EM ADVANCES

Rural emergency department use by CTAS IV and V patients

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ABSTRACT

Objective: For a variety of reasons, many emergency department (ED) visits are classified as less- or nonurgent (Canadian Triage and Acuity Scale [CTAS] level IV and V). A recent survey in a tertiary care ED identified some of these reasons. The purpose of our study was to determine if these same reasons applied to patients presenting with problems triaged at a similar level at a low-volume rural ED.

Methods: A 9-question survey tool was administered to 141 CTAS level IV and V patients who attended the South Huron Hospital ED, in Exeter, Ontario, over a 2-week period in December 2006.

Results: Of the 141 eligible patients, 137 (97.2%) completed the study. One hundred and twenty-two patients (89.1%) reported having a family physician (FP) and 53 (38.7%) had already seen an FP before presenting to the ED. Just over one-half of all patients (51.1%) had their problem for more than 48 hours, and 42 (30.7%) stated that they were referred to the ED for care. Fifty-three (38.7%) of the respondents felt they needed treatment as soon as possible. Many patients reported coming to the ED because: 1) their FP office was closed (21.9%); 2) they could not get a timely appointment (16.8%); or 3) the walk-in clinic was closed (24.8%). Only 6 patients (4.4%) specifically stated that they came to the ED because they had no FP. One-third of patients attended the ED because they believed it offered specialized services.

Conclusion: In this rural setting, most less- or nonurgent ED patients had an FP yet they went to the ED because they did not have access to primary care, because they perceived their problem to be urgent or because they were referred for or sought specific services.

Keywords: nonurgent, low acuity, Canadian Emergency Department Triage and Acuity Scale, CTAS, rural ED

RÉSUMÉ

Objectif : Pour de nombreuses raisons, bon nombre des patients se présentant à l'urgence sont classés dans les catégories « moins urgent » ou « non urgent » correspondant respectivement aux niveaux IV et V de l'Échelle canadienne de triage et de gravité (ÉTG). Un récent sondage réalisé à l'urgence d'un centre hospitalier de soins de troisième ligne a mis en lumière certaines raisons. L'objectif de notre étude était de déterminer si les mêmes raisons s'appliqueraient au triage à un niveau semblable chez les patients se présentant à l'urgence dans un centre hospitalier à faible achalandage en milieu rural.

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Méthodes : Un sondage de 9 questions a été réalisé sur une période de 2 semaines, en décembre 2006, auprès de 141 patients s'étant présentés à l'urgence de l'hôpital South Huron, à Exeter (Ontario) et à qui ont été attribués les niveaux IV et V de l'ÉTG.
Résultats : Des 141 patients admissibles à l'étude, 137 (97,2 %) ont répondu au sondage. Cent vingt-deux patients (89,1 %) ont déclaré avoir un médecin de famille (MF) et 53 (38,7 %) avaient déjà consulté un MF avant de se présenter à l'urgence. Chez un peu plus de la moitié des patients (51,1 %), les symptômes étaient présents depuis plus de 48 heures, et 42 (30,7 %) ont indiqué qu'ils avaient été dirigés à l'urgence pour être traités. Cinquante-trois (38,7 %) des répondants estimaient qu'ils devaient être traités dans les meilleurs délais. Un grand nombre de patients ont mentionné qu'ils se sont présentés à l'urgence pour les raisons suivantes : 1) le cabinet de leur MF était fermé (21,9 %); 2) ils ne pouvaient obtenir promptement un rendez-vous (16,8 %); ou 3) la clinique sans rendez-vous était fermée (24,8 %). Seulement 6 patients (4,4 %) ont précisé qu'ils s'étaient présentés à l'urgence parce qu'ils n'avaient pas de MF. Un tiers des patients se sont rendu à l'urgence parce qu'ils pensaient pouvoir y recevoir des services spécialisés.
Conclusion : En milieu rural, la plupart des patients ayant été classés dans les catégories « moins urgent » ou « non urgent » avaient un MF, mais ont pourtant choisi de se présenter à l'urgence parce que 1) ils n'avaient pas accès à des soins primaires; 2) ils estimaient que leur état était urgent; 3) ils avaient été aiguillés vers l'urgence; 4) ils pensaient avoir accès à des services spécialisés.

Introduction

It is well known that many emergency department (ED) visits are considered less- or nonurgent (level IV or V as classified by the Canadian Triage and Acuity Scale [CTAS]).[1–3] The reasons for these visits have been the focus of several studies, as many health care personnel consider such ED use inappropriate. They believe that less- or nonurgent problems should be treated in other health care settings, such as walk-in clinics or family physician (FP) offices.[4–11] Many reasons have been suggested for less- or nonurgent ED use, including convenience,[12,13] not having an FP[12] and a lack of awareness of other treatment options.[14] Boushy and Dubinsky discounted the notion of convenience by demonstrating that less- or nonurgent ED use can prove frustrating for patients because many of these visits are associated with lengthy wait times or negative interactions with ED staff. The latter often believe they are providing care that should be sought elsewhere.[14]

A study conducted by Field and Lantz in 2006[15] identified various reasons why CTAS IV and V patients use a tertiary care ED. Some of the most common reasons included: 1) patients felt they required a specific service offered by the ED; 2) they believed their condition was urgent; or 3) they were referred to the ED by a community member. The same authors also found that having or not having an FP bore no relation to rates of ED use by CTAS level IV and V patients. Our study undertook to determine if the reasons CTAS IV and V patients presenting to a low-volume rural ED are similar to those identified in an urban tertiary care setting.

Methods

Design and setting

Based on the model used by Field and Lantz,[15] our cross-sectional patient survey was conducted over a 2-week period (24 h/d) in December 2006 at the South Huron Hospital ED in Exeter, Ontario. This 24-hour emergency care provider with a local population of 4000 treats approximately 10 000 patients per year. Our survey was approved by the South Huron Hospital Medical Advisory Committee.

Subjects

Using the Canadian Emergency Department Triage and Acuity Scale (CTAS),[3,16,17] we defined less-urgent patients as CTAS level IV and nonurgent patients as CTAS level V (Box 1). All arriving patients were seen by a CTAS-certified triage nurse and assigned a CTAS acuity level (Box 1). Those who were triaged into these acuity levels were asked to participate in the study and they were given a cover letter that described the nature of the study, requested their involvement in the study and informed them that their participation was voluntary and confidential. For those who did not wish to participate, "void" was written on their survey when it was returned uncompleted.

Data collection and analysis

Each participant was given a questionnaire with 9 questions (Appendix 1). Survey results were tabulated and the data analyzed using Microsoft Excel (Microsoft Corporation, Redmond, Washington).

Results

During the 2-week study period, 141 patients were eligible for the study. Of them, 137 (97.2%) completed the survey and were all grouped together as less- or nonurgent for the purpose of analysis.

The majority of patients were from the local area and had an FP (Table 1). More than one-third of the respondents had already seen a physician for their problem (53 patients, 38.7%). Just over one-half of all patients (51.1%) had had their nonacute medical problem for more than 48 hours before presenting to the ED. Forty-two patients (30.7%) stated that they were referred to the ED for care (Table 1). When this latter group was further analyzed, 32 out of 46 of respondents indicated that a health care worker had recommended the ED visit (Table 2). The sum of patients for this subanalysis exceeds the study denominator because some patients cited more than 1 reason.

Many patients came to the ED because they did not have immediate access to primary care (Table 3). More than 20% of respondents reported that they presented to the ED because their own FP office was closed. Another 16.8% stated that they could not wait for an appointment with their own FP, while 24.8% stated that they went to the ED because the alternative site (i.e., a walk-in clinic) was closed. Only 4.4% listed not having an FP as the reason for their visit. Many (38.7%) felt that they needed treatment as soon as possible, while another 32.8% felt an ED-specific service, such as radiography, suturing, IV medication or casting, was required (Table 4).

Box 1. Description and objectives of the Canadian Emergency Department Triage and Acuity Scale (CTAS) levels[3,18]

I Resuscitation
- Conditions that threaten life or limb and need to be seen immediately.

II Emergent
- Conditions that are a potential threat to life, limb or function and need to be assessed within < 15 min.

III Urgent
- Conditions that could potentially progress to a serious problem and need to be assessed within < 30 min.

IV Less urgent/Semi-urgent
- Conditions that would benefit from intervention and should be assessed within < 60 min.

V Nonurgent
- Conditions that may be acute but are nonurgent or part of a chronic problem, and should be assessed within < 120 min.

Table 1. General descriptive data of patient responses

Question	No. (and %) of patients who responded "yes"; *n* = 137
Are you a resident of the Exeter, Ontario, area?	109 (79.6)
Do you have a family doctor?	122 (89.1)
Have you seen a doctor about this problem before?	53 (38.7)
Have you had this problem for > 48 h?	70 (51.1)
Did someone send you to the emergency department?	42 (30.7)

Discussion

We found that there are many reasons why patients present to an ED with less- or nonurgent medical problems. This is consistent with previous literature.[4–11,15] Previous investigators

Table 2. Responses of the 42 patients who reported they were referred to the emergency department

Referral source	No. of patients
Patients family physi cian	9
Another family physician	0
Walk-in clinic	4
Specialist	2
Dentist	1
Nurse	8
Telehealth Ontario nurse	1
Paramedic	4
9-1-1 operator	1
Told to return by EP after previous ED visit	2
Subtotal	32
Other*	14
Total	46†

ED = emergency department; EP = emergency physician.
*Other referral sources included employer (2), family (10) and friend (1), and 1 patient did not include a response.
†The sum of the patients (46) exceeds the study denominator (42) because some patients provided more than 1 reason.

Table 3. Reasons why respondents went to the emergency department

Reason for ED use	No. (and %) of patients; *n* = 137*
Needed a specific service offered in the ED	45 (32.8)
Needed treatment as soon as possible	53 (38.7)
Family physician's office was closed	30 (21.9)
Could not wait for appointment with family physician	23 (16.8)
Walk-in clinic was closed	34 (24.8)
Did not have a family physician	6 (4.4)

ED = emergency department.
*Percentages and sum of patients exceeds the study denominator because many patients cited more than 1 reason.

have suggested that a shortage of FPs could be partly responsible for ED use by this group of patients.[18] Contrary to this belief, the vast majority of patients in our study had an FP (89.1%), which was similar to the results reported by Boushet and Dubinsky a decade ago.[14] Furthermore, only 4.4% claimed to be using the ED because they did not have an FP. This agrees with the recent urban Canadian study published by Field and Lantz in 2006.[15] Having an FP does not seem to prevent less- or nonurgent ED visits in this setting; moreover, not having one did not seem to contribute further to ED use, although here the numbers are too small to be certain.

Lack of access to primary care has often been suggested as a contributor to ED use.[4,8,9,12,13,15] This was demonstrated in our study with patients presenting because their FP's office was closed (21.9%), because they could not wait for an appointment (16.8%) or because the walk-in clinic was closed (24.8%). Suggesting that diversion of these less- or nonurgent patients away from the ED if primary care access was available may not be without risk.[1,19] In addition, these patients do not contribute to overcrowding and use only a small proportion of ED resources.[2,12,19,20] Providing primary care to this group in an ED may be more cost effective than opening an additional health care facility. Such a facility would also require additional personnel, personnel who are lacking in most small Canadian communities.

Many of our patients reported being referred to our rural ED for care. Burnett and Grover[21] reported 40% of patients were referred to their urban ED. In their study, the majority of those who referred these less- or nonurgent patients were health care professionals. This was confirmed in our study. More education may be needed to prevent less- or nonurgent patients from being directed to the ED when other options exist in the community.

Previous studies have demonstrated that patients' perceived urgency led to less- or nonurgent ED visits.[4,21–23] Our study supports this finding. In this sense, patients used the ED appropriately. A patient's perception of urgency has been shown to vary greatly from that of a physician's.[8,9,11,24] More than one-half of the study patients reported having their medical problem for more than 48 hours. Furthermore, 38.7% of patients had already seen a physician for their less- or nonurgent medical problem. These results may indicate patient dissatisfaction with their usual source of primary care, a suggestion that was previously raised by Sarver and colleagues.[18] It is also possible that some patients are using the ED to obtain a second opinion.

Many patients presented to the ED with less- or nonurgent problems because they believed they required a specific service provided by the ED. The most common of these services was radiographs, which was the same reason cited by a number of other researchers.[1,13,22] However, radiographs are offered by our local walk-in clinic, which is open 364 days a year. The walk-in clinic also offers casting, suturing and dressing changes. This finding may suggest that the public is unfamiliar with the walk-in clinic and the services it offers, or that they find the convenience of the ED's 24-hour-a-day availability more attractive than clinic hours. Even if public education made them aware of these alternate resources, there is little evidence that such sources of care will reduce the number of less- or nonurgent patients visiting the ED.[13,19]

Table 4. Specific services in the emergency department cited as being needed (*n* = 45)

Required service	No. of patients*
Radiography	20
Suturing (stitches)	7
Casting	2
Intravenous medications	4
Other	15

*Sum of patients exceeds the study denominator because some patients cited more than 1 reason.

Limitations

This study is limited by its relatively small sample size, single site location and brief seasonal sampling period. Moreover, the location is unique because it has a walk-in clinic in a rural setting. Further research should explore the reasons for choosing the ED for less- or nonurgent problems when alternate sources of primary care are open and available.

Conclusion

In this low-volume rural setting, the main reasons for many less- or nonurgent patients to present to the ED included the fact that they had an FP but had difficulty accessing timely care, that they were referred to the ED or that they perceived they needed specialized care.

The recent primary care reform movement has put together teams of health care providers. Goals of these teams include improving access to primary care and increasing the number of services available. A further study should be conducted to determine if the number of less- or nonurgent ED patients decreases as a result of this paradigm shift in the delivery of primary care.

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Appendix 1. Sample patient questionnaire	
1. Are you a resident of the Exeter area?	YES / NO
2. Do you have a family doctor? If NO, why? (please mark) ____Cannot find one accepting new patients ____Not from the area ____Have not looked for one ____Other (please specify) _____	YES / NO
3. Have you seen a doctor about this problem before?	YES / NO
4. Have you had this problem for more than 48 h?	YES / NO
5. Did someone send you to the emergency department? If YES, who? (please mark) ____Your own family doctor ____Another family doctor ____Walk-in-clinic ____Specialist ____Dentist ____Nurse ____Paramedic ____Asked to return by the Exeter emergency doctor ____Other (please specify) _____	YES / NO
6. If YES, did that person make arrangements for you to come to the emergency department? (i.e., called ahead)	YES / NO
7. Is your problem related to a recent injury (within 48 h)?	YES / NO
8. Did you come here because of a dental problem?	YES / NO
9. Why did you come to the emergency department? (please mark) ____Sent here ____Do not have a family doctor ____Needed treatment as soon as possible ____Family doctor's office was closed ____Could not wait for appointment with family doctor ____Walk-in-clinic was closed ____The emergency department offers a specific service you think you require (please mark) ____X-ray ____IV medication ____Sutures (stitches) ____Casting ____Other (please specify) _____	