

Perspectives of ambulatory patients visiting the emergency department during the Christmas and New Year holiday period

Descriptive survey

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Abstract

Objective To assess the perceptions of ambulatory patients presenting to the emergency department (ED) of symptom acuity and access to care; the proportion of ambulatory patients who contacted their GPs before attending the ED; and patients' knowledge about whether their GPs provide after-hours or walk-in services.

Design Descriptive survey and proportion test comparisons for data analysis.

Setting Kingston, Ont.

Participants All ambulatory patients presenting to the ED from December 22, 2016, to January 2, 2017 ("holiday surge" period), and from September 25, 2017, to October 1, 2017 (nonholiday period).

Main outcome measures Patients' perceptions of symptom acuity and access to primary care; proportion of patients who contacted their GPs before attending the ED; and patients' knowledge about their GPs' after-hours or walk-in services.

Results Overall, 1638 patients during the holiday surge period and 642 patients during the nonholiday period completed the survey (response rate of 54.8% and 38.3%, respectively). Out of all 2280 participants, 530 (23.2%) contacted their GP before going to the ED; 1514 (66.4%) participants decided to go to the ED on their own, and about half of them (795 of 1514 [52.5%]) believed their problem was urgent and could not wait for a GP. A third of all participants (825 of 2280 [36.2%]) believed their GP could have managed their medical problem if they could have gotten an appointment that day. Among a subgroup of participants with a GP, 1095 (52.5%) were aware of off-hour services provided by their GP. There were no statistically significant differences in responses between the holiday and nonholiday periods.

Conclusion A large proportion of ambulatory patients would have seen their GP for their medical issue if they thought that they had same-day or next-day access. There is a need for general and emergency physicians to work together on improving access to acute care services.

Editor's key points

▶ During the Christmas and New Year holidays, emergency departments (EDs) experience an increase in patient volume that has been attributed to a reduced availability of health care resources, including GPs, during the holiday period, resulting in patients with nonemergent complaints visiting an ED setting. This phenomenon is called the *holiday surge*. This study sought to determine why patients decide to come to the ED with nonemergent issues at one of the busiest times of the year.

▶ This study found that lack of timely access to a GP drives a large proportion of ambulatory patients to the ED to seek acute care services for medical complaints that could have been treated by a GP. This problem is compounded by the finding that almost half of respondents were not aware of whether their GP provided care at an after-hours clinic or walk-in service. There was also an important proportion of patients who perceived their presenting complaint to be appropriate for ED-based care. The absence of differences between the holiday surge and nonholiday periods suggests that patient access to their GP and patients' perception of their acuity is a problem that is not limited to holiday periods.

▶ Patients could benefit from interventions that focus on patient education about illness severity and appropriate use of health care resources. Also, improving timely access to GPs with same-day appointments and ensuring patient awareness about GP availability might help reduce the burden on EDs.



Points de repère du rédacteur

► Durant la période des vacances de Noël et du Nouvel An, les services d'urgence connaissent une augmentation du nombre de patients, qui a été attribuée à la disponibilité réduite des ressources en santé, y compris celle des omnipraticiens, entraînant des visites de patients qui consultent pour des problèmes non urgents. Ce phénomène est appelé l'affluence du temps des Fêtes. Cette étude cherchait à déterminer les raisons pour lesquelles des patients décident de se rendre aux services d'urgence pour des problèmes non impérieux, à l'un des moments les plus achalandés de l'année.

► Cette étude a relevé que le manque d'accès en temps opportun à un omnipraticien incite une grande proportion de patients ambulatoires à se rendre aux services d'urgence pour des problèmes médicaux qui auraient pu être traités par leur médecin. Cette situation est aggravée par la constatation suivante : près de la moitié des répondants ne savaient pas si leur omnipraticien offrait des soins après les heures normales ou dans une clinique sans rendez-vous. Un grand nombre de patients avaient aussi l'impression que leur problème immédiat justifiait des soins aux services d'urgence. L'absence de différences entre l'affluence du temps des Fêtes et les périodes non fériées fait valoir que l'accès des patients à leur omnipraticien et leur perception de la gravité de leur état constituent un problème qui ne se limite pas au temps des Fêtes.

► Les patients pourraient bénéficier d'interventions axées sur l'éducation à propos de la gravité des maladies et du recours approprié aux ressources en soins de santé. De plus, l'amélioration de l'accès à un omnipraticien en temps opportun grâce à des rendez-vous le jour même et l'assurance que les patients connaissent la disponibilité de leur médecin pourraient aider à réduire le fardeau des services d'urgence.

Points de vue de patients ambulatoires qui se présentent aux services d'urgence durant la période de Noël et du Nouvel An

Sondage descriptif

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Résumé

Objectif Évaluer comment les patients ambulatoires qui se présentent aux services d'urgence perçoivent la gravité de leurs symptômes et leur accès aux soins; la proportion des patients ambulatoires qui ont communiqué avec leur omnipraticien avant de se rendre aux services d'urgence; et les connaissances des patients à propos des services offerts par leur omnipraticien après les heures normales ou dans une clinique sans rendez-vous.

Type d'étude Sondage descriptif et comparaisons de tests de proportions pour l'analyse des données.

Contexte Kingston (Ontario).

Participants Tous les patients ambulatoires qui se sont présentés aux services d'urgence entre le 22 décembre 2016 et le 2 janvier 2017 (période d'«affluence du temps des Fêtes») et entre le 25 septembre 2017 et le 1^{er} octobre 2017 (période non fériée).

Principaux paramètres à l'étude Les perceptions des patients quant à la gravité de leurs symptômes et à leur accès aux soins primaires; la proportion de patients qui ont communiqué avec leur omnipraticien avant de se rendre aux services d'urgence; et les connaissances des patients au sujet des services offerts par leur omnipraticien en dehors des heures normales ou dans une clinique sans rendez-vous.

Résultats Dans l'ensemble, 1638 patients durant la période d'affluence du temps des Fêtes et 642 patients durant la période non fériée ont répondu au sondage (taux de réponse de 54,8 % et 38,8 % respectivement). Parmi les 2280 participants, au total, 530 (23,2 %) avaient communiqué avec leur omnipraticien avant de se rendre aux services d'urgence; 1514 (66,4 %) participants avaient décidé eux-mêmes d'aller aux services d'urgence, et environ la moitié d'entre eux (795 sur 1514 [52,5 %]) croyaient que leur problème était urgent et qu'ils ne pouvaient pas attendre de consulter leur omnipraticien. Le tiers de tous les participants (825 sur 2280 [36,2 %]) croyaient que leur omnipraticien aurait pu traiter leur problème médical s'ils avaient pu avoir un rendez-vous le même jour. Il n'y avait pas de différences statistiquement significatives dans les réponses fournies durant la période des Fêtes et celle non fériée.

Conclusion Une grande proportion de patients ambulatoires auraient consulté leur omnipraticien s'ils avaient su qu'ils pouvaient avoir un rendez-vous le jour même ou le lendemain. Il est nécessaire que les médecins généralistes et les médecins des services d'urgence travaillent de concert pour améliorer l'accès aux services de soins aigus.

During the Christmas and New Year holidays, emergency departments (EDs) experience a sharp increase in patient volume. This has been attributed to a reduced availability of health care resources, including GPs, during the holiday period, which results in patients with nonemergent complaints attending an ED setting.¹ In Canada, the media and hospitals have named this phenomenon the *holiday surge*.²⁻⁴ To meet the increased demand each year, EDs proactively develop plans to support timely access to acute care. However, these initiatives often fall short as overcrowding and prolonged wait times in the ED persist.

The holiday surge has been previously reported and quantified. However, to our knowledge, there have been no studies on the perspectives of patients regarding why they decide to come to the ED with nonemergent issues at one of the busiest times of the year. The objective of this study was to determine patient perceptions of those presenting to the ED during a holiday surge period about the acuity of their primary complaint, the proportion of patients who contacted health care providers before attending the ED, and patient knowledge about their GPs' after-hours or walk-in services. We were also interested in examining whether responses differed between a holiday surge period versus a nonholiday period.

— Methods —

The study occurred at the 2 urgent care sites of the Kingston Health Sciences Centre in Ontario: the ED at Kingston General Hospital (KGH) and the urgent care centre at Hotel Dieu Hospital (HDH). One academic department, which includes trainees, provides physician staffing for both sites. These hospital-based services serve a geographically defined population and are the only source of ED care in this community. In 2017, the combined departments saw more than 111 000 patients, with an overall admission rate of 19%. As of 2015, at least 70.1% of the population in Kingston was rostered with a GP. This figure does not include patients who have access to a GP who does not roster patients. The population of Kingston in 2016 was 117 660.⁵

We performed paper-based surveys during the 12-day holiday surge period between December 22, 2016, and January 2, 2017, as well as during a 7-day nonholiday period between September 25, 2017, and October 1, 2017. The nonholiday period was selected as it was not associated with any anticipated GP or hospital service closure, statutory holiday, or public-school holiday. Ethics clearance was provided by Queen's University and the Affiliated Teaching Hospitals Research Ethics Board.

The 1-page questionnaire asked the patient to describe his or her chief complaint, followed by a 3-question multiple-choice survey. The survey took less than 2 minutes to complete. During the study periods, all ambulatory patients presenting to the ED and urgent

care centre were given the questionnaire after completion of registration. The registration clerk completed the date, the time, and the Canadian Triage and Acuity Scale (CTAS) sections on the questionnaire before giving it to the patient. Participation was optional and anonymous, and there was no honorarium provided for completion of the survey. After receiving the survey, patients were not encouraged or reminded to complete the survey by hospital or research personnel. Completed questionnaires were deposited by the patients into collection boxes placed in the ED waiting room. The following patients were excluded from our study: resuscitative patients (CTAS 1), those arriving by emergency medical services, those who died or were dead on arrival in the ED, those directly admitted to a service, and those transferred from another facility. If the patient was unable to complete the survey owing to age or comorbidity, the survey was given to any attending caregiver who could complete the survey on his or her behalf.

Survey forms were collected and data entered in Microsoft Excel 2016. Patients' presenting complaints were categorized within Canadian Emergency Department Information Systems categories. Percentages, mean values, mean comparisons, and proportion test comparison statistical testing were performed with Microsoft Excel 2016. The level of significance used for all tests was $\alpha = .05$. A Bonferroni correction was applied to control for type 1 error inflation. Surveys with completed questions but incomplete demographic information were included in statistical analysis. Surveys without answers for the first 2 questions were excluded from statistical analysis. Response rates were calculated by dividing the total number of surveys included for statistical analysis by the number of patients who met inclusion criteria for the study, regardless of whether they received a survey.

— Results —

From December 22, 2016, to January 2, 2017, 1638 patients responded to the survey. This included 900 responses from the KGH ED (54.8% response rate), and 738 responses from the HDH urgent care centre (54.9% response rate). From September 25, 2017, to October 1, 2017, 642 patients responded to the survey. This included 243 responses from the KGH ED (29.7% response rate), and 399 responses from the HDH urgent care centre (46.5% response rate). There was a greater number of patients seen per day during the holiday versus nonholiday period; however, this did not achieve statistical significance (284.3 vs 268.3, $P = .05$). The age range of participants was 1 month to 99 years. During the nonholiday period there was a greater proportion of CTAS 3 patients (45.3% vs 37.7%, $P < .003$). A greater proportion of patients presented to acute care services with otorhinolaryngology (13.3% vs 7.8%, $P < .003$) and respiratory

complaints (11.5% vs 6.2%, $P < .003$) during the holiday period, this being consistent with influenza seasonal peaks. No other descriptors differed significantly (**Table 1**).

Table 2 summarizes whether patients had contacted a health care provider before visiting the ED. There were no significant differences in the proportion of patients who were referred to the ED or urgent care centre by specialists, telehealth, or walk-in clinic staff. Most patients did not contact a health care professional before going to an acute care service regardless of whether it was a holiday or nonholiday period (67.9% vs 62.6%, $P = .016$). The most common reason for not

seeing their GP was inability to get an appointment within a reasonable time, with no difference between holiday and nonholiday periods (59.6% vs 63.5%, $P = .37$). Within this patient subgroup, **Table 3** shows their responses regarding why they decided to seek an acute care service for their medical complaint. Most respondents in both periods believed that their problem was urgent and could not wait for a GP (53.6% vs 49.5%, $P = .16$). There was no difference in the proportion of respondents who did not have a GP (6.6% vs 9.2%, $P = .08$).

Table 4 shows that a smaller proportion of respondents during the holiday period believed that a GP could have treated their medical problem if they could have gotten an appointment within 24 to 48 hours (4.8% vs 8.6%, $P < .0125$). There were no other significant differences when comparing time frames.

For the subgroup of respondents with a GP, 1095 (52.5%) were aware of off-hour services provided by their GP. There was no significant difference by time frame in the proportions of people who knew whether their GP provided care at an after-hours clinic or walk-in service (53.6% vs 50.4%, $P = .23$). Of the patients who knew their GP provided care at an after-hours clinic or walk-in service, 70.3% of them knew the hours of that service during the holiday period, and 61.6% of them knew the hours of that service during the nonholiday period. However, during both periods, approximately a quarter of respondents did not answer this subquestion.

Given the similarities in patient response by time period, the results from holiday and nonholiday periods were combined. Of 2280 respondents, 530 (23.2%) contacted their GP before going to an emergency care service and 1514 (66.4%) decided to visit the emergency care service on their own. Most of the latter respondents (795 of 1514 [52.5%]) believed their problem was urgent and could not wait for a GP. A large proportion of patients (825 of 2280 [36.2%]) believed their GP could have managed their medical problem if they could have gotten an appointment that day.

— Discussion —

The results of this study suggest that lack of timely access to a GP drives a large proportion of ambulatory patients to the ED to seek acute care services for medical complaints that could have been treated by a GP. This problem is compounded by the finding that almost half of respondents were not aware of whether their GP provided care at an after-hours clinic or walk-in service. There was also an important proportion of patients who perceived their presenting complaint to be appropriate for ED-based care. We did not find the lack of a GP to contribute significantly to ED volume. The absence of differences between the holiday surge and nonholiday periods suggests that patient access to their GP and patients' perceptions of their acuity are problems that are not limited to holiday periods.

Table 1. Characteristics of study participants

DESCRIPTOR	HOLIDAY SURGE (N = 1638)	NONHOLIDAY PERIOD (N = 642)
Mean (SD) age,* y	42.9 (24.5)	40.3 (21.3)
Sex, [†] n (%)		
• Male	699 (42.7)	266 (41.4)
• Female	905 (55.3)	360 (56.1)
Mean (SD) patients per day	284.3 (14.8)	268.3 (21.4)
No. of patients by CTAS score, [‡] n (%)		
• 2	122 (7.4)	27 (4.2)
• 3	617 (37.7)	291 (45.3)
• 4	793 (48.4)	294 (45.8)
• 5	68 (4.2)	30 (4.7)
Presenting patient complaint, [§] n (%)		
• Cardiovascular	91 (5.6)	37 (5.8)
• Ear, nose, and throat	218 (13.3)	50 (7.8)
• Environmental	0 (0.0)	1 (0.1)
• Gastrointestinal	162 (9.9)	74 (11.5)
• Genitourinary	83 (5.1)	34 (5.3)
• Mental health	10 (0.6)	3 (0.4)
• Neurologic	91 (5.6)	57 (8.9)
• Obstetric-gynecologic	31 (1.9)	15 (2.3)
• Ophthalmologic	50 (3.1)	23 (3.6)
• Orthopedic	367 (22.4)	154 (24.0)
• Respiratory	189 (11.5)	40 (6.2)
• Skin	134 (8.2)	77 (12.0)
• Substance misuse	0 (0.0)	0 (0.0)
• Trauma	0 (0.0)	0 (0.0)
• General and minor	203 (12.4)	65 (10.1)

CTAS—Canadian Triage and Acuity Scale.

*Data missing for 39 participants.

[†]Data missing for 50 participants.

[‡]Data missing for 38 participants.

[§]Data missing for 21 participants.

Table 2. Participant responses to whether they contacted an HCP for their medical problem before visiting an acute care service

RESPONSE	HOLIDAY SURGE (N = 1638), N (%)	NONHOLIDAY PERIOD (N = 642), N (%)	P VALUE*
Yes, contacted GP	358 (21.9)	172 (26.8)	.012
Yes, contacted specialist	46 (2.8)	9 (1.4)	.05
Yes, called telehealth	50 (3.1)	21 (3.3)	.79
Yes, used walk-in clinic	34 (2.1)	25 (3.9)	.014
No, decided to come in by self	1112 (67.9)	402 (62.6)	.016
No, told to return by emergency physician	38 (2.3)	13 (2.0)	.67

HCP—health care provider.

*Level of significance at $P < .0083$ after Bonferroni correction for multiple comparisons.

Table 3. Responses of those participants who chose to attend the acute care service on their own explaining why they decided to seek an acute care service for their medical complaint

RESPONSE	HOLIDAY SURGE (N = 1112), N (%)	NONHOLIDAY PERIOD (N = 402), N (%)	P VALUE*
Most convenient place	262 (23.6)	84 (20.9)	.28
Problem is urgent and cannot wait for GP	596 (53.6)	199 (49.5)	.16
Problem is not urgent, but this is the only place that can provide the care I need	181 (16.3)	82 (20.4)	.06
No GP	73 (6.6)	37 (9.2)	.08

*Level of significance at $P < .0125$ after Bonferroni correction for multiple comparisons.

Table 4. Participant responses to whether a GP could have treated their medical problem

RESPONSE	HOLIDAY SURGE (N = 1638), N (%)	NONHOLIDAY PERIOD (N = 642), N (%)	P VALUE*
Yes, if I could get an appointment today	610 (37.2)	215 (33.5)	.09
Yes, if I could get an appointment within 24-48 h	78 (4.8)	55 (8.6)	< .0125
Yes, if I could get an appointment within the week	40 (2.4)	26 (4.0)	.04
No	910 (55.6)	346 (53.9)	.47

*Level of significance at $P < .0125$ after Bonferroni correction for multiple comparisons.

To our knowledge, this is the first formal attempt to quantify any differences between patients' perceived need for acute care and perceived access to their GP during a holiday versus a nonholiday period. Contrary to our expectations, we did not find clinically important differences. Our results suggest that regardless of having a GP, most ambulatory patients will seek an emergency care service for their medical needs owing to the perceived urgency of their medical complaint. This can be attributed to differences in how patients likely assess their acuity on measures different from those of medical providers.⁶ These patients could benefit from interventions that focus on patient education about illness severity and appropriate use of health care resources. Even though 36.2% of participants believed their GP could have addressed their problem if they had gotten an appointment that day, even fewer tried

contacting their GP for an appointment. In addition, almost half of respondents were unsure of whether their GP provided care at an after-hours clinic or walk-in service. This implies that improving timely access to GPs with same-day appointments and ensuring patient awareness about GP availability could help reduce the burden on EDs.

Our results are consistent with previous studies that have surveyed the reasons that nonurgent patients present to an ED. Most surveyed patients came directly to the ED for care and believed they needed urgent care (45% to 93%).⁷⁻¹¹ Studies also showed that 8% to 23.7% of those surveyed chose to use the ED because of its convenience.^{8,9,11,12} Inability to arrange a prompt appointment with a GP was cited as a reason for ED usage in 11% to 26.1% of respondents.¹¹⁻¹⁴

Limitations

The present study has limitations. Participants were recruited in a single midsized city in Canada and so our findings might not be generalizable to other settings and populations. The relatively high proportion of patients rostered to a GP in our setting might also limit external validity. Nonetheless, the problems of increased demand for emergency services and a shortage of GPs affect communities across the country. Our survey periods were limited and might not reflect other nonholiday periods throughout the year.

Being a convenience survey, it comes with selection and response bias. We experienced an important difference in response rates for the 2 time periods assessed. This is likely owing to our being less vigilant in gaining buy-in by registration staff during the second survey period. This might have affected our results when comparing holiday versus nonholiday period data. Selection bias includes the risk of healthy user bias in which a patient's presenting medical complaint might have precluded him or her from answering our survey, and self-selection bias in which patients who waited longer in the waiting room were more likely to complete our questionnaire. We believe that wait times were rarely sufficiently short to keep patients from completing a brief questionnaire. The anonymous survey was based on the participant's perceptions without input from physicians or the ability to follow the participant's disposition; therefore, responses are subject to self-report and recall biases.

Our questionnaire was not able to differentiate patients who lived within Kingston from patients from outside Kingston who would not have had a GP available to attend to their needs. However, the latter would constitute a small minority of patients, and should not affect our results. A pilot study performed for 10 days during the 2015 to 2016 holiday period found that of 812 respondents, 94.6% listed a local postal code. Finally, this study was unable to determine whether respondents who contacted their GP would have actually gone there for medical assistance, or that respondents would have gone to their GP even if that option were available.

While we did not find a statistically significant difference in the number of patients per day during the holiday and nonholiday periods studied, historical data do suggest an ED holiday surge. The patient volume during the study's holiday surge from December 22, 2016, to January 2, 2017, represented a 7.3% increase compared with the same period 1 year before. There was a 5.3% increase in patient volume during the most recent 2017 to 2018 holiday surge period compared with the study's holiday period. These changes reflect the need to address the steady increase in demand for acute care services seen across Canada.

Conclusion

Our findings suggest that a large proportion of ambulatory patients would have seen their GP for their medical

issue if they perceived same-day or next-day access as possible. Patients' perception of need or access did not differ between holiday and nonholiday periods. These results suggest there is opportunity for patient education and system changes within community-based primary care to enhance its role in providing urgent care and improving awareness of its services. 

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Contributors

All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests

None declared

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