Predictors of Patient Dissatisfaction with Emergency Care

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Key words: emergency service, patient satisfaction, consumer satisfaction, ethnic groups, physician-patient relations, data collection

Abstract

Background: Patient feedback is increasingly being used to assess the quality of healthcare.

Objective: To identify modifiable independent determinants of patient dissatisfaction with hospital emergency care.

Methods: The study group comprised a random sample of 3,152 of the 65,966 adult Israeli citizens discharged during November 1999 from emergency departments in 17 of the 32 acute care hospitals in Israel. A total of 2,543 (81%) responded to a telephone survey that used a structured questionnaire. The dependent variables included: hospital characteristics, patient demographic variables, patient perception of care, self-rated health status, problem severity, and outcome of care. The dependent variable was dissatisfaction with overall ED experience on a 1–5 Likert-type scale dichotomized into not satisfied (4 and 5) and satisfied (1,2 and 3).

Results: Eleven percent of the population reported being dissatisfied with their emergency room visit. Univariate analyses revealed that dissatisfaction was significantly related to ethnic group, patient education, hospital identity and geographic location, perceived comfort of ED facilities, registration expediency, waiting times, perceived competence and attitudes of caregivers, explanations provided, self-rated health status, and resolution of the problem that led to referral to the ED. Multivariate analyses using logistic regressions indicated that the four most powerful predictors of dissatisfaction were patient perception of doctor competence and attitudes, outcomes of care, ethnicity, and self-rated health status.

Conclusions: Attempts to reduce dissatisfaction with emergency care should focus on caregiver conduct and attitudes. It may also be useful to improve caregiver communication skills, specifically with ethnic minorities and with patients who rate their health status as poor.

IMAJ 2002;4:603–606

Patient feedback is widely used as an indicator of quality of healthcare [1]. The hospital emergency department setting is unique because it provides an opportunity to study patient perception of care in conditions of rapid patient turnover, time constraints, random assignment among caregivers, and absence of long-term doctor-patient relationships. Consequently, several researchers have used various methods to gain insight into patient perception of care in the ED, such as mailed questionnaires [2], in-person questionnaires at discharge from the ED [3], telephone surveys [4], review of patient complaints [5], and inquiry into patient reasons for leaving the ED without formal discharge [6]. It has been found that dissatisfaction with the ED is related to patient perceptions of physician and nursing skills, treatment outcomes, facility characteristics, and waiting time [2]. One prospective experimental study revealed that ED patients informed about their diagnosis were more satisfied than a control group, and rated the following dimensions of care significantly higher: physician skill, concern and caring, appropriateness of waiting times, ability of staff to reduce patient anxiety, and ease and convenience of care [3].

The relative contribution of the various components of care varies by method of investigation. For example, the most common complaints of patients who left the ED without formal discharge were prolonged waiting time, perceived difficulties with hospital staff, and pressing commitments elsewhere [6]. In another study, most complaints involved allegations of "rude or unprofessional conduct," refusal to admit to hospital, or "problems with medical treatment" [5]. In contrast, a telephone survey indicated that patient perception of the technical quality of care was more important than perceived timeliness or bedside manner in determining dissatisfaction with ED care [4].

To our knowledge, there have not been prior multi-institutional surveys published about patient dissatisfaction with the ED in Israel. The present study attempts to gain an insight into patient perceptions of ED care and to define the main independent determinants of dissatisfaction with care. The identification of modifiable predictors of patient perception of hospital emergency care may suggest approaches to improve its quality. We chose dissatisfaction rather than the reciprocal "satisfaction" because although patients usually rate the medical care they receive highly [7], and even small differences at the upper end of the scale have important implications for patient behavior [8], we believe that a focus on patient satisfaction may blunt caregiver sensitivity to the need for further improvement. While a finding that as many as 90% of the patients are satisfied is interpreted as encouraging, a finding that 1 of 10 consumers remains disappointed is more likely to engender concern and promote attempts to address the causes of dissatisfaction.

Patients and Methods

Study population, sampling and procedure

The study population consisted of 65,966 adult (aged 18 or older) Israeli citizens, excluding maternity patients, who were discharged during November 1999 from the emergency depatments in 17 of the 32 public acute care hospitals in Israel. On discharge from the ED, each patient received an introductory letter explaining the goals and importance of the forthcoming telephone survey. We randomly sampled about 194 from each hospital, for a total of 3,300. Of those sampled, 25 had deceased and 123 did not meet the survey criteria, so that the sample totalled 3,152 persons. Participants were

ED = emergency department

interviewed by telephone using a structured questionnaire. Most were interviewed within 1 month, and all within 3 months of discharge from the ED. A total of 2,543 responded (81%). The remainder had difficulties in language and/or communication (10%), were not located (5%), or refused to participate (4%).

Instrument

We used a structured questionnaire in the three most commonly spoken languages in Israel: Hebrew, Arabic and Russian. The questionnaire was translated from Hebrew into Arabic and Russian, and then back-translated.

The independent variables included items related to hospital characteristics, patient demographic variables, patient evaluation of caregivers' conduct, competence and attitudes of the process and outcome of care, comfort of ED facilities, and patient self-rated health status. The specific items related to these variables are listed with the results.

The dependent variable was dissatisfaction with care, as assessed by patient response to the question: "Overall, to what extent are you satisfied with the care you received in the emergency department?" Responses ranged from 1 (very satisfied) to 5 (very dissatisfied) and the results were arbitrarily dichotomized into satisfied (1,2 and 3) and dissatisfied (4 and 5).

Analysis

Univariate analysis and multiple logistic regressions within the various categories of independent variables were used to identify possible predictors of dissatisfaction. Selected variables with a P value of 0.05 or less for chi-square test or likelihood ratios were introduced one at a time into a final logistic regression in order to identify the main independent predictors for patient dissatisfaction with ED care.

Results

Overall, 36% of the respondents reported being very satisfied with their emergency room visit, 33% were satisfied, 20% were somewhat satisfied, 5% were little satisfied, and 6% were not at all satisfied. We collapsed the above categories into two groups: satisfied (89%) and dissatisfied (11%).

Univariate analyses

Dissatisfaction with ED care was significantly higher among Arabic (19%) and Russian-speaking patients (20%) and among those with elementary education (15%), but was not correlated with patient age, gender or self-reported income [Table 1].Dissatisfaction was significantly related to registration expediency and perceived waiting time, as well as to perceived competence, attitudes, respect, and information sharing by caregivers. Only 6% of those who felt they were treated with respect, but as many as 62% of those who did not, were dissatisfied with their care [Table 2]. Dissatisfaction rates were higher among patients who rated their medical problem as serious, or whose problem recurred after discharge or was not resolved. Thus, only 7% among those who rated their general health as very good, but as many as 41% among those who rated their general health as very poor, were dissatisfied with ED care. Furthermore, average dissatisfaction rates differred significantly by perceived comfort of facilities and geographic location of hospitals [Table 3].

Table 1. Dissatisfaction rates among 2,543 emergency care patients surveyed in 1999, by demographic variables

Independent variable	N	% dissatisfied	*P*
Total population	2,543	10.5	
Spoken language			
Hebrew	1,861	8.2	0.000
Arabic	308	18.8	
Russian	189	19.6	
Education			
Elementary	401	15.2	0.003
High school	1,203	10.2	
Higher	742	8.8	
Age (yr)			
18–44	1,540	10.8	0.345
45–64	510	11.0	
⩽65	307	8.1	
Gender			
Women	1,191	9.6	0.116
Men	1,168	11.6	
Self-reported monthly income (shekels)			
< 2,400	317	13.2	0.096
2,401–3,500	351	12.8	
3,501–7,000	696	10.3	
7,001–10,000	312	10.9	
10,001–13,000	120	5.8	
> 13,001	186	10.3	

Multivariate analyses

Average dissatisfaction rates among hospitals varied between 4% and 18%. This variability was not explained by differences in patient characteristics. However, after adjustment for perceived comfort of facilities and for perceived competence and attitudes of care providers, the differences among hospitals were no longer significant (data not shown).

Ethnicity (Arab and Russian), education, ED comfort and facilities, waiting times, perceived competence and attitudes of care providers, outcome of ED care, and self-rated health status were entered into a logistic regression with dissatisfaction as the dependent variable. Patient perception of doctor competence and attittudes, whether their medical problem was resolved, ethnicity, and self-rated health status were the four most powerful predictors of dissatisfaction with ED care. Additional significant and independent predictors were the perception that care providers did their best, competence and attitudes of other care providers, respect of care providers, comfort and facilities of the ED, and explanation given regarding medical diagnosis and treatment [Table 4].

Discussion

Our findings are consistent with previously reported independent determinants of patient dissatisfaction with the ED, including

Table 2. Dissatisfaction rates among 2,543 emergency care patients surveyed in 1999, by waiting times, attitudes of care providers and explanations

Independent variable	N	% dissatisfied	*P*
Registration for ED			
Short	1,737	9.8	0.014
Average	212	9.4	
Long	88	19.3	
Time spent in ED			
Reasonable	1,583	5.1	0.000
Too short	86	25.6	
Too long	655	21.7	
Waiting time in ED for nurse			
Short	1,504	7.2	0.000
Average	308	11.0	
Long	247	26.7	
Waiting time in ED for physician			
Short	1,224	4.7	0.000
Average	460	9.3	
Long	621	22.2	
Doctor competence and attitudes			
Good and very good	1,860	3.4	0.000
Average or less	468	38.2	
Competence and attitudes of other care providers			
Good and very good	2,058	6.9	0.000
Average or less	296	36.5	
Care providers did their best			
Yes	1,686	2.5	0.000
Could have done more	294	15.0	
Could have done much more	314	48.1	
Care providers treated me with respect and consideration			
Yes	2,019	5.5	0.000
Partially	210	28.6	
No	122	62.3	
Explanation given regarding medical diagnosis and treatment			
Satisfactory	1,447	3.0	0.000
Somewhat satisfactory	194	17.5	
Unsatisfactory	82	36.6	
No explanation given	573	23.6	
Instructions given regarding treatment after discharge			
Satisfactory	1,429	3.4	0.000
Somewhat satisfactory	122	17.2	
Unsatisfactory	54	27.8	
No instructions given	707	23.1	
Instructions given regarding what to do in case of recurrence or deterioration after discharge			
Satisfactory	1,134	3.4	0.000
Somewhat satisfactory	45	13.3	
Unsatisfactory	21	38.1	
No instructions given	1,105	17.6	

Table 3. Dissatisfaction rates among 2,543 emergency care patients surveyed in 1999, by outcomes of treatment and hospital characteristics.

Independent variable	n	% dissatisfied	*P*
Self-rated severity of problem			
Very minor	82	6.1	0.000
Minor	424	4.7	
Moderate	857	9.1	
Serious	713	13.5	
Very serious	240	20.8	
Problem recurred after discharge			
Yes	815	22.1	0.000
No	1,537	4.4	
Medical problem was resolved			
Yes	1,173	2.1	0.000
Partially	403	8.4	
No	659	27.9	
Self-rated health status			
Very good	901	6.5	0.000
Good	705	8.1	
Fair	512	11.7	
Poor	162	27.8	
Very poor	63	41.3	
Comfort and facilities			
Good and very good	1,840	7.1	0.000
Average or less	485	23.5	
Hospital location, geographic			
North	861	10.9	0.005
South	366	14.8	
Center	1,115	8.8	
Time of day of ED visit			
7 am – 3 pm	908	10.8	0.504
3 pm – 11 pm	745	9.9	
11 pm – 7 am	225	8.4	
Weekend	479	11.9	

patient perception of doctor conduct, competence and attittudes [9], patient's ethnic group [10], self-rated health status [11] and self-rated outcome of care [12]. Clarity of instruction [13,14], higher income [15], younger age [16], higher education [17] and waiting time [2] had a lesser or no effect on patient dissatisfaction. After controlling for perceived comfort of facilities and perceived competence and attitudes of care providers, there were no significant differences among hospitals in dissatisfaction rates.

Three of the four main predictors of dissatisfaction – patient perception of doctor conduct, patient self-rated health, and patient ethnic group – suggest avenues for improvement. The characteristics of doctor conduct associated with patient satisfaction have been extensively studied [18,19], and the findings suggest that dissatisfaction with care may be reduced by attempts to improve physician communication skills and ability to meet patients' needs for health-related information. A second approach to improvement is suggested by the higher dissatisfaction rates among patients with poor self-rated health. It is possible that these are chronically ill patients who are given a lower priority for care. The identification and focus on such patients may both improve care and reduce dissatisfaction rates.

Lastly, there were significantly higher dissatisfaction rates among Arabic and Russian speakers, even after adjustment for confounders, such as age, income, education, self-rated health status and self-rated outcome of care. It is possible that these higher dissatisfaction rates reflect difficulties of integrating into a

Table 4. Logistic regression of the predictive value of selected independent variables for dissatisfaction with care among 2,543 emergency care patients surveyed in 1999

Variable	Entered as	Reference group	Coefficient	Odds ratio	*P*
Doctor competence and attitudes	Average or less	Good/very good	1.60	4.97	0.0000
Medical problem was resolved	Partially/no	Yes	1.50	4.49	0.0000
Spoken language	Russian	Hebrew	1.38	3.98	0.0000
Self-rated health status	Poor/very poor	Very good/ good/fair	1.32	3.73	0.0000
Spoken language	Arabic	Hebrew	1.30	3.68	0.0000
Care providers did their best	Could have done more	Yes	1.21	3.34	0.0000
Competence and attitudes of other care providers	Average or less	Good/very good	0.79	2.21	0.0004
Care providers treated me with respect and consideration	No	Yes	0.57	1.76	0.0103
Comfort and facilities	Average or less	Good/very good	0.51	1.67	0.0139
Explanation given regarding medical diagnosis and treatment	No	Yes	0.51	1.66	0.0113
Time spent in ED	Not reasonable	Reasonable	0.40	1.50	0.0441
Education	Elementary	High school	0.38	1.46	0.1710

foreign culture; however, this finding is consistent with other studies that suggest differences in attitudes and quality of care with regard to ethnic and racial minorities [20]. It is possible that caregivers have a reduced sensitivity to the needs of patients belonging to different religious, ethnic or cultural groups. An emphasis on overcoming language and culture barriers in doctor-patient communication may result in an increase in satisfaction rates among ethnic minorities.

Acknowledgments. This study was funded by the Ministry of Health and Clalit Health Services. The authors are grateful to the participating hospitals for their help and cooperation, and to Dr. Bruce Rosen for his valuable input throughout the work.

References

1. Donabedian A. The Definition of Quality and Approaches to its Assessment. Ann Arbor, MI: Health Administration Press, 1980.
2. Carey RG, Seibert JH. A patient survey system to measure quality improvement: questionnaire reliability and validity. *Med Care* 1993;31:834–45.
3. Krishel S, Baraff LJ. Effect of emergency department information on patient dissatisfaction. *Ann Emerg Med* 1993;22:568–72.
4. Rhee KJ, Bird J. Perceptions and dissatisfaction with emergency department care. *J Emerg Med* 1996;14:679–83.
5. Curka PA, Pepe PE, Zachariah BS, Gray GD, Matsumoto C. Incidence, source, and nature of complaints received in a large, urban emergency medical services system. *Acad Emerg Med* 1995;2:508–12.
6. Fernandes CM, Daya MR, Barry S, Palmer N. Emergency department patients who leave without seeing a physician: the Toronto Hospital experience. *Ann Emerg Med* 1994;24:1092–6.
7. Ware JE, Hays RD. Methods for measuring patient dissatisfaction with specific medical encounters. *Med Care* 1988;26:393–402.
8. Ware JE, Davies AR. Behavioral consequences of consumer dissatisfaction with medical care. *Eval Prog Plan* 1983;6:291–7.
9. Pilpel D. Hospitalized patients' satisfaction with caregivers' conduct and physical surroundings. *J Gen Intern Med* 1996;11:312–14.
10. Linn LS. Factors associated with patient evaluation of health care. *Milbank Mem Fund Q Health Soc* 1975;53:531–48.
11. Linn LS, DiMatteo MR, Chang BL, Code DW. Consumers' values and subsequent dissatisfaction ratings of physician behaviour. *Med Care* 1984;22:804–12.
12. Carmel S. Satisfaction with hospitalization: a comparative analysis of three types of services. *Soc Sci Med* 1985;11:1243–9.
13. Evans TC, Lucid EJ, Amann C. Social work technician program. *Ann Emerg Med* 1993;22:841–4.
14. Wolford S. Emergency department patient liaison volunteers: a cost containment and visitor dissatisfaction strategy. *J Emerg Nurs* 1995;21: 17–21.
15. Dennis B, Overton DT, Schwartz LR, Strait M. Emergency department complaint frequency: variation by patient median household income. *Ann Emerg Med* 1992;21:746–8.
16. Linn LS, Greenfield S. Patient suffering and patient dissatisfaction among the chronically ill. *Med Care* 1982;20:425–31.
17. Linder-Pelz S. Social psychological determinants of patient dissatisfaction: a test of five hypotheses. *Soc Sci Med* 1982;16:583–9.
18. Ong LML, de Haes JCJM, Hoos AM, Lammes FB. Doctor-patient communication: a review of the literature. *Soc Sci Med* 1995;40: 903–18.
19. Speedling EJ; Rose DN. Building an effective doctor-patient relationship: from patient dissatisfaction to patient participation. *Soc Sci Med* 1985;21:115–20.
20. Council on Ethical and Judicial Affairs. Black-white disparities in health care. *JAMA* 1990;263:2344.

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