

Is this Problem Urgent?

Attitudes in a community hospital emergency room

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SUMMARY

As health care resources become increasingly scarce, some suggest that emergency rooms are misused or overused. This study examined whether patients believe their problems are urgent, whether health care providers agree, and what factors influence these decisions. In many cases, using less expensive alternative care is appropriate. Widespread education to change patients' attitudes about the urgency of their medical concerns could reduce inappropriate hospital visits.

RÉSUMÉ

Face à la pénurie croissante des ressources en soins de santé, certains estiment que les salles d'urgence sont mal utilisées ou surutilisées. Cette étude a examiné le degré d'urgence des problèmes tel que défini par les patients comparativement à celui des dispensateurs de soins et s'est interrogée sur les facteurs qui influencent ces décisions. Dans de nombreux cas, il est approprié d'utiliser une alternative de soins moins coûteuse. Des programmes d'éducation à grande échelle visant à modifier les attitudes des patients face à l'urgence de leurs préoccupations médicales pourraient réduire le nombre des visites inappropriées à l'hôpital.

Can Fam Physician 1993;39:1345-1352.



IN THESE DAYS OF TIGHT HOSPITAL budgets and widespread economic concerns about Canada's health care system, the media have paid much attention to the appropriate use of medical services by patients. Despite this attention, hospital emergency rooms seem busier than ever.

Many factors influence how emergency services are used. These include the accessibility of that service in the community (location, hours open, handicap provisions), availability of the patient's usual physician, and severity and rapidity of onset of the patient's illness. Because patients' perceptions of the urgency of their complaints influences how they access the health care system,¹ several studies have examined patients' attitudes about the urgency of their visits to emergency rooms.¹⁻⁴ There is often a low correlation between patients' perceived morbidity (determined by questionnaire) and actual morbidity measured objectively after laboratory investigation. In addition, several investigators have shown that

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physicians' perceptions of severity of illness are often quite different from those of patients.^{1,4}

Physicians who staff emergency wards widely believe that the facilities are being grossly misused as well as overused by the public. There is little published information, however, about the use of hospital-based emergency services in smaller communities in Canada.

This study was undertaken to examine the current attitudes of patients and health care providers in a community hospital in eastern Ontario. The perceived urgency of the presenting complaint, as well as the effect of age, type of complaint, time of visit, and duration of symptoms, was examined.

METHOD

This study was undertaken at the Prince Edward County Memorial Hospital in Picton, Ont, from September 3 to September 14, 1991.

Three hundred consecutive charts were stamped with an ink pad stamp before patient assessment. This stamp included boxes marked yes or no in answer to the question "urgent visit?" for patients, nurses, or physicians, in order to simplify reporting.

Following triage by the emergency room nurse, the patients or their guardians

were asked whether they considered the problem to be urgent (ie, "Do you think that this problem could have been deferred for 12 to 24 hours to be seen by your own

RESULTS

Of 300 consecutive charts stamped for inclusion into this survey, 278 (93%) were retrieved for analysis and 22 (7%) were unavailable for analysis or lost to follow up. Of those retrieved, 65 patient visits (23%) were reported as scheduled, and a further 15 charts (5%) were not completed by anyone. The remaining 198 charts were included in the analysis (*Figure 1*).

Of these, 192 charts had a recorded "patient" response. The other six patients were residents of a home for mentally handicapped adults. One hundred eighty-three charts were completed by the nurse, and 121 charts had a physician response noted. A total of 21 family physicians and 14 registered nurses were involved with patient assessments during the study period.

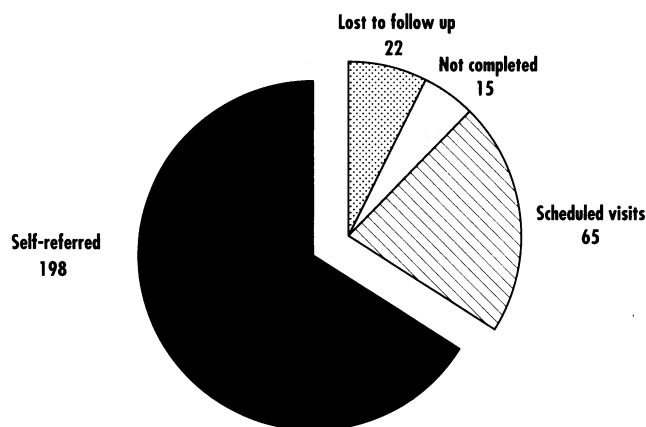
Discrepancies in opinion

Overall, 140 patients or parents (73%) believed that the presenting problem could not have waited 12 to 24 hours for assessment (*Figure 2*). Nurses, however, considered the problem urgent in only 93 cases (51%). This indicates only moderate agreement ($\kappa = 0.5 \pm 0.06$ SD) between patients and nurses for those charts where both responses were noted. In most instances the patient considered the problem more urgent than did the nurse (odds ratio = 13). Physicians reported that 62 of the patient visits (51%) were for an urgent problem. This also indicates moderate agreement with patients ($\kappa = 0.58 \pm 0.07$ SE). Disagreement occurred mainly in the same direction as that between nurses and patients (odds ratio = 10).

Agreement between doctor and nurse was high ($\kappa = 0.74 \pm 0.06$ SE), with only 14 cases of disagreement in 109 charts completed by both nurse and physician. Disagreement over the urgency of the problem was equally distributed between the nurse and the physician.

Patients' responses did not vary statistically with age (Pearson $\chi^2 = 8.5, P = 0.07$), although a trend toward an increased perception of urgency appeared at the extremes of age (*Figure 3*). For example, 83% of parents responding for children younger than 5 years believed that their complaint required urgent assessment.

Figure 1. Emergency charts audited for study (N = 300)



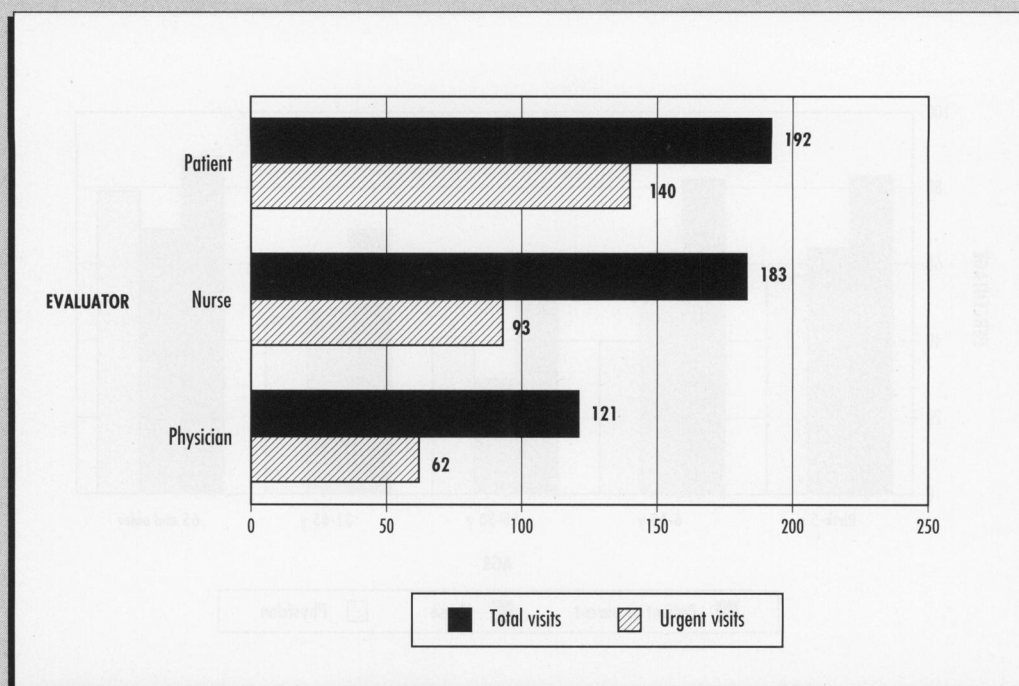
doctor?"). The yes or no response was recorded on a specially marked area on the chart. Similarly, the nurse and in turn the physician were asked to record whether they thought the problem was urgent or not.

Only patients whose visits were self-initiated were included in this study. Patients attending clinics by surgical specialists (otolaryngology, general surgery) through the emergency room or patients with scheduled visits to the emergency room for lesion removal, dressing changes, etc, were excluded from this study.

After patients were discharged from the emergency department, completed charts were audited for patient, nurse, and physician response. Patients' age, type and duration of symptoms, time and day of visit, and city of residence were recorded. No names or identification numbers were recorded to preserve anonymity.

Analysis of agreement between patients' responses and those of health care providers was completed using κ , a measure of the agreement between two or more observers taking into account all responses (in this case two: yes or no) and the possibility of agreement owing to chance alone. The effect of patient demographic variables was analyzed using Pearson χ^2 analysis.

Figure 2. Perception of urgency of visit



Likewise, 88% of persons older than 65 years considered their problem urgent.

The physician's responses were also unrelated to patient age (Pearson $\chi^2 = 6.60$, $P = 0.16$); however, they judged a higher proportion of children and elderly visits as urgent. The effect of patient age, however, influenced the perception of urgency by nurses (Pearson $\chi^2 = 13.09$, $P = 0.01$).

The agreement between patients and health care providers did not appear to be influenced by patient age. The only exception to this was when patient age was less than 5 years. Agreement between parent and nurse was high ($\kappa = 0.75$) in this age group. This did not extend to physicians, whose agreement with patients was unaffected by age. There was perfect agreement ($\kappa = 1.0$) between doctors and nurses for patients older than 65 years.

Perception of urgency

A variety of patient complaints were assessed during this time (Figure 4). Unfortunately, numbers in each category

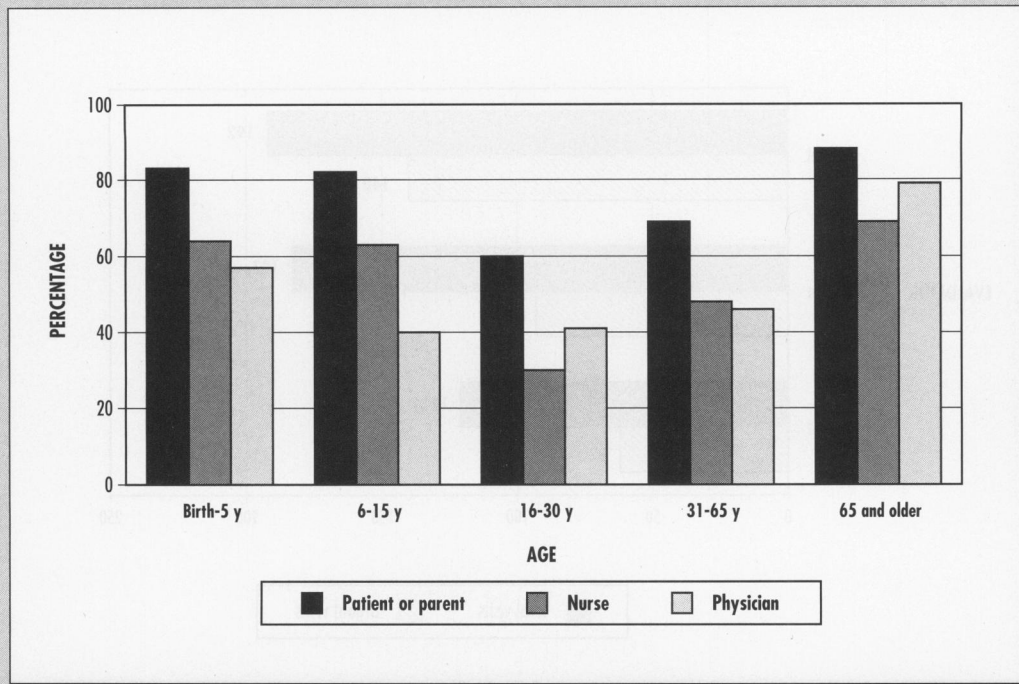
were too small for meaningful analysis of their effect on impression of urgency.

Some interesting observations, however, can be made. First, the problems deemed urgent most often were quite different for the three different groups. Patients reported that their neurological complaints (headaches or dizziness) were urgent 95% of the time. Gastrointestinal and skin complaints were ranked as second and third most urgent. Nurses also believed that neurological symptoms were urgent more often, followed by chest pains and gastrointestinal problems. Physicians assessed chest pains as urgent 100% of the time, more than any other complaint, with gastrointestinal and skin complaints after that.

Second, some problems had wide discrepancy in perception of urgency between groups. For example, 67% of patients considered their otolaryngological symptoms urgent concerns, while only 25% of health care providers agreed.

Patients' perceptions of urgency differed significantly with duration of symptoms (Pearson $\chi^2 = 9.23$, $P = 0.02$). Of all

Figure 3. Effect of patient age on perception of urgency



urgent visits, 56% presented within 1 day of the onset of symptoms (Figure 5). Both physicians and nurses believed that, the longer the patient had the symptoms, the less urgent the problem (Pearson $\chi^2 = 24.35$, $P < 0.001$ for nurses; Pearson $\chi^2 = 14.33$, $P = 0.002$ for physicians). Agreement was unaffected by this variable.

Patients' views of problem urgency were unrelated to time of day that they presented to the hospital (Pearson $\chi^2 = 0.03$, $P = 0.98$). Consistently, 74% of patients considered their visit urgent (Figure 6). Nurses' and doctors' responses, however, were affected by the time of presentation (Pearson $\chi^2 = 6.70$, $P = 0.04$ for nurses; Pearson $\chi^2 = 5.77$, $P = 0.05$ for doctors). Doctors and nurses were much more likely to view problems as urgent after midnight. Agreement between patient, nurse, and physician about the urgency of the visit was highest ($\kappa = 0.61 \pm 0.84$ SE) during this time.

The perception of urgency of the problem was significantly different on weekends from perception on weekdays

(for patients, Pearson $\chi^2 = 10.38$, $P = 0.06$; for nurses, Pearson $\chi^2 = 10.01$, $P = 0.01$; for doctors, Pearson $\chi^2 = 6.57$, $P = 0.04$). All respondents perceived visits on weekends to be more urgent (Figure 7).

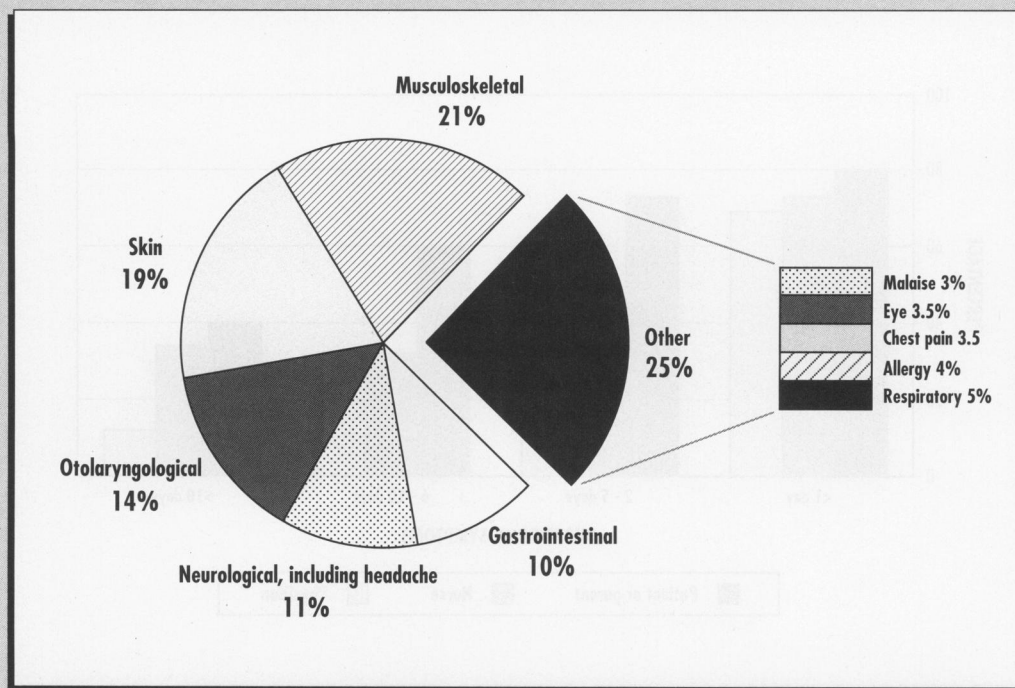
DISCUSSION

This study examined the use of emergency services and patient perceptions of the urgency of their problems in a community hospital in Ontario.

Overall, most patients (73%) believed that their problems required attention before 12 hours (were urgent). This belief was corroborated by emergency department nurses and doctors in only two thirds of cases. There was a definite trend when staff and patient disagreed; the patient was much more likely to believe that his or her concern was urgent than were the staff.

The patient's perception of urgency seems to be unrelated to age or time of presentation to hospital, but patients arriving on weekends were much more likely to believe that their problem needed

Figure 4. Common presenting problems



attention than patients arriving during the week. This could be related to a perception that their own physician is inaccessible and a need to have an immediate answer to their health concern. It appears, however, that health care providers also perceive problems to be more urgent (or less able to be deferred) on weekends. It could very well be that, in this community, the only access to medical care is through the emergency room during this period, and both patients and staff have grown accustomed to and accept this use of hospital services.

Health care providers' attitudes also varied with other factors. Nurses' responses were affected by patient's age, particularly in the ages between 16 and 65 where problems were often deemed less urgent. Perhaps a "wellness bias" is operating here, and these patient groups are seen as being generally healthy. It could also be that nurses were much more likely to agree with parents of young children about the urgency of their visit because they, a group made up mainly of young women, could easily identify with these

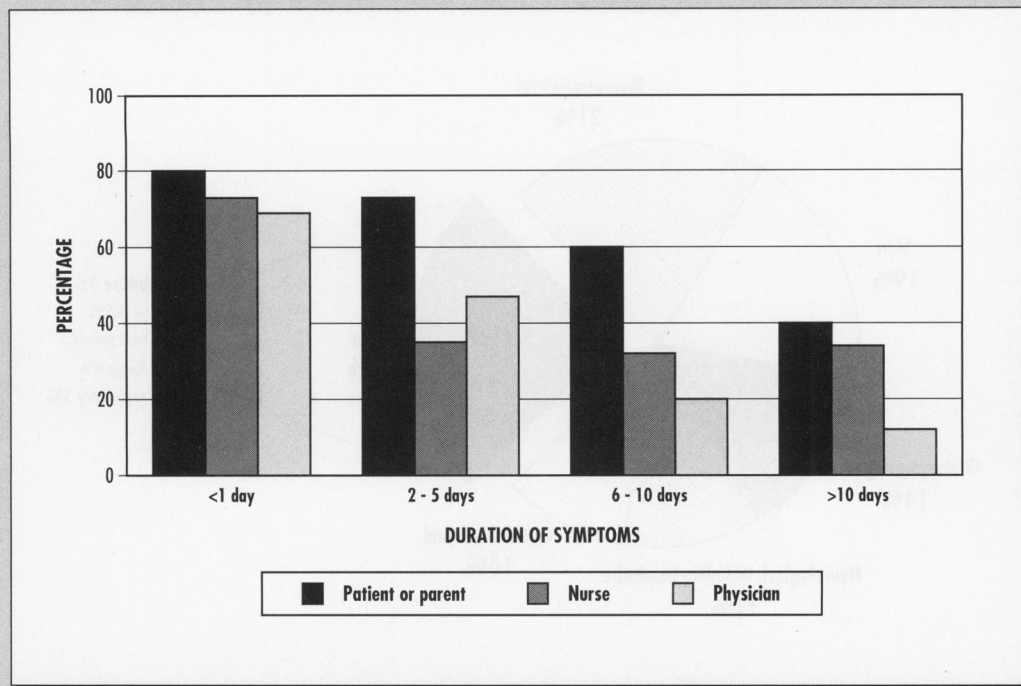
parents. Both doctors' and nurses' attitudes correlated with both time of day (after midnight was viewed as more urgent) and day of week.

Shortcomings of the study

This study has several shortcomings that could have affected the results. Notably, there was poor physician compliance to this survey despite adequate advertisement. Only 61% of charts were completed by physicians, with most incomplete charts on weekends.

Second, the recording of response by the nurse and the physician was not done blindly; physicians, in particular, had access to both the patient and nurse response before they answered. This could have influenced reporting by the health care provider. Also, the definition of urgent as requiring care within 12 to 24 hours might be too broad. Perhaps categorizing urgent into shorter time spans (immediate, emergency, urgent, able to be deferred) as done by Braunstein et al¹ and Gifford et al⁴ would have given a more complete picture of patient attitudes.

Figure 5. Effect of duration of symptoms on perception of urgency



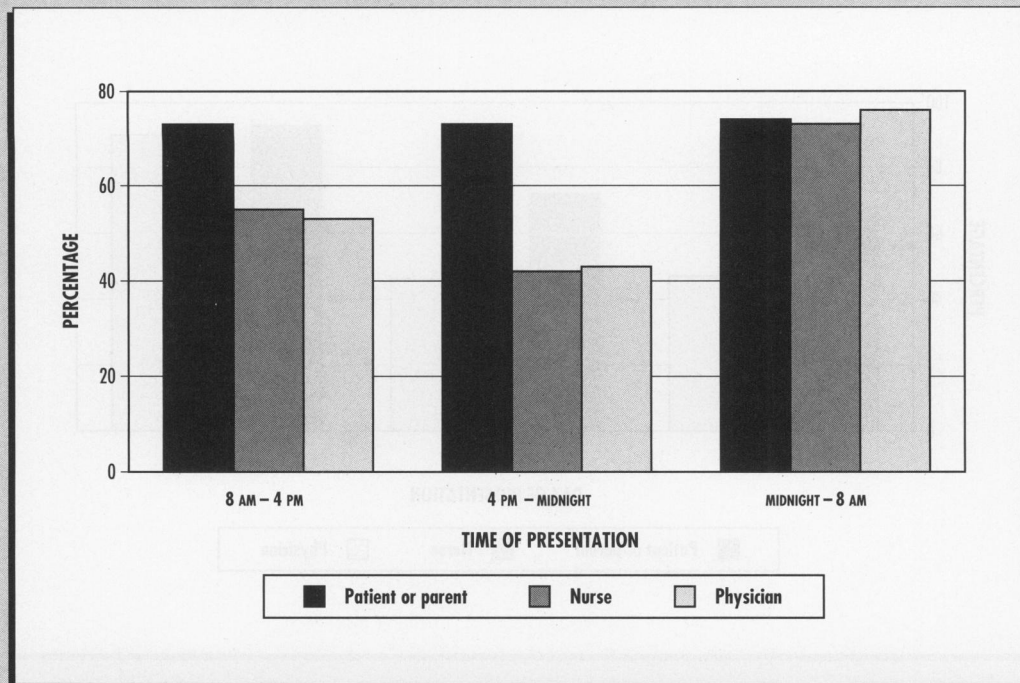
Finally, although patient responses were obtained after nursing triage (ie, not in the waiting room), there could have been a patient response bias related to the short time lag between questionnaire and provision of health care. For example, a patient might be more likely to believe that he or she has to justify being in the emergency room by reporting that the concern is urgent.

Despite these flaws, one can draw several conclusions from these data. Results agree with other studies¹⁻⁴ of emergency departments that many patients are using emergency triage centres even though they, themselves, do not view their problems as emergencies. In this survey, more than 25% of all self-initiated visits were deemed not urgent by patients, and another 65 patients (23% of all visits) were scheduled by their own physicians to use the expensive resources of the hospital emergency room. This finding suggests that patient and physician education might be of great value for cutting inappropriate visits. Many of these patients reported not

having a doctor or were unaware that they could be easily slotted into a clinic the following day.

Fortunately, in this study only three cases were problems perceived as urgent by the health care providers and not recognized as such by the patient, thus delaying needed care. Of these, two were uninjured victims of a motor vehicle collision and one was an elderly woman whose episode of angina had resolved before she reached hospital. Thus, it appears that educating the "nonurgent users" could reduce emergency room use without risking medical safety. This group should perhaps be encouraged to treat themselves until a regular appointment can be made and to take greater responsibility for their own minor ailments. It might also be appropriate for physicians using the expensive but convenient services (for dressing changes, etc) provided by the emergency room to assist hospitals and government to arrange alternative, less expensive provision of services, perhaps an after-hours "recheck" clinic affiliated with the hospital.

Figure 6. Effect of time of day on perception of urgency



Educating patients about urgent care

Much disagreement and discourse surrounds the management of the other, larger, group of patients who believe that they require urgent care when assessment reveals that their concerns are unfounded prospectively as well as retrospectively.^{1-3,5-7} Some patients also seek urgent care on the recommendation of their doctors only because of convenience (ie, on weekends and evenings). Physicians perhaps encourage increased use in an effort to protect themselves from litigation by encouraging people to seek attention "if you are worried at all..." Also, as patients become more and more medicine-literate through the lay press, they might be more likely to read their symptoms as harbingers of serious illness.

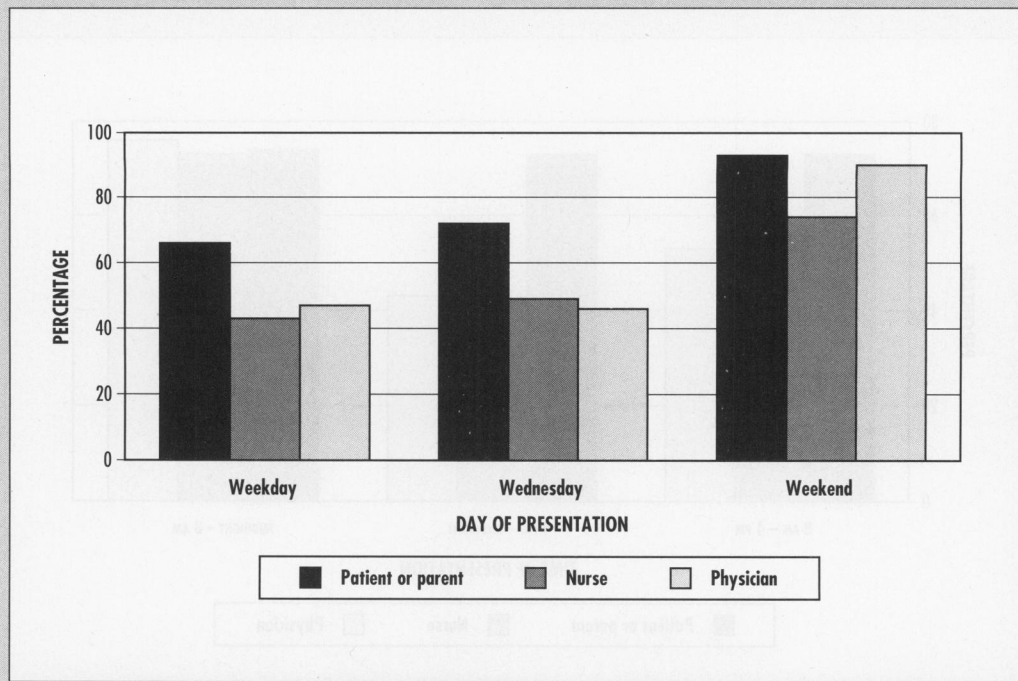
Several authors^{2,3} suggest that physicians and nurses should accept patients' perceptions of how urgent the problem is even when it differs from their perception. Some^{2,5} maintain that it is presumptuous of health care providers to assert that minor illness is unimportant and that

patient anxiety is not a "good enough" reason to seek medical aid. It has been suggested^{2,3} that it is, in the end, a patient's right to determine where and when to access the medical system based on his or her own perceptions, and we agree.

Many walk-in clinics, however, have sprung up in the past decade, presumably to meet these needs, but they have had little impact on the use and misuse of expensive hospital-based services.⁶⁻⁸ We believe that the best way to contain costs due to overuse of expensive services is to assist the public in changing their perceptions of urgency.

The onus of this enormous undertaking in education should be shared among all parties with influence in health care. Government promotion and development of public health programs can augment teaching done by individual physicians and allied health care workers. Informing patients of reasonable expectations and side effects of a new medication, for example, or recommending simple home remedies for common minor illnesses before they occur

Figure 7. Effect of day of week on perception of urgency



(ie, managing low-grade fevers in young children) can avert many unnecessary visits to the emergency room. Marketing these measures to the public as being both less expensive and less time-consuming for them could be the key to success of such a program.

This study demonstrated patients' perceptions of their illnesses and some of the variables that affect access to the health care system. Considerable opportunity exists to alter patients' perceptions of the urgency of their medical concerns. Inappropriate visits to emergency rooms might be reduced through widespread education, perhaps fostering more cost-effective use of emergency services. ■

Acknowledgment

We thank the staff of the Prince Edward County Memorial Hospital in Picton, Ont, for their cooperation and support during this study. We especially thank Dr David Seybold and Dr Andrew Janikowski for their comments on the study design. The assistance of Dr Benny Zee of the Clinical Trials group at Queen's University with the statistical analysis and Dr Neil Hobbs of the Department of Family Medicine with graphics was much appreciated.

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References

- Braunstein J, Abanobi OC, Goldhagen JL. Parental perception of urgency and utilization of pediatric emergency services. *Fam Pract Res J* 1987;6:130-7.
- Stratman WC, Ullman R. A study of consumer attitudes about health care: the role of the emergency room. *Med Care* 1975;13:1033-43.
- Wolcott BW. What is an emergency? Depends on whom you ask. *J Am Coll Emerg Phys* 1979;8(6):241-3.
- Gifford MJ, Franaszek JB, Gibson G. Emergency physicians' and patients' assessments: urgency of need for medical care. *Ann Emerg Med* 1980; 9(10):502-7.
- Martin E, Russell D, Goodwin S, Chapman R, North M, Sheridan P. Why patients consult and what happens when they do. *BMJ* 1991;303:289-92.
- Rizos J, Anglin P, Grava-Gubins I, Lazar C. Walk-in clinics: implications for family practice. *Can Med Assoc J* 1990;143:740-5.
- Miller GB, Nantes S. Walk-in clinics and primary care: review of the literature. *Can Fam Physician* 1989;35:2019-22.
- Chouinard A. What's wrong with walk-ins? *Can Med Assoc J* 1988;139:63-4.

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