Delivery of Primary Care to Women

Do Women's Health Centers Do It Better?

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OBJECTIVE: Women's health centers have been increasing in number but remain relatively unstudied. We examined patient expectations and quality of care at a hospital-based women's health center compared with those at a general medicine clinic.

DESIGN: Cross-sectional survey.

SETTING: University hospital-affiliated women's health and general internal medicine clinics.

PARTICIPANTS: An age-stratified random sample of 2,000 women over 18 years of age with at least two visits to either clinic in the prior 24 months. We confined the analysis to 706 women respondents who identified themselves as primary care patients of either clinic.

MEASUREMENTS AND MAIN RESULTS: Personal characteristics, health care utilization, preferences and expectations for care, receipt of preventive services, and satisfaction with provider and clinic were assessed for all respondents. Patients obtaining care at the general internal medicine clinic were older and had more chronic diseases and functional limitations than patients receiving care at the women's health center. Women's health center users ($n = 357$) were more likely than general medicine clinic users ($n = 349$) to prefer a female provider (57% vs 32%, $p = .0001$) and to have sought care at the clinic because of its focus on women's health (49% vs 17%, $p = .0001$). After adjusting for age and self-assessed health status, women's health center users were significantly more likely to report having had mammography (odds ratio [OR] 4.0, 95% confidence interval [CI] 1.1, 15.2) and cholesterol screening (OR 1.6, 95% CI 1.0, 2.6) but significantly less likely to report having undergone flexible sigmoidoscopy (OR 0.5, 95% CI 0.3, 0.9). There were no significant differences between the clinics on receipt of counseling about hormone replacement therapy or receipt of Pap smear, or in satisfaction.

CONCLUSIONS: These results suggest that, at least in this setting, women's health centers provide care to younger women and those with fewer chronic medical conditions and may meet a market demand. While the quality of gender-specific

preventive care may be modestly better in women's health centers, the quality of general preventive care may be better in general medical clinics.

KEY WORDS: women's health; quality of health care; primary health care.

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The concept of women's health centers dates to the women's health movement of the 1960s and 1970s. Such centers, which provide outpatient clinical services designed for women, have grown in number over the past two decades.¹ The American Hospital Association's 1992 Annual Survey identified 23.6% ($n = 1,394$) of its member hospitals as having a women's health center.² A national survey conducted by the Commonwealth Fund in 1993 estimated that there were 3,600 such centers in the United States, serving approximately 14.5 million women. Roughly 7.5 million women relied on these centers as their usual source of care.³ Despite their increasing role in the delivery of primary health care to women, women's health centers and the care they provide remain essentially unstudied. We sought to examine how the characteristics, preferences, and expectations of women receiving routine health care at a women's health center compared with those of women receiving their usual care in a general internal medicine clinic at the same medical center and to investigate whether the quality of preventive care provided to women differed between the two settings. We hypothesized that given its emphasis on gender-specific care and its staffing by both internists and gynecologists, the women's health center might perform significantly better on measures of quality specific to women's health but comparably on measures of quality for major medical conditions in adults. Although both clinics have a high proportion of patients who seek consultation and second opinions through the university, we sought specifically to examine those women who identified themselves as receiving their primary care at either clinic.

METHODS

Setting

The study was conducted with patients of the University of Washington Medical Center's women's health and general internal medicine clinics. Both clinics provide outpatient primary care. They are located in close proximity to one another, on the same floor of the University's

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ambulatory care building. A small number of providers see patients in both clinics. During the study period, approximately 4% of all patient visits at the women's health center and 15% of those at the general medicine center were made to a provider who worked at both clinics.

The women's health center, opened in 1995, provides ambulatory services to adult women in a multidisciplinary team setting. Interest on the part of several hospital departments in improving service to women was the predominant motivator behind the center's establishment. The needs of potential consumers and the perspectives of the specialists involved in delivery of health care to women were studied through focus group methodology during the planning stages. The main concern was to ensure a combination of services that would provide excellent access to primary care, general gynecology, and other specialty services commonly used by women, such as mammography, incontinence care, and osteoporosis and menopause consultation. The resulting facility reflects both consumer concerns and provider viewpoints.

The center emphasizes delivery of primary care, with a focus on health education and preventive care, a team approach, and patient participation in health care decisions. Staff teamwork and job satisfaction are core elements of the center's philosophy. The center is staffed by both general internists and gynecologists and by male as well as female providers. Approximately 40% of clinical services are gynecologic, 40% is primary care delivered by general internists and nurse practitioners, and the remainder is made up of other specialties such as breast health and urology. A nutritionist offers dietary counseling and weight management, and a social worker facilitates access to psychosocial services. Regular team meetings allow joint problem solving. Each provider works in close conjunction with a registered nurse who manages telephone contacts with patients and facilitates follow-up of medical issues.⁴ Providers who have worked in both clinics have observed several features of the women's health center that distinguish it from the general medicine clinic: (1) staff tend to have a strong interest in women's health; (2) informal interactions of a consultative nature occur frequently between providers of different specialties as they work alongside one another; and (3) patient educational materials on women's health issues are readily available (J. G. Elmore, personal communication).

Subjects

Methods for recruitment, informed consent, and survey administration were approved by the Institutional Review Board at the University of Washington. We used an age-stratified random sampling design to select 2,000 women from the University of Washington's Medical Information System who met our eligibility criteria: age over 18 years, and at least two visits to one of the study clinics within the previous 24 months. This sampling method was chosen to ensure inclusion of roughly equal numbers

of subjects in three age categories (18–49, 50–65, and over 65 years) that were felt to be relevant for assessments of quality.

Letters introducing the study were mailed to all selected women. Of these, 112 declined participation, for the following reasons: 12 were deceased, 5 were disabled, 2 had language or hearing problems, 11 felt they had had too few visits to complete the survey comfortably, and 88 did not specify a reason. In addition, 14 could not be reached by U.S. mail, 28 were mailed duplicate surveys because they had met eligibility criteria for both clinics, and for one identification number there was no name matched. Of the 1,839 remaining women, 1,020 (55.5% response rate overall, with rates by clinic of 48.9% for general medicine patients and 62.2% for women's health patients) returned the survey. Four returned surveys were deleted from the analysis because they were very incomplete. Thus, usable responses were received from 1,016 women. Most results compare the 357 women's clinic patients and the 349 general medicine clinic patients who identified their respective clinic as their primary care source.

Data Collection Method

The mailed survey was implemented according to the Total Design Method,⁵ with an advance letter introducing the study mailed to all recipients 2 weeks prior to the mailing of the first questionnaire with cover letter, a postcard reminder mailed out to all participants 1 week after the first questionnaire, and a replacement survey with cover letter mailed to nonrespondents 4 weeks after the first survey mailing date. Addresses were printed directly on the envelopes rather than on labels. No financial incentive was provided. A business return envelope addressed to the University of Washington outpatient clinic was included. All surveys carried an identification number used for tracking purposes only.

Survey Instrument

The questionnaire addressed four content areas: (1) patient characteristics including demographic characteristics, medical conditions, and self-assessed health and functional status; (2) preferences and expectations for care; (3) health care utilization; and (4) quality of care, as reflected in receipt of preventive services, shared decision making, satisfaction with primary care provider, and satisfaction with care at the clinic. Individual items for each content area were identified from previous questionnaires^{6,7} (T. S. Inui, personal communication; R. A. Deyo, unpublished data) for patient characteristics, process measures of quality of care, satisfaction with provider, and shared decision making. Items pertaining to preferences, expectations, utilization, and satisfaction with clinic were drafted by one of us (EAP) and revised based on review and critique by colleagues. The

survey was pretested with 20 established patients of the women's health center, modified on the basis of responses to five open-ended questions, retested with an additional 10 patients, and again modified to its final form, which contained a total of 40 questions. The majority of questions were found to be comprehensible and easily answered at the time of the first pretesting.

Description of Variables

Subjects were identified as primary care patients of either clinic by the question, "Is there one of the clinics that you consider to be the place you usually go for your health care needs?" Women were asked about history of physical and sexual abuse and presence of common medical conditions. Self-assessed health was obtained from response to the question, "In general, would you say your health is poor, fair, good, very good, or excellent?" derived from the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36).⁸ Functional status was based on responses to the SF-36 questions, "Do you have difficulty bathing or dressing without help?" and "Do you have difficulty climbing one flight of stairs?"⁸

Clinic utilization was based on the question, "How many visits have you had with (your regular health care provider) in the past 12 months?" Preferences were assessed from affirmative responses to the items, "I chose to get care at the clinic because I wanted a health care setting focusing on women's health" and "I prefer to see a female for my health care needs." Expectations for care were based on the open-ended question, "Please describe what you were expecting or looking for when you first came to the . . . clinic. . ."

Women were asked about receipt of preventive services, including counseling about hormone replacement therapy, breast cancer screening with mammography, cervical cancer screening with Pap smear, cholesterol screening, and colon cancer screening with flexible sigmoidoscopy. We evaluated delivery of each preventive service only for the subgroup of patients for whom the service was applicable, according to current recommendations of the United States Preventive Services Task Force (USPSTF).⁹ For example, the USPSTF recommends that all perimenopausal and postmenopausal women receive counseling about the potential risks and benefits of hormone replacement therapy. We therefore selected all women who answered either "periods have become infrequent and/or irregular" or "periods have stopped completely" to our survey question about menstrual pattern. When appropriate, responses to questions on screening (i.e., for mammography, Pap smear, cholesterol screening, and flexible sigmoidoscopy) were dichotomized to represent receipt of the test within a specific recommended screening interval (e.g., mammography within the last 2 years).

Satisfaction with current provider and belief that shared decision making occurs with that provider were

evaluated with the questions, "Thinking about the doctor or nurse practitioner you have seen most often, how would you rate him/her on overall care?" and "I am satisfied that my doctor takes my opinion into account when decisions are made about my health care." Satisfaction with clinic was assessed with the question, "Do you feel that your expectations for care at the clinic were met?"

Statistical Analysis

Respondents and nonrespondents were compared on age, race, health insurance, health care utilization, and native language using administrative data collected by the clinics; proportions and χ^2 were used for categorical variables, and means and Student's *t* statistics for continuous variables. The same tests were used to assess the statistical significance of differences between the clinic populations identified through the survey data collected, including differences in demographic characteristics, comorbidities, self-assessed health status and functional status, health care preferences, health care utilization, receipt of preventive services, shared decision making, and satisfaction with provider. Differences in expectations for care and satisfaction with care by clinic were compared in a qualitative fashion, by examining words most frequently used by respondents to describe their expectations. Direct rate standardization was used to obtain clinic-specific performance rates for recommended preventive services, adjusted for patient age group and self-reported health status, using the full study sample as the standard population. The statistical significance of clinic differences on these measures was obtained from logistic regression models that included the same covariates. Satisfaction with current clinic provider was analyzed using multiple linear regression adjusting for patient characteristics that in previous studies have been shown to be associated with ratings of care received: age, education, race, and health status.¹⁰ The occurrence of shared decision making with current provider was analyzed using logistic regression adjusting for the same four variables. Data analyses were carried out using SPSS, version 7.0, and STATA, version 5.0.

RESULTS

Women who responded to the survey ($n = 1,016$) were significantly older than women who did not respond ($n = 819$) (mean age [SD] of respondents = 57.4 [15.9] years vs 53.5 [18.6] years, $p = .0001$), more likely to be white (89.5% white vs 81.8% non-white, $p = .0001$), and more likely to be recipients of Medicare (32.5% vs 27.9%) or to have some other form of health insurance (1.5% uninsured vs 5.3%, $p = .0001$). There were no significant differences between respondents and nonrespondents in the average number of clinic visits over the 2-year period (5.6

Table 1. Characteristics of Women by Clinic

Characteristic	Women's Health (n = 357)	General Medicine (n = 349)	p Value*
Mean age (SD), y	53.8 (17.1)	58.4 (16.6)	.0001
White race, %	87.9	85.9	.4
Occupation, %			.04
Retired or disabled	63.7	75.3	
Homemaker	20.9	15.7	
Student	4.4	1.5	
College graduate, %	63.3	55.0	.1
Self-assessed health status excellent, %	15.2	9.2	.008
Difficulty bathing/dressing, %	1.7	7.2	.0001
Difficulty climbing one flight, %	9.6	20.7	.0001
History of sexual abuse, %	15.9	12.0	.2
Medical conditions, %			
Hypertension	21.6	25.3	.0001
Diabetes	3.4	7.0	.03
Stroke	0.8	3.8	.01
Chronic pain	19.3	27.2	.01
More than 2 clinic visits in last year, %	37.5	54.2	.0001
Eligible for preventive screening test, %			
Hormone replacement counseling	39.5	39.5	
Mammogram	37.8	35.2	
Pap smear	33.1	31.8	
Cholesterol screening	40.6	38.4	
Flexible sigmoidoscopy	37.5	36.0	

* χ^2 calculated from all categories of the variable; selected categories shown.

[4.6] visits vs 5.3 [4.5] visits, $p = .1$) or in primary language spoken (96.8% English vs 93.1%, $p = .1$).

Among the respondents who identified themselves as primary care patients of the women's health center ($n = 357$) or the general medicine clinic ($n = 349$), general medicine patients were significantly older (average age, 58.4 years vs 53.8 years for women's health patients, $p = .0001$) and more likely to be retired or disabled, while women's health patients were more likely to be homemakers or students (Table 1). A larger proportion of women's health center patients rated their health as excellent. A larger proportion of general medicine patients reported difficulty with bathing and with climbing one flight of stairs. General medicine patients also were more likely to have hypertension, diabetes, cerebrovascular disease, and chronic pain. There were no significant differences in race, education, and history of sexual abuse (Table 1), or presence of other medical conditions (data not shown), including depression, incontinence, anxiety, and cardiovascular disease.

General medicine patients reported having made more clinic visits in the prior 12 months than women's health patients (2.7 visits vs 2.4, $p = .0001$). Women's

health patients were more likely to have sought care at that location because they were looking for a clinic focused on women's health (49% vs 17%, $p = .0001$). Women's health patients were also more likely to report preferring a female as their primary care provider (57% vs 32%, $p = .0001$) and to actually have a female provider (79% vs 48%, $p = .0001$) (Table 2).

Despite a common perception among providers that expectations were higher among patients seeking care at the women's health center, similar and predictable themes were identified when examining responses to the open-ended question, "What were you expecting, or looking for, when you first came to the clinic?" Statements generally referred to either provider characteristics or clinic atmosphere. Words and phrases most frequently used by participants to describe their expectations regarding their provider were "caring," "competent," "thorough," "trustworthy," "collaborative," "a good listener," "someone who would take me seriously," and "interested in the whole person." Words most frequently used to describe expectations about the clinic atmosphere were "warm," "comfortable," "personal," and "friendly."

Table 2. Preferences for Care

Preference	Women's Health, % (n = 357)	General Medicine, % (n = 349)	p Value
Prefer clinic for women	49.0	16.5	.0001
Prefer female provider	57.1	32.4	.0001
Have female provider	78.5	48.4	.0001

Table 3. Delivery of Preventive Services by Clinic: Unadjusted Comparisons

Preventive Service	Proportion Receiving Service	OR (95% CI) for Clinic Effect*
Hormone replacement therapy counseling for peri- and postmenopausal women		
Women's health	81.4	1.6 (0.9, 2.9)
General medicine	73.0	1.0
Mammogram within last 2 years for women aged 50–69 y		
Women's health	97.8	4.8 (1.3, 17.3)
General medicine	90.2	1.0
Pap smear within last 3 y for nonhysterectomized women aged 18–65 y		
Women's health	97.8	1.6 (0.4, 5.9)
General medicine	95.6	1.0
Cholesterol level within past 12 mo for women aged 45–65 y		
Women's health	62.1	1.5 (0.9, 2.4)
General medicine	52.5	1.0
Flexible sigmoidoscopy within last 5 y for women over age 50 y		
Women's health	37.3	0.6 (0.4, 0.9)
General medicine	50.8	1.0

*OR indicates odds ratio; CI, confidence interval.

Process measures of quality of care covered both gender-specific and non-gender-specific screening interventions and were based on domains developed by the National Committee for Quality Assurance (NCQA) Health Plan Employer Data and Information Set (HEDIS®), version 3.0.¹¹ We found that the proportions of subjects reporting receipt of preventive services was in excess of 90% at both clinics for breast cancer and cervical cancer screening and slightly lower for hormone replacement counseling, cholesterol screening, and colon cancer screening (data not shown). All of the gender-specific comparisons slightly

avored the women's health center in both unadjusted and adjusted analyses (Tables 3 and 4). After selection of the eligible subgroup for each analysis and adjustment for age and self-assessed health status, we found that patients of the women's health center were significantly more likely to report that they had had mammography. Although proportions and odds ratios for hormone replacement counseling and cervical cancer screening also favored the women's health center, these differences were not statistically significant. On non-gender-specific screening interventions, women's health center users were significantly

Table 4. Delivery of Preventive Services by Clinic, Adjusted for Age and Health Status

Preventive Service	Adjusted OR (95% CI) for Clinic Effect*
Hormone replacement therapy counseling for peri- and postmenopausal women	
Women's health	1.3 (0.7, 2.4)
General medicine	1.0
Mammogram within last 2 y for women aged 50–69 y	
Women's health	4.0 (1.1, 15.2)
General medicine	1.0
Pap smear within last 3 y for nonhysterectomized women aged 18–65 y	
Women's health	1.3 (0.3, 4.8)
General medicine	1.0
Cholesterol level within past 12 mo for women aged 45–65 y	
Women's health	1.6 (1.0, 2.6)
General medicine	1.0
Flexible sigmoidoscopy within last 5 y for women over age 50 y	
Women's health	0.5 (0.3, 0.9)
General medicine	1.0

*All logistic models adjusted for age and health status. OR indicates odds ratio; CI, confidence interval.

more likely to report having had cholesterol screening but significantly less likely to report having undergone flexible sigmoidoscopy.

Hypothesizing that the lower rate of colon cancer screening at the women's health center might be explained by that clinic's provider mix of gynecologists and internists (with the general medicine clinic staffed exclusively by internists), we compared the proportions of internist's patients at each clinic who had received flexible sigmoidoscopy. We found that this difference was no longer statistically significant, although proportions still favored the general medicine clinic (55% vs 38%, $p = .13$).

To explore the effect of provider gender on preventive care, we examined delivery of the three gender-specific preventive services by provider gender. Although the proportions of female providers who discussed hormone replacement therapy and performed breast and cervical cancer screening were slightly higher, these differences were not statistically significant (hormone replacement therapy discussion by 79% of female providers vs 77% of male providers, $p = .7$; breast cancer screening by 97% of female providers vs 92% of male providers, $p = .1$; cervical cancer screening by 97% of female providers vs 94% of male providers, $p = .3$).

Satisfaction with overall care received from the primary care provider was high in both clinics, with 70% of women's health patients and 72% of general medicine patients reporting their level of satisfaction as excellent ($p = .5$). A high proportion of patients at both clinics reported that shared decision making between patient and provider occurred (91% of women's health and 93% of general medicine patients, $p = .1$). There were no significant differences between the clinic populations in adjusted analyses in satisfaction with current primary care provider ($p = .9$) or in the probability of endorsing the statement that shared decision making occurred (for women's health center, odds ratio [OR] 0.70; 95% confidence interval [CI] 0.39, 1.26). The majority of patients from both clinics felt that their expectations for care were being met. Suboptimal access emerged as a major theme from the comments of women at both clinics who felt dissatisfied with care. Problems most frequently cited included (1) not being able to get an appointment as soon as desired (2) long waits in the waiting room before getting to see the provider, (3) not being able to see the same provider on return visits, and (4) long delays in having calls returned.

DISCUSSION

We found through this cross-sectional survey that the women's health center appeared to be serving a market need for that segment of the patient population that preferred a women-focused environment and a female primary care provider. Other studies have documented similar preferences in other settings that also provided health care exclusively to women.^{12,13} We also found that despite age-stratified sampling, patients seeking care at the women's health center

were younger and had less chronic illness and physical disability. The women's health center appeared to perform significantly better on mammography and modestly (though not significantly) better on other gender-specific measures. On non-gender-specific measures, the performance of the women's health center was varied—while doing somewhat better on cholesterol screening, it performed significantly less well than the general medicine clinic on colon cancer screening. The majority of patients appeared satisfied with care received, and no clear differences in satisfaction between the clinics were identified.

Our study extends previous, purely descriptive research on women's health centers by attempting to evaluate the quality of care delivered to women in such an environment relative to a more traditional setting. The performance on preventive care at both the women's health center and the general medicine clinic was high, exceeding national averages as reported by the Center for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS), a continuous surveillance system that collects information about modifiable risk factors for chronic diseases and other causes of death. The BRFSS data, which are based on self-report, indicated a national rate of 68% for breast cancer screening, 85% for cervical cancer screening, 37% for flexible sigmoidoscopy, and 65% for cholesterol screening.¹⁴ Recently published studies continue to provide evidence of widespread underutilization of recommended screening procedures.¹⁵⁻¹⁷ This difference between the clinics we studied and the situation nationally may be related to the emphasis on and teaching of preventive care in this university setting, which may increase the likelihood that preventive care would actually be delivered. Screening performance in our study was also somewhat higher than that reported by other investigators who have examined delivery of preventive services as determined by patient self-report: rates of breast and cervical cancer screening were both roughly 50%; rate of colon cancer screening with flexible sigmoidoscopy, 33%; and rate of cholesterol screening, approximately 50%.¹⁸⁻²⁰ Participants in these studies differed from those in our study in that they tended to be low-income or minority; these differences could account for the variation in self-reported rates of screening, as socioeconomically disadvantaged individuals and individuals of certain ethnic subgroups have decreased access to health care and undergo less screening.²¹⁻²⁴

In this setting, provider gender had little association with processes of care. Our finding contrasts with that of other studies that have found higher rates of breast and cervical cancer screening for patients of female providers.^{25,26} One explanation for our result is that the physical proximity of the general medicine clinic and the women's health center would tend to heighten awareness about delivery of gender-specific health care interventions.

Several limitations deserve mention. First, the two clinics coexist on the same floor of the same building at the university, and a small number of providers practice in both clinics. Moreover, providers from the two clinics attend many of the same teaching conferences. Thus, a

transfer of knowledge and practice habits across clinics may diminish practice variation between them and explain why we found similar rates of preventive care interventions and patient satisfaction.

Second, given our overall response rate, those who were willing to participate may have differed from nonparticipants. Our comparison of respondents and nonrespondents indicated that respondents tended to be older, insured, and white, characteristics that would predict high participation in screening. Individuals who respond to mailed surveys also tend to be better educated and have a particular interest in the survey's subject matter.²⁷ We were able to control for education but not for interest in health matters. Thus, because participation in preventive measures is also likely to be influenced by interest in health matters, it is possible that the estimates of preventive care delivery found in this study overestimate the actual rates of screening for this population.

Our response rate varied somewhat by clinic, with fewer general medicine patients responding. The lower response rate from that clinic could be because patients of that clinic were less interested in the survey's subject matter or more likely to have switched to a different clinic. The lower response rate for the general medicine clinic might upwardly bias the actual participation rates for the preventive care measures at that clinic to a greater degree than for the women's health clinic.

Third, although our sampling strategy of including only women who had had at least two visits to one of the clinics within the prior 2 years would tend to minimize recall bias, women were responding to screening events that had occurred prior to the study. This could account for some of the differences observed between the clinics, particularly if more women at one clinic had difficulty with memory. We sampled using age stratification to ensure equal numbers of older women, the subgroup most likely to have cognitive dysfunction, but did not specifically ask about memory difficulty.

Fourth, we considered a 1.5-fold difference between the clinics in the likelihood of being screened to be clinically significant; our ability to detect such a difference may have been limited by small numbers of respondents who were eligible for certain preventive screening measures.

Fifth, the generalizability of our results may be limited by our having studied two clinics that are hospital-based and serve predominantly well-educated, white women.

Finally, the accuracy of patient reports of various services could not be assessed because chart reviews were not performed. However, evidence suggests that patients can provide some types of information (e.g., whether certain tests were ordered, medications prescribed, and treatments recommended) as accurately as other sources of information often used in quality assessment, and may actually augment these traditional sources.^{28,29}

In conclusion, at least in this setting, the women's health center appears to be meeting a preference expressed by some women for receiving health care in an environment

designed specifically for women and staffed mostly by women providers. While the quality of gender-specific preventive care may be modestly better in women's health centers, the quality of general preventive care may be better in general medical clinics.

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