WC patients and 80 traditional primary care patients at each site. In sites that had less than 170 unique WC patients, we sampled all patients in the WC and oversampled in the primary care group to obtain a site total of 250. Institutional Review Board approval was obtained for each of the sites.

### **Procedures**

We used a 3-step mailing process modified from the total design method. <sup>13</sup> The initial mailing included: a cover letter from the regional network Director and principal investigator describing the study; the survey questionnaire; and a postage-paid return envelope. The initial packet was

followed at 1 week intervals by a reminder/thank you postcard and then by a repeat mailing of the survey and return envelope. Since the survey was anonymous, return envelopes were coded as to whether the patient was randomized from a WC or a TC. Completed surveys were scanned into an Access database using Teleform software (Cardiff Software, Inc., Vista, Calif).

Our random sample consisted of 2,315 female patients from 10 VA medical centers identified previously. We excluded 80 persons who were either deceased or had incomplete mailing addresses. Of the 2,235 surveys mailed, 74 were not deliverable. The final number of surveys assumed delivered was 2,161. Of this group, 1,321 anonymous surveys were completed and returned for an overall response rate of 61% (1,321/2,161). Further exclusions included the removal of 222 women who used the 2 sites without a comparison WC and the removal of 128 women who did not specify their VA clinic location. The analytic sample for this report was 971 respondents.

We used the VA administrative database to compare the demographics of all respondents (N=1,321) to the overall random sample because the survey was anonymous. In general, respondents were older (mean age 58.6 vs 52.1 years; P<.0001), more likely to be white (88.1% vs 83.6%; P=.0001), and more likely to report incomes above \$20,000 (38.6% vs 30.2%; P<.0001). The proportion of married women was similar between the randomized and respondent samples (34% vs 33.7%; NS).

## **MEASURES**

#### **Patient Satisfaction**

For the overall satisfaction rating, we used a modified single item from the VA National Survey of Ambulatory Care 14: "Overall, how would you rate the quality of care you received at the VA in the past 12 months?" The 5 response categories ranged from "poor" to "excellent." In addition, we included the draft version of the Primary Care Satisfaction Survey for Women (PCSSW) developed by researchers from the Federal Centers of Excellence in Women's Health. 15 The 34-item PCSSW was developed using focus groups of women from different demographic backgrounds, and the items constructed reflect the health care issues deemed important by women. 15 Twenty-nine of the items are divided into 5 domains identified by the focus groups as important for the health care needs of women: getting care; privacy and comfort; communication; complete care; and follow-up care. Patients rated each item on a 5-point scale from "poor" to "excellent." We created summary scores for each PCSSW domain by adding responses for all items. Persons rating all items of a domain as excellent were considered to have a perfect score. We calculated the summary scores for each domain and the related descriptive statistics. (Data not shown.) The internal consistency by Cronbach's  $\alpha$  for each domain was good and ranged from 0.77 to 0.96. 16 For 4 domains (getting care, privacy

and comfort, complete care, and follow-up care), only 1 missing item per respondent was allowed. For the communication domain, which had 10 items, 2 missing items per respondent were allowed.

#### **Health Care Use**

Questions were included to determine the patient's health care utilization patterns during the previous 12-month period. Patients were asked whether the regular provider was seen at the last clinic visit (yes/no). We also asked about the use of other VA providers (yes/no) and the use of any physician regularly outside the VA system (yes/no).

# **Demographics and Health**

Demographic data included age, race (white versus all other categories), marital status (married versus all other categories), level of education (high school, technical training beyond high school or some college, and college graduate), household income for 1999 (ordinal levels of \$10,000 were listed and then dichotomized to less than or equal to \$20,000 versus all other), and specific location of clinic (site). Overall health status was determined by a single-item question rated from "poor" to "excellent" that is widely used in the health services literature. <sup>17</sup>

# **ANALYSIS**

To compare women's clinics versus traditional primary care clinics by each covariate, we used the Student's t statistic for continuous variables and  $\chi^2$  for categorical variables. Multiple logistic regression models were used to evaluate patient satisfaction scores in WCs versus TCs while controlling for patient demographics, health status, health care use, and site with 7 dummy covariates. For overall satisfaction, we dichotomized responses to "excellent" versus all other. For the PCSSW domain scales, we compared patients with an excellent rating on all items (i.e., a perfect score) to all other categories and used logistic regression while controlling for the same covariates. From each model, we calculated the odds of a perfect score for each domain in a WC versus a traditional clinic. All results were considered significant if the associated P value was <.05. Data analyses were performed using SPSS, version 10 (SPSS, Inc., Chicago, Ill) and STATA, version 7 (Stata Corp., College Station, Tex).

We chose excellent satisfaction versus all other responses to apply the most stringent criteria for observing a difference. This methodology was based on the quality management and improvement recommendation that comparisons be done with best practices. <sup>18,19</sup> For completeness, we repeated the model using the less conservative measure of "very good" and "excellent" satisfaction versus all other response categories. Overall results were consistent with the initial analysis.

# **RESULTS**

# **Demographics and Health Status**

The analytic sample included 971 women, 61.7% from WCs and 38.3% from TCs (Table 1). Patients in WCs were significantly younger (mean age 55.5 vs 62.9 years; P < .001) and more likely to be nonwhite (15.5% WC vs 9.4% TC; P < .02). Most of the nonwhite women described themselves as black or African American (11.5% WC vs 6.7% TC). Marital status, educational status, income, and overall health did not differ between the 2 clinic types.

# **Health Care Use**

Patients in WCs were more likely to use only the VA system for their health care compared to patients in TCs. While similar proportions of women in each clinic had seen their regular provider at the most recent visit (79.3% WC vs 78.2% TC; NS), more patients in WCs had seen other VA providers (65.3% WC vs 54.0% TC; P < .001) during the same time frame and reported lower use of non-VA physicians on a regular basis (30.9% WC vs 52.4% TC; P < .001).

# **Bivariate Satisfaction Results**

We analyzed responses to 28 of 29 individual items on the PCSSW to identify questions that demonstrated significant differences between ratings in the 2 clinic

Table 1. Patient Characteristics by Clinic

	Women's Clinic	Traditional Clinic	
·	(N = 599)	(N = 372)	P Value
Mean age, y (SD)	55.5 (16.5)	62.9 (17.1)	<.001
18–39, %	20.4	11.7	
40-64, %	46.1	32.3	
≥65, %	33.5	56.0	
Race, %			
White	84.5	90.5	.02
Nonwhite, black	11.5	6.7	
Nonwhite, other	4.0	2.7	
Education, %			.633
≤High school	30.1	32.9	
Some college or	45.8	44.9	
technical training			
College graduate	24.1	22.3	
Married, %	31.7	36.3	.147
Income ≤20,000, %	61.1	64.3	.328
General health "very good" or	33.6	29.0	.141
"excellent", %			
Regular provider seen	79.3	78.2	.696
at last visit, %			
Use of other VA providers, %	65.3	54.0	<.001
Regular use of non-VA physician, %	30.9	52.4	<.001

VA, Veterans Affairs.

populations. The item on childcare accommodation, within the domain of getting care, was not analyzed because of patient misinterpretation and lack of applicability. On 19 of 28 remaining items, WC patients more frequently gave ratings of excellent than TC patients. None of the items had higher rates of excellent satisfaction in TC compared to WC (Table 2). Within the domain of getting care, questions on preference for a female provider and flexibility in scheduling an appointment had a greater percentage of patients with excellent satisfaction in the WCs. Within the domain of privacy and comfort, items related to patient dignity (e.g., chance to talk with my clothes on) and comfort (e.g., comfort during a gynecological exam) had highly significant differences between clinics. Under the communication domain. all items showed significant differences. These items reflect time allowed for talking and asking questions, sensitivity to patient issues (e.g., interest in mental health, sexual health, discussion of nontraditional therapies, increasing comfort with concerns, use of understandable language, explanation of tests, and sensitivity when answering questions), and the patient's overall confidence in her regular provider. For complete care, items that reflected a well-rounded visit (e.g.,

information on healthy living, care fits my age) as well as knowledge of women's health and disease prevention were rated significantly higher in WCs. Finally, in the domain of follow-up care, information on the next appointment needed was significantly different between clinics, while provision of test results or information on support groups and resources did not show any difference in ratings.

In bivariate comparisons of the 2 clinics, over one third of patients in WCs reported excellent overall satisfaction compared to traditional clinics (35.7% WC vs 26.8% TC; P=.005) (Table 3). Women's clinics had a significantly higher proportion with excellent ratings within the domains of complete care (13.5% WC vs 7.9% TC; P=.017) and communication (19.5% WC vs 12.2% TC; P=.008). For the other domains (e.g., getting care, privacy and comfort, and follow-up care), the unadjusted percentage with excellent ratings was similar between clinics.

#### Multivariate Satisfaction Results

In multivariate logistic regression analyses controlling for age, race, level of education, marital status, income,

Table 2. Excellent Satisfaction on Items in the PCSSW

Domain	Women's Clinic, % (N = 599)	Traditional Clinic, % (N = 372)	P Value
Getting care			
Courtesy of the receptionist or office staff	34.9	29.8	.113
Chance to see female provider if I prefer	43.7	28.9	<.001
Flexibility in scheduling appointment	34.3	25.8	.008
Informed about waiting time	16.0	13.3	.291
Privacy and comfort			
Privacy with receptionist	15.8	12.0	.123
Comfort in waiting room	20.1	19.2	.733
Chance to talk with my clothes on	38.3	27.5	.001
Comfort during a gynecological exam	50.1	32.6	<.001
Communication			
Amount of time to talk	38.6	26.9	<.001
Interest in mental health	40.9	26.1	<.001
Ability to increase comfort with my concerns	39.5	27.3	<.001
Chance to ask all my questions	40.9	28.3	<.001
Use language I understand	46.8	38.2	.012
Answer questions in a sensitive manner	43.0	33.4	.005
Discuss nontraditional therapies	32.6	22.6	.035
Comfort discussing sexual problems	36.7	25.6	.022
Explanation of tests	36.8	24.9	<.001
Overall confidence	37.1	29.3	.018
Complete care			
Knowledge of my medical history	31.5	25.4	.055
All tests at 1 visit	22.6	18.4	.155
Information on healthy living	27.1	18.7	.007
Care fits my age	34.5	20.6	<.001
Knowledge of women's health	43.7	31.2	<.001
Explains different options	31.9	25.7	.068
Focus on disease prevention	35.3	28.1	.043
Follow-up care			
Instructions on test results	25.7	21.9	.228
Information on next appointment needed	38.2	28.0	.002
Information/resources on women's health	23.9	17.9	.090

Table 3. Percent Excellent for All Items in a Domain and on Overall Satisfaction

Domain	Women's Clinic, %	Traditional Clinic, %	P Value
Getting care	10.0	9.8	.91
Privacy and comfort	10.4	7.9	.22
Communication	19.5	12.2	.008
Complete care	13.5	7.9	.017
Follow-up care	22.1	17.2	.078
Overall satisfaction with VA care	35.7	26.8	.005

VA, Veterans Affairs.

health status, recent visit with primary care provider, use of other VA providers, use of a regular non-VA physician, and site with 7 dummy covariates, female veterans who were seen in WCs were more likely to have excellent satisfaction compared to those seen in TCs; P=.05 (odds ratio [OR], 1.42; 95% confidence interval [95% CI], 1.00 to 2.02) (Table 4). Similarly, for every domain of the PCSSW, patients seen in the WC were significantly more likely to report a perfect satisfaction score: getting care (OR, 1.69; 95% CI, 1.14 to 2.49; P=.008); privacy and comfort (OR, 1.63; 95% CI, 1.11 to 2.39; P=.013); communication (OR, 1.66; 95% CI, 1.16 to 2.37; P=.006); complete care (OR, 1.69; 95% CI, 1.17 to 2.43; P=.005); and follow-up care (OR, 1.70; 95% CI, 1.16 to 2.47; P=.006).

As in other studies, increasing age, better health status, and recent visit with a primary care provider were all associated with higher overall satisfaction, while higher education was associated with lower satisfaction. Additionally, recently seeing your regular provider and better health status were significantly associated with a perfect score across all 5 satisfaction domains. While higher education had a negative influence on the domain of getting care, it did not show any influence on the other 4 satisfaction domains.

#### **DISCUSSION**

Women veterans who receive care in specialized women's clinics are more satisfied with their care than their counterparts in traditional primary care clinics. This difference remained despite WCs having more young and minority patients who tend to rate satisfaction lower in other VA studies. These findings provide evidence that vulnerable populations with health disparities may be better served in gender-specific VA settings. Unlike the data from WC settings, where women often choose a site because of their interest in women's health, veteran women do not come to the VA because they are seeking a female provider or "female-oriented" setting. They attend the VA because they have diagnoses related to their military experience or simply because they qualify for VA care.

While the assignment into a WC is determined by the VA administration, the year in which a WC is established

rable 4. Odds of Excellent Overall Satisfaction or Perfect Score on a Satisfaction Domain Adjusted OR (95% CI)

	Overal	Overall Satisfaction	9	Getting Care	Privacy	Privacy and Comfort	Com	Communication	Com	Complete Care	Pollo	Follow-up Care
	Adjusted		Adiusted	_	Adjusted		Adjusted		Adiusted		Adiusted	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	S.	95% CI
Women's clinic	1.42	(1.00 to 2.02)	1.69	(1.14  to  2.49)	1.63	(1.11  to  2.39)	1.66	(1.16  to  2.37)	1.69	(1.17  to  2.43)	1.70	(1.16  to  2.47)
Age 40–64 y	1.89	(1.15 to 3.09)	1.32	(0.79  to  2.21)	1.34	(0.80  to  2.24)	1.27	(0.80 to 2.03)	1.35	(0.84  to  2.17)	0.95	(0.58  to  1.54)
Age 65+ y	1.73	(1.03 to 2.90)	1.18	(0.69 to 2.03)	1.37	(0.80  to  2.34)	1.24	(0.75  to  2.06)	1.14	(0.69 to 1.88)	1.08	(0.64  to  1.80)
Race, white	1.15	(0.67 to 2.00)	1.29	(0.71  to  2.34)	1.36	(0.75  to  2.45)	0.94	(0.55 to 1.60)	1.08	(0.63 to 1.82)	0.82	(0.48  to  1.41)
Married	0.89	(0.62 to 1.28)	0.78	(0.53 to 1.16)	6.0	(0.61 to 1.33)	06.0	(0.63  to  1.30)	0.75	(0.52 to 1.09)	0.75	(0.51  to  1.11)
Income >\$20,000	1.29	(0.88 to 1.88)	0.98	(0.65 to 1.48)	8.0	(0.53  to  1.20)	1.42	(0.97  to  2.10)	1.23	(0.83 to 1.81)	1.43	(0.96  to  2.12)
Some college or	0.80	(0.55 to 1.16)	0.94	(0.64  to  1.39)	0.98	(0.67  to  1.45)	1.07	(0.73  to  1.55)	0.88	(0.60 to 1.28)	96.0	(0.65  to  1.42)
technical training												
College graduate	0.55	(0.34 to 0.89)	0.51	(0.30 to 0.88)	0.61	(0.36  to  1.02)	0.69	(0.43  to  1.11)	0.75	(0.47  to  1.21)	0.77	(0.47  to  1.26)
Overall health very	1.87	(1.33 to 2.63)	1.52	(1.05 to 2.20)	1.57	(1.09 to 2.27)	2.07	(1.46  to  2.94)	1.86	(1.31  to  2.62)	1.95	(1.37  to  2.77)
good or excellent												
Regular provider seen	2.54	(1.60 to 4.04)	2.01	(1.23 to 3.27)	1.71	(1.07 to 2.72)	2.34	(1.52 to 3.59)	2.88	(1.79 to 4.65)	3.54	(2.08 to 6.03)
Use other VA providers	0.90	(0.65 to 1.26)	0.85	(0.60 to 1.22)	0.68	(0.48  to  0.96)	1.09	(0.78  to  1.53)	0.98	(0.70  to  1.37)	0.79	(0.56 to 1.11)
Regular use of	0.93	(0.66 to 1.32)	0.95	(0.65 to 1.39)	1.12	(0.77  to  1.63)	1.07	(0.75  to  1.53)	1.16	(0.82  to  1.65)	1.39	(0.97  to  2.00)
non-VA physician												

OR, odds ratio; CI, confidence interval; VA, Veterans Affairs.

influences assignment. Nationwide, nearly every VA women's clinic was established after 1992, and for the region studied, most were established after 1995. These recent openings indicate that patient–provider relationships in WCs could have a maximum duration of 4 years from clinic opening to the study period. Additionally, women veterans who were already receiving care could choose to remain with the traditional primary care provider to maintain continuity instead of switching to a WC. The extent to which this happened across sites is unknown. Thus, veteran women who use the WCs have a shorter period for patient–provider relationships and are more likely to be younger and nonwhite. These recent events make the differences we observed more impressive.

The significance across the multiple satisfaction domains of the PCSSW is important. The PCSSW domains contain items that are important to women<sup>6</sup> and general ambulatory populations<sup>21</sup> even when overall satisfaction does not differ. Women experience communication problems and provider apathy toward psychological issues as causes of dissatisfaction<sup>6,21,22</sup>. However, a prior metaanalysis of satisfaction studies<sup>23</sup> documents that most satisfaction surveys do not include attention to psychosocial issues in their instruments. These findings indicate that certain gender-specific aspects of care and satisfaction are neither considered nor examined in the "generic" satisfaction surveys. We believe that this may be an important factor in our satisfaction results in VA women's clinics. Generic satisfaction tools may limit our ability to capture differences. Because the PCSSW targets issues that fit 1 of the following 3 areas: 1) female-only items; 2) new areas of specific interest to women; and 3) new approaches to areas previously addressed in satisfaction studies, it identifies specific differences in treatment settings even when overall satisfaction scores are skewed. Such issues include comfort during gynecological exams, talking with your clothes on, and the perception of provider sensitivity as well as time to talk, ask questions, and receive explanations. These items also target a range of services including gynecology, mental health, age-related health, sexual health, and disease prevention. The data indicate that further work is needed to understand structure and services in women's clinics. Currently, work is in progress among the federally funded Centers of Excellence in Women's Health to refine this initial woman-specific instrument. The results suggest that such a tool is valuable for evaluating outpatient satisfaction and identifying items that help us target specific clinic or patient issues.

# **Study Limitations**

Although our study population is diverse by age, race, education, and representation within lower income levels, we cannot generalize the results beyond our region or the VA clinic setting. This is one of several limitations.

First, clinic setting is a gross measure of a patient's experience. It does not capture the structural details of clinic environments. Our study focuses on patient characteristics that influence satisfaction and omits provider and system characteristics that may impact satisfaction. Second, we were unable to characterize the specialty of the regular provider or the services he/she provides. These issues may be important factors for satisfaction. Third, we also know that at some locations, providers may work in both clinic settings. The proportion and frequency of this event is unknown. However, these occurrences should bias the results toward the null. Fourth, data on health care behaviors were limited. Other items that influence satisfaction include veteran insurance status and use of non-VA facilities.<sup>24</sup> Fifth, we did not compare female veterans to male veterans or to civilian women. Potential differences in demographics may limit comparisons to these other populations.

#### **IMPLICATIONS**

If multiple disciplines of medical care can be organized from 1 site efficiently, the potential for fragmentation is reduced while comprehensiveness, coordination, and continuity is increased. If these organizational changes influence patient perceptions of care as well as patient health outcomes, then we have a model for improved service delivery and quality.

Our findings suggest several avenues for future research. First, more information is needed about the structure, organization, and practices of women's clinics in order to determine what components improve women's satisfaction with primary care. If these factors have key influences in general populations as well as vulnerable VA populations (e.g., women, minorities, or persons with permanent disabilities or mental illness), the information will apply to VA and non-VA health systems. Second, if patient satisfaction is high, other quality measures must be evaluated. The literature suggests that higher satisfaction will influence other aspects of care. 25,26 These data will be important both for the VA, because the percentage of women veterans is projected to double by 2010, 10 and for the civilian market as it evaluates more efficient ways to deliver quality health care to the discerning consumer.

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