Nonurgent Use of Hospital Emergency Departments: Urgency from the Patient's Perspective

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Background. Patients often seek care from hospital emergency departments (EDs) for conditions medical personnel perceive as nonurgent. The purpose of this study was to examine ED patients' perceptions of urgency, and to determine whether patients with no regular source of medical care are more likely to use the ED for problems they perceive as nonurgent.

Methods. We surveyed 268 patients in an urban ED waiting area who were considered nonurgent by the ED triage nurse. Using structured interviews, we determined patients' perceptions about the urgency of their medical condition, whether they had a regular source of medical care, and their reasons for choosing the ED for care. After controlling for other variables, we determined whether having no regular source of care was associated with patient-rated nonurgent ED utilization.

Results. Eighty-two percent of patients rated their condition as urgent. Patient-rated urgency was not associated with having a regular source of care. The most common reason for seeking care in the ED was expediency.

Conclusions. A large majority of ED patients perceive the problems for which they seek care from an ED as urgent, even when they are assessed as nonurgent by a health professional. Lack of a regular source of care has no significant impact on ED utilization for problems that patients perceive as nonurgent. Simply providing patients with a regular source of care is unlikely to have a significant impact on nonurgent ED utilization without efforts to manage utilization and ensure adequate access to primary care.

Key words. Emergency service, hospital; health services accessibility; choice behavior; questionnaires; cross-sectional studies. (*J Fam Pract 1996; 42:491-496*)

Hospital emergency departments (EDs) are often used for problems that do not require emergency care.[1–3] The 1992 National Hospital Ambulatory Medical Care Survey[4] found that 55% of ED visits are for nonurgent problems, and numerous other studies have found similar results.[1,3,5–12] It is widely believed that nonurgent ED utilization is largely attributable to poor access to primary care,[1–3] and more specifically, to absence of a regular source of care.[6,7] If this is true, providing patients with a regular source of care should lead to a decrease in nonurgent ED utilization. Studies have found, however, that simply providing patients with a regular source of care has minimal impact on the utilization of EDs for nonurgent problems.[13–16]

There are several reasons why such programs might not be successful. First, simply providing a regular source of care may not be sufficient to ensure adequate access to care.[17,18] The way in which urgency is measured may further hinder the success of such programs. Most studies have measured urgency from the perspective of health professionals[3–12] rather than of the patients'. Patients' perceptions of urgency may differ from that of health professionals.[5–6] In most cases, it is the patient rather than a health professional who decides when to seek emergency care. Therefore, if providing a regular source of care

Submitted, revised February 15, 1996.

Presented at the 22nd Annual Meeting of the North American Primary Care Research Group, San Antonio, Texas, December 3, 1994, and presented as a poster at the 11th Annual Meeting of the Association for Health Services Research, San Diego, Calif, June 12, 1994.

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ISSN 0094-3509

is to have an impact on ED utilization for nonurgent conditions, one would expect it to primarily have an impact on visits considered nonurgent by the patient. No previous studies have measured the association between having a regular source of care and ED utilization for conditions perceived by patients as nonurgent.

The purpose of this study was to examine patient perceptions of urgency among hospital ED patients, and to determine whether patients without a regular source of care are more likely to use the ED for problems they perceive as nonurgent.

Methods

Design and Setting

This cross-sectional survey study was conducted at the ED of an urban teaching hospital. The study period consisted of a full 1-week period (24 hours per day), from January 11, 1993, through January 18, 1993, plus three 8-hour time blocks (two 8:00 AM to 4:00 PM blocks and one 4:00 PM to midnight block) during the following week.

Patient Selection

The study group was selected from ED patients who were seeking care for problems considered nonurgent by the triage nurses. This medically nonurgent population was chosen because these patients are usually the ones targeted by programs designed to reduce ED utilization. In the study hospital, nonurgent patients are defined as those who may safely wait several hours or more for evaluation. Patients were excluded if they were unable to answer questions and had no guardian present who could answer for them, if they refused to be interviewed (less than 5% of those approached refused an interview), or if they were taken to the treatment area before an interview could be initiated. Of the 744 patients seen in the ED during the study period, 609 (82%) were considered nonurgent by the triage nurse. Of the 609 nonurgent patients, 281 patients (46%) were interviewed for the study. These patients were selected by convenience sampling from patients who were in the ED waiting area. When compared with patients who were not interviewed, the 281 study patients were more likely to be children (28% vs 19%), less likely to be adults over the age of 40 (21% vs 29%), and more likely to seek care on a weekday (86% vs 79%), but did not differ significantly by sex, health insurance, or time of day seen. No patients were selected more than once.

Measures

A structured interview was administered by interviewers who had received a 2-hour training session by staff at a university center for survey research. The survey instrument was pilot-tested and revised prior to the study. Each patient was asked to assess the urgency of the current medical problem by responding to two questions adapted from the National Medical Care Utilization and Expenditure Survey[19]: "At the time you decided to come to the emergency room, was there a threat to your life if you did not receive treatment within an hour?"and "At the time you decided to come to the emergency room, did you feel you needed care within a few hours to prevent the problem from becoming serious?" These questions had been previously used in a large national survey study and had been tested in earlier studies.[20,21] A "yes" response to either question resulted in the visit being categorized as urgent from the patient's perspective. If the answer to both questions was "no," the visit was categorized as nonurgent. Thirteen patients (4.6%) did not provide valid responses to these questions and were excluded from the analysis. These 13 patients were more likely to be seen on the evening shift, but did not differ by any other study variables. The final sample included 268 patients.

A subsample of 35 patients were asked two additional questions regarding the perceived urgency of their condition. The first was an open-ended question to determine what they thought might happen if they did not receive care within a few hours. In the second question, patients were asked to rate the seriousness of their problem on a 10-point scale.

To determine patients' reasons for choosing the ED rather than a primary care site for care, all patients were asked: "What were the reasons why you chose to come to the emergency room rather than some other place, that is not an emergency room, for medical care today?" Responses were recorded in an open-ended manner. Patient responses were combined into 13 mutually exclusive categories based on similarity of content.

Each patient's regular source of care was determined by asking: "Where do you go for your regular medical care?" Patients who named an ED as their regular source of care were considered to have no regular source of care. All patients were asked whether they had been referred to the ED, the number of visits they had made to the ED in the previous 3 months (<2 vs ≥ 2), distance lived from the ED (<1 mile vs ≥ 1 mile), annual household income (in thousands of dollars, categorized as <5, 5 to 9, 10 to 19, 20 to 29, 30 to 39, or ≥ 40), and whether they had a telephone at home. Patients with an identified regular source of care were asked the number of visits made in the previous 3 months and the distance lived from the regular

source of care. The following information was obtained from medical records: patient age; primary health insurance (Medicaid, Medicare, private, other or none); race/ethnicity (white, African-American, Hispanic, or other); time (day, evening or night) and day (weekend or weekday) of presentation to the ED; and the ED nurse's triage assessment.

Data Analysis

In the primary analysis, patient-perceived urgency was used as a dichotomous dependent variable. The association between urgency and each independent variable was first measured in a bivariate analysis using the chi-square test. Variables that were significant at $P \leq .10$ in the bivariate analysis were entered as covariates in a multiple logistic regression. Alternative models were tested, including forcing in the variable that identifies whether the patient had a regular source of care, and forward stepwise addition of all variables. The results of these alternative methods did not significantly change the original model, and thus are not reported. In the final logistic regression model, covariates associated with the response variable at $P < .05$ were considered significant.

A second analysis was conducted to investigate the association among the three patient ratings of urgency for the patients who reported this information. Patients' responses about what might happen if prompt care were not received were coded into two categories indicating either serious or nonserious consequences. Using Fisher's exact test, the responses of patients who had rated their visit as urgent were compared with those of patients who had rated their problem as nonurgent. Next, mean urgency scores were calculated for patients who rated their problem as urgent and nonurgent, and the scores were compared using the Mann-Whitney *U* test.

In a third analysis, a calculation was made of the proportion of patients with urgent and nonurgent problems who reported each reason for choosing the ED as a source of care. The difference in the proportions was compared using a chi-square test, with $P < .05$ as the cutoff for statistical significance. All analyses were conducted using SPSS PC+, Version 5.0 software.[22]

Results

The study population (N=268) was primarily poor (74% with annual household income <$20,000), African-American (68%), had a telephone at home (76%), and had either Medicaid (33%) or no insurance (47%). Seventy-nine percent were seen on a weekday, primarily during the day (55%) and evening (37%) shifts. Thirty-five percent of patients lived within 1 mile of the ED, and 22% had been to the ED at least twice in the previous 3 months. Thirty-one percent had no regular source of care. Of those with a regular source of care, 45% had a private physician, 24% lived within 1 mile of their regular source of care, and 35% had seen their regular source of care at least twice in the previous 3 months.

Table 1. Characteristics of Patients Seen in an Emergency Department, by Patient-Rated Urgent and Nonurgent Medical Problems

Characteristic	Urgent Problems No. (%) (n=219)	Nonurgent Problems No. (%) (n=49)	*P* Value
Age, y			
0–4	32 (15)	2 (4)	.06
5–12	13 (6)	7 (14)	
13–17	16 (7)	1 (2)	
18–39	109 (50)	29 (59)	
40–64	44 (20)	10 (20)	
65+	5 (2)	0 (0)	
Sex			
Male	113 (52)	19 (39)	.01
Female	105 (48)	30 (61)	
Regular source of care			
Yes	155 (71)	31 (63)	NS
No	64 (29)	18 (37)	
Regular source of care*			
Hospital clinic	64 (41)	15 (48)	NS
Private physicians	72 (47)	11 (36)	
Community health center	6 (4)	1 (3)	
Other	13 (8)	4 (13)	
Distance lived from emergency department			
<1 mile	70 (32)	22 (46)	.08
≥ 1 mile	146 (68)	26 (54)	

**Data reported only for persons with a regular source of care (n= 186).*

Overall, 82% of patients rated their problem as urgent. In bivarate analysis, only three variables were associated with patient-rated urgency: distance lived from the ED, age, and sex (Table 1), but none of these variables was a significant predictor of urgency in the multivariate analysis. Having a regular source of care was not significant in either the bivariate or multivariate analysis.

Thirty-five patients were asked what they thought would happen if they did not receive care within a few hours. Of the 28 patients who gave responses that could be categorized as "serious" or "nonserious" consequences, serious consequences were reported for 90% of the patients who perceived their problems as urgent and 63% of patients who perceived their problems as nonurgent ($P = .10$). Of 31 patients who rated the seriousness of their problems on a scale of 1 to 10, the mean score was 9.3 for urgent patients and 4.3 for nonurgent patients

Table 2. Patients' Reasons for Seeking Care in an Emergency Department Rather than a Primary Care Site, by Patient-Rated Urgency of Medical Problem

Reason Listed	% of Patients Rating Medical Problem As	
	Urgent (n=219)	Nonurgent (n=49)
Emergency department closer	33	39
Emergency department faster	19	25
No regular source of care	19	16
Likes emergency department service	16	18
Regular source of care not accessible	20	8
Urgent problem	16	14
Referred	11	16
More convenient	11	12
Financial	7	8
Better medical care	6	6
Other	6	0
Records at emergency department	4	4
Need hospital service	3	0

NOTE. No differences were statistically significant. Patients were allowed to list more than one reason.

(P=.22). Because of the small subsample, the power to detect a 20% difference was less than 10% for both analyses.

The reasons given by all surveyed patients in response to the question about why they chose an ED for health care rather than an office or some other place are listed in Table 2. The two most commonly stated reasons are "the ED is closer" and "the ED is faster." Patients who rated their problem as urgent and those who rated their problem as nonurgent did not differ in their reasons for choosing the ED.

Discussion

This study demonstrates that the majority of ED patients perceive their problems as urgent. This is true even for patients whose medical problems are considered nonurgent by ED nurses. This finding seems to contradict the widespread belief that hospital EDs are frequently utilized for minor problems; however, it is important to remember that this belief is based on the perspectives of health professionals, not patients. Previous studies measuring urgency from the patient perspective have found results that agree with those of the present study[5,23,24]; depending on how urgency is measured, as many as 95% of ED patients view their problem as urgent.[24] From the perspective of patients, nonurgent ED utilization might not be as great a problem as health professionals perceive.

This study also demonstrated that patients' use of the ED for problems they perceive as nonurgent has little to do with absence of a regular source of care. This finding is supported by the reasons patients gave for using the ED. Regardless of whether patients perceived their problem as urgent or nonurgent, only a small percentage listed absence of a regular source of care as a reason for using the ED.

There are several possible reasons for the lack of association between ED utilization for patient-rated nonurgent problems and absence of a regular source of care. One possible reason is that patients with a regular source of care do not necessarily have convenient access to that care.[17,18] While having a regular source of care is one important component,[25,26] access to care is complex and involves many dimensions.[27–30] Although other components of access to care may be associated with patient-rated nonurgent ED utilization, the data from this study do not support this theory. None of the components of access to care measured in this study (ie, having health insurance, having a higher income, having a telephone, and living close to health care facilities) was associated with urgency, and the proportion of nonurgent visits was not higher during weekends or evening hours, when ambulatory care is less available. Also, patients who used the hospital clinic as their regular source of care, where appointment availability is limited, were not significantly more likely to utilize the ED for a nonurgent problem than were those who used private physicians as their regular source of care. Finally, the percentage of patients who listed lack of availability of their regular source of care as a reason for ED care was no different for patients who perceived their problems as urgent than for those with nonurgent problems. Although this study does not suggest an association between patient-rated urgency and access to care, it should be noted that this study was not intended to measure access variables other than having a regular source of care. For example, we were not able to measure availability of office appointments at each patient's regular source of care. Future studies are needed to measure the association between other access variables and patient-rated nonurgent ED utilization.

There are other possible reasons why having a regular source of care had little impact on whether patients chose the ED for problems they perceived as nonurgent. Many patients view the ED as an appropriate option for nonurgent care if the ED is more convenient than primary care facilities.[31] This theory is supported by our finding that many patients listed "the ER is closer" or "the ER is faster" as reasons for using the hospital emergency department for medical care. These reasons do not differ according to patients' perceptions about the urgency of their medical problems. Other studies have found expediency and convenience to play a large role in a patient's decision to seek health care.[32–35]

If most ED patients perceive their problems as requiring urgent attention and absence of a regular source of care has little to do with utilization for problems they

perceive as nonurgent, what can be done to decrease ED utilization for problems that are not medically urgent? By seeking care from an ED, many patients are seeking reassurance.[36] They may be willing to forgo ED treatment if reassured by a health professional that their problem could be safely managed in a primary care setting.[6] ED nurses may be able to screen potential ED patients and refer those whose problems are medically nonurgent to primary care providers. Such triage programs have been found to significantly reduce the number of patients requiring ED treatment,[37–41] to reduce future ED utilization for those referred,[13] to reduce the number of patients who leave the ED without treatment,[38] and to have no significant adverse effect on patient satisfaction[38,42] or health outcomes.[13,38–40]

Another method of decreasing ED utilization is to require prior approval from a primary care provider. While such systems reduce ED utilization,[1,2,43,44] they also increase the administrative burden on ED providers, encouraging them to bypass the system and attenuating the possible positive impact.[1,2,45] Finally, educating patients about what types of problems require emergency care[23,46,47] and about self-care for minor problems[48,49] might decrease inappropriate use of EDs.

There are several limitations to this study. First, one could debate whether patient responses to the urgency questions accurately represent their true perception of urgency. Some patients might inflate their assessment of urgency in order to justify their ED visit or to expedite their treatment. This is unlikely to be a major problem in the present study for a number of reasons. Most importantly, a 12% subsample of patients responded to two additional questions about urgency. The concordance between their primary assessment of urgency and their responses to these questions validates the primary urgency measure. In addition, interviewers identified themselves as nonhospital personnel and told patients that their responses would not affect their treatment in the ED. Finally, other studies have found that a high percentage of ED patients rate their problem as urgent.[5,23,24] Since the present study used urgency criteria that were more stringent than those of other studies, our findings may actually be an underestimate of patients' true perceptions of urgency.

There are also limitations to the generalizability of the study. Study patients were not intended to be representative of all ED patients, but rather of patients whose medical problems are considered nonurgent by a triage nurse. These patients were chosen because they represent the population targeted by most programs that are designed to decrease ED utilization. If all ED patients had been interviewed, one might expect an even higher proportion to rate their problem as urgent. Also, the study population consisted primarily of patients who were poor, African-American, and without private health insurance; the results may differ for ED populations with different demographic characteristics.

There is little disagreement that hospital EDs are frequently used for problems that do not require urgent medical attention. Since ED care for such problems can be costly,[50–52] it may be desirable from a health policy perspective to limit this use of EDs. However, if we are to change ED utilization, we must first understand and address the problem from the point of view of those who make the decision to seek ED care, ie, the patients. This study supports previous findings that most ED patients perceive their problems as urgent even when they are considered nonurgent by health professionals. It also demonstrates that when urgency is rated by the patient, nonurgent ED utilization has little to do with absence of a regular source of care. If these findings hold true in other ED populations, efforts to decrease utilization EDs for nonurgent care must accomplish more than simply providing patients with a regular source of care. Possible options include ensuring that primary care is accessible and convenient to the patient, requiring preapproval from primary care physicians for ED visits, and triaging patients at the time they seek ED care. Without such mechanisms in conjunction with ensuring the availability and accessibility of a regular source of care, efforts to decrease the use of EDs for nonurgent medical problems are unlikely to have a significant impact.

Acknowledgments

The authors would like to thank Charles Reese, MD, and the emergency department at the Medical Center of Delaware for their assistance in conducting this study, and James Diamond, PhD, from the Department of Family Medicine at Jefferson Medical College for his helpful comments on the manuscript. We also appreciate the assistance of Jeffrey Raffel, PhD, and the Center for Applied Demography and Survey Research of the University of Delaware, as well as the support of the Delaware Medical Research Institute.

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