

Patient and Provider Satisfaction with Medical Care

John H. Kurata, PhD, MPH; Aki N. Nogawa, MS; David M. Phillips, MD; Sharon Hoffman, RN; and Merrill N. Werblun, MD

San Bernardino, Los Angeles, and Irvine, California

Background. This study compares patient and provider satisfaction with medical care and waiting time in a large family medicine residency program. Few published studies have dealt with both patient and provider perceptions.

Methods. Telephone interviews were conducted with 156 adult, English-speaking patients who were randomly selected from daily appointment schedules. The patients were asked to rate their satisfaction with 10 aspects of medical care and to estimate the length of time they waited to see their physicians. Sixty-five family health care providers responded to the same survey items through a self-administered questionnaire.

Results. In general, 97% of patients and 89% of providers were satisfied with the overall medical care provided at the family health center. Approximately 8% of

patients and 22% of providers were dissatisfied with waiting time, and 11% of patients and nearly 60% of providers were dissatisfied with appointment scheduling. Patients' estimates of waiting time for care (mean = 16.1 minutes) were significantly shorter than providers' estimates (mean = 27.5 minutes). Patients who were dissatisfied with the length of waiting time estimated waiting 41.8 minutes, while satisfied patients estimated waiting 13.3 minutes ($P < .001$).

Conclusions. Family medicine patients reported higher levels of satisfaction with medical care than did providers. Both groups were the least satisfied with access to care.

Key words. Physician-patient relations; appointments and schedules; quality assurance, health care.

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This study compares patient and provider perceptions of satisfaction with medical care and estimates of waiting time in five outpatient family medicine clinics. Few published studies have dealt with both patient and provider perceptions¹⁻⁴ and no previous study in a family medicine residency setting has compared patients' assessments with providers' assessments of medical care satisfaction.

Previous surveys have shown that patients generally report high levels of satisfaction with medical service and care.⁵ The exception, however, appears to be waiting time. Data from several studies show that dissatisfaction is highest or second highest for this item.^{1,2,6-9} Research in family medicine training programs during the 1980s showed average patient preexamination waiting times of 25 minutes or longer.^{10,11}

Patient satisfaction with medical care has been cited

as one of the ultimate validators of quality of care.¹² In addition, provider satisfaction may have an impact on health care outcomes. The perceptions of health care practitioners may affect the way they treat the patient, both medically and personally. Previous studies have shown that patients do not necessarily distinguish between these two aspects of care.¹³

Methods

Surveys of medical care satisfaction were carried out at three resident-staffed family health centers and two faculty-staffed centers affiliated with San Bernardino County Medical Center in southern California. Nearly identical survey questions were asked of both family medicine patients and health care providers at the five sites. Likert-scaled items measured four factors: technical quality of the visit; access to care in terms of waiting time to see a provider while at the health center and number of days to get an appointment; courtesy of medical care staff and providers; and general satisfaction with medical care. The response scale included five categories, from "very satisfied" to "very dissatisfied."

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From the Department of Family Medicine (Drs Kurata, Phillips and Werblun, Ms Nogawa) and Nursing Administration (Ms Hoffman), San Bernardino County Medical Center, San Bernardino; the Division of Family Medicine (Dr Kurata), Los Angeles School of Medicine, University of California; and the Department of Family Medicine (Ms Nogawa, Drs Phillips and Werblun), Irvine School of Medicine, University of California. Requests for reprints should be addressed to John H. Kurata, PhD, MPH, Director of Research, 755 E Gilbert St, San Bernardino, CA 92404.

Patients were surveyed over a 16-day period in April and May 1990. Ten patients per day, five from the morning and five from the afternoon schedules, were randomly selected from computerized appointment rosters. The registered nurse at each center was instructed to select one patient from each hour of the morning and afternoon schedules and four substitutes for the day. The nurse who selected patients was not a health care provider and did not know the patients personally. Patients were surveyed shortly after their visit by trained telephone interviewers. Two attempts were made to contact each patient. Patients were excluded from the study if they did not speak English, were under 18 years of age, were first-time patients, had already been interviewed, or had not kept their appointment that day.

Patients rated the care they had received during that day's visit to the health center. Patients were also asked to estimate the number of minutes after the time of their scheduled appointment that they waited to receive care.

Provider surveys were by self-administered questionnaire. In April 1990, the residency program faculty (ie, nine family physicians, four nurse practitioners, and three social workers) and the five registered nurses who managed the health centers were surveyed. A survey of the 61 residents in the program was conducted in June.

Provider surveys were not keyed to specific patients interviewed. Providers were asked to rate the health center from their perspective, not what they perceived patients' satisfaction to be, and to estimate the number of minutes patients usually wait at the center before being seen by a health care provider.

Data were analyzed using the BMDP statistical package.¹⁴ The *F* test or *t* test was used to assess differences in means for continuous variables. Differences in proportions for categorical variables were tested using chi-square tests. Since multiple statistical comparisons were made, a *P* value of .01 level of significance was selected. Spearman's rank-order correlation coefficient (r_s) was computed.¹⁵ The study was designed so that the *t* test for $\alpha = .01$ (two-tailed) has an estimated power of 81% to detect a medium-sized effect (0.4 standardized units from the population mean waiting time).¹⁶

Results

Survey Respondents

Of the 328 adult patients who were called, 149 could not be reached. While all patients had provided a telephone number by which they could be contacted, 47 of the numbers were inaccurate. Another 102 calls resulted in no answer, a busy signal, or a telephone answering ma-

Table 1. Characteristics of 156 Patients Interviewed and 172 Patients Who Were Unavailable for Interview (%)*

Characteristic	Interviewed (n = 156)	Not Interviewed (n = 172)	P Value
Sex			.17
Male	27	21	
Female	73	79	
Age (y)			.011
18-44	34	50	
45-64	51	42	
65 +	15	9	
Race/Ethnicity			.03
White	49	35	
Hispanic	19	21	
Black	12	13	
Other/unknown	20	32	
Medical care coverage			.34
Indigent	68	71	
Insurance	15	17	
Medicare	17	12	

*Percents may not sum to 100 because of rounding.

chine reached. Of the 179 patients contacted and asked to participate in an interview, six refused (four because of bad health or hearing problems), three had rescheduled their appointments and had not been seen that day, and 14 did not speak English.

A total of 156 patients, 87% of the adults contacted, were interviewed. Interviewed patients (Table 1) were predominately female (73%). Ethnicity was not obtained for 29 of the 31 patients in the "other or unknown" category. Sixty-eight percent obtained their medical care coverage through programs designated for individuals who are financially unable to pay for medical care (eg, Medi-Cal). The 17% classified as Medicare patients included those who had a combination of Medicare and other types of coverage.

Demographic distributions for interviewed patients were first compared with patients who were not interviewed. The respondent group contained more older patients and white patients than those not interviewed, and slightly fewer female and indigent patients (Table 1). No significant differences were found, although the difference in age group approached significance at $P = .011$. A second comparison was made with demographic distributions for all adult visits to the centers during May 1990 ($n = 3753$). No statistically significant differences were found for sex, age, race or ethnicity, or type of medical care coverage.

Responses from 65 health care providers were analyzed. All of the residency program faculty members and registered nurses who were contacted completed the survey. Seventy-five percent of the residents responded.

Table 2. Patient and Provider Satisfaction with Medical Care (%)

Factor	Patients (n = 156)			Providers (n = 65)		
	Satisfied	Neutral	Dissatisfied	Satisfied	Neutral	Dissatisfied
Technical quality						
Time spent with MD	96.5	2.6	0.9	71.6	15.0	13.4
Time spent with NP	100	0	0	68.2	22.7	9.0
Technical skill of MD	96.5	2.6	0.9	93.1	5.2	1.7
Technical skill of NP	100	0	0	83.3	13.3	3.3
MD's explanation of condition	94.8	3.5	1.7	75.4	15.8	8.8
NP's explanation of condition	100	0	0	85.7	4.8	9.5
Access to care						
Wait to get an appointment	73.4	15.6	11.0	24.1	17.2	58.7
Office waiting time to see MD	86.7	6.2	7.1	42.6	27.8	29.7
Office waiting time to see NP	82.9	7.3	9.8	73.9	21.7	4.3
Courtesy						
Receptionist/secretary	95.5	3.2	1.2	81.9	9.1	9.1
Nurses	96.8	1.9	1.3	89.1	6.2	4.7
Provider (MD)	98.3	0	1.7	86.4	13.6	0
Provider (NP)	100	0	0	100	0	0
Medical care in general	96.8	1.9	1.3	88.7	11.3	0

MD denotes physician; NP, nurse practitioner.

Patient Satisfaction

More than 95% of patient respondents were satisfied with the technical quality of the medical care and courtesy of the personnel (Table 2). Patient satisfaction with access to care ranged from 73% to 87%. Approximately 8% of patients were dissatisfied with waiting time, and 11% were dissatisfied with the number of days they had to wait for an appointment.

There were no statistically significant associations between satisfaction with medical care and demographic variables.

Provider Satisfaction

Although health care providers were less satisfied than patients in all survey categories, the pattern of response was similar to that for patients (Table 2). Providers (like patients) were least satisfied with access to care. Up to 30% of providers were dissatisfied with waiting time in the health centers, while nearly 60% expressed dissatisfaction with the waiting period for an appointment. In general, dissatisfaction with the technical quality of the medical care and courtesy of the personnel was low. About 12% of health care providers were dissatisfied with the amount of time spent with patients, and 9% were dissatisfied with how the condition diagnosed during the visit was explained to the patient.

Waiting Time Estimates

Patients estimated that they waited an average of 16.1 minutes (95% CI = 13.6 to 18.5) past their scheduled

appointment time before receiving care. Waiting time estimates differed significantly ($P < .001$) by level of satisfaction with waiting time. Patients who were dissatisfied with the length of waiting time estimated waiting time at more than three times longer (41.8 minutes) than satisfied patients (13.3 minutes) and nearly twice as long as neutral patients (23.6 minutes). Patients' satisfaction with waiting time and mean waiting time estimates did not differ significantly by demographic characteristics.

Faculty and residents estimated that patients waited 27.5 minutes (95% CI = 23.7 to 31.3) to see a health care provider. The difference between patient and provider estimates of waiting time was statistically significant ($P < .001$). The residents' estimate of waiting time was 28.5 minutes, slightly higher than the 25.7 minutes estimated by family medicine faculty and nurse managers. Differences by clinic site for waiting time estimates and satisfaction with waiting time were not statistically significant for either providers or patients. There was perfect correlation ($r_s = 1.0$, $P = .05$) between patient and provider estimates of waiting time across clinic sites.

Discussion

The purpose of this study was to compare patient satisfaction with medical care with provider satisfaction levels in a family practice residency setting. Overall, provider satisfaction levels were notably lower than those reported by patients. This is consistent with previous studies.^{1,3,4} Both groups were most dissatisfied with access to care.

Bestvater¹⁰ and Bredfeldt¹¹ and colleagues have re-

ported that patients wait at least 25 minutes before being seen by a health care provider at a family medicine residency training program site. From waiting time estimates reported here, a wait of about 25 minutes would seem reasonably accurate. Providers believed that patients waited between 27 and 28 minutes. Patients who responded "neutral" for satisfaction with waiting time estimated waiting almost 24 minutes. If that is the case, most of the patients perceived a shorter than actual waiting time, while most providers perceived a longer than actual patient waiting time.

On standard Likert-type questionnaires, patients generally rate satisfaction with medical care quite high. Perhaps they are hesitant to express dissatisfaction with their physician or health care system. Patient estimates of waiting time, however, did vary.

Patients who expressed dissatisfaction with waiting time estimated waiting nearly 42 minutes to be seen, almost twice as long as patients who rated themselves as "neutral" and more than three times longer than those who expressed satisfaction with waiting time. Thus, patients' responses appear to be consistent. Satisfaction levels were inversely associated with waiting time.

Results of this study indicate that dissatisfaction with waiting time does not depend on sex or race or ethnicity, but does have a slight correlation with age and insurance status. Younger patients expressed less satisfaction than older patients. Patients with insurance, however, sent mixed messages; this group reported a shorter estimated waiting time (about 12 minutes) but the least satisfaction with waiting time (82%). Indigent patients reported the longest waiting periods, yet satisfaction levels among this group were similar to those of the other patients. One possible explanation is that insured patients have higher expectations of service than indigent patients.

There is no widely accepted standard for what is a "good" level of patient satisfaction. The level of satisfaction in the current study (80%) is higher than that reported by previous studies. Studies conducted during the 1970s reported waiting time satisfaction levels of 65% to 78% for varying populations and ambulatory care settings.^{1,8,9}

A possible limitation to the generalizability of this study is that patients visiting the clinic for the first time were excluded. There were several reasons for excluding these visits. First-time patients are scheduled for longer appointments, may be subject to a longer waiting list for access to care, and are not assigned to first-year residents. Because of these differences from established patient visits, first-time patients' perceptions of care could con-

found results from this study and would be better handled in a separate study.

A major strength of this study is that selection bias was minimized in several ways. First, patients were selected from computerized listings by nurses who were not being evaluated by patients and who usually did not know the patients. Second, the staff members who interviewed patients were not involved in the selection process. Third, patients were selected from each hour of the morning and afternoon practice schedules to ensure a uniform distribution over time.

Comparisons of provider and patient satisfaction with health care can help identify areas where medical "consumers" and medical "experts" differ in their perceptions of satisfaction with care. Understanding these differences in perceptions may help to promote better communication between health care providers and their patients.

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