



### Editor's key points

► This study evaluated non-attendance of appointments at an inner-city clinic in Saskatchewan in order to gather information that will help the development of novel approaches to aid patients in accessing care and attending appointments. The study included a chart review of booked appointments between January and June 2016 (1976 booked appointments), as well as a telephone survey with patients who missed their appointment (43 participants).

► Almost a quarter of the appointments at this clinic were missed, with forgetting the appointment being the most commonly cited reason. Reminding patients of appointments is a practical way of addressing this issue; however, it does not address the underlying social issues affecting access to care (eg, dependence on public transportation, poverty-related barriers).

► Many patients at this clinic depended on public transportation (eg, public transit, specialized transit for those with reduced mobility) to access care. Individuals with low socioeconomic status frequently have to rely on public transportation to access health care services; advocating for increased access to public transportation in low-income areas and adjustment of fares according to income might aid patients in accessing care.

# Examining non-attendance of doctor's appointments at a community clinic in Saskatoon

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## Abstract

**Objective** To quantify the degree of non-attendance of medical appointments, as well as to identify the social reasons behind the missed appointments, at an inner-city primary care clinic.

**Design** Retrospective chart review and survey.

**Setting** Inner-city clinic in Saskatoon, Sask, serving a primarily low-income and First Nations population.

**Participants** Patients with appointments in the clinic between January 2016 and June 2016.

**Main outcome measures** Number of non-attended clinic appointments and the reasons for missed appointments.

**Results** Of the 1976 booked appointments during the study period, 487 (24.6%) appointments were not attended. Among the patients with walk-in appointments, 123 (15.5%) of them left the clinic before seeing a physician. New patients had a high rate of non-attendance (44.4% did not show up to appointments). Among those who did not attend an appointment, 19.9% of them missed more than 1 appointment; 77.8% of missed appointments were made more than a week in advance of the appointment, and 51.7% of those who missed an appointment saw a physician at the clinic at a later date (18.5 days later on average). The most common reasons for non-attendance were forgetting the appointment or feeling too sick to attend. Social determinants such as transportation were also found to play a role in non-attendance. Most survey participants stated that a telephone call reminder would aid them in keeping their appointments.

**Conclusion** Non-attendance is a multifactorial issue that causes a considerable waste of resources, limits the provision of preventive care, and negatively affects patient health. As forgetting was found to be a frequent cause of missed appointments, introducing a telephone reminder system might be an affordable and effective first measure to address non-attendance. Factors associated with poverty and other social determinants of health also affect attendance and are more challenging to address.



# Étudier les absences à des rendez-vous avec le médecin dans une clinique communautaire de Saskatoon

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## Résumé

**Objectif** Déterminer le degré d'absentéisme aux rendez-vous médicaux, de même que les raisons sociales à l'origine des rendez-vous manqués dans une clinique du centre-ville de Saskatoon.

**Type d'étude** Une revue rétrospective de dossiers et une enquête.

**Contexte** Une clinique du centre-ville de Saskatoon, en Saskatchewan, au service surtout de personnes à faible revenu et d'une population autochtone.

**Participants** Des patients ayant des rendez-vous à la clinique entre janvier et juin 2016.

**Principaux paramètres à l'étude** Le nombre rendez-vous manqués à la clinique et les raisons de manquer ces rendez-vous.

**Résultats** Sur les 1976 prises de rendez-vous durant la durée de l'étude, 487 (24,6 %) avaient été manqués. Parmi les patients se présentant sans rendez-vous, 123 (15,5 %) avaient quitté sans avoir vu un médecin. Les nouveaux patients avaient un taux élevé d'absentéisme (44,4 % ne s'étant pas présentés au rendez-vous). Parmi ceux qui avaient manqué un rendez-vous, 19,9 % en avaient déjà manqué au moins 1 autre; 77,8 % des rendez-vous manqués avaient été pris plus d'une semaine avant la date du rendez-vous et 51,7 % des patients qui ne s'étaient pas présentés avaient vu un médecin à la clinique à une date ultérieure (en moyenne 18,5 jours plus tard). Les raisons les plus souvent invoquées pour cette absence étaient l'oubli et le fait de se sentir trop mal en point pour y aller. On a également observé que certains facteurs d'ordre social, tels que les moyens de transport, jouaient aussi un rôle dans cet absentéisme. La plupart des participants à l'enquête ont mentionné qu'un rappel téléphonique les aiderait à ne pas manquer leur rendez-vous.

**Conclusion** Les rendez-vous manqués constituent un problème multifactoriel qui entraîne un important gaspillage de ressources, nuit à la prestation de soins préventifs et a des effets négatifs sur la santé des patients. Étant donné que l'oubli était souvent la raison invoquée pour ne pas s'être présenté, le fait d'instaurer un système de rappel téléphonique pourrait s'avérer une première mesure abordable et efficace pour s'attaquer à ce problème. Les facteurs associés à la pauvreté et les autres déterminants sociaux de la santé nuisent aussi à la présence aux rendez-vous, et il est plus difficile d'y remédier.

## Points de repère du rédacteur

► Cette étude portait sur les absences à des rendez-vous dans une clinique du centre-ville de Saskatoon, cherchant à recueillir des renseignements susceptibles d'aider à concevoir de nouvelles façons d'aider les patients à obtenir des soins et à se rendre à leurs rendez-vous. L'étude comprenait une revue de dossiers portant sur les rendez-vous pris entre janvier et juin 2016 (N = 1976), de même qu'une enquête téléphonique auprès de patients qui avaient manqué leur rendez-vous. (N = 43).

► Près du quart des rendez-vous à cette clinique avaient été manqués, la raison la plus couramment évoquée étant l'oubli. Un rappel du rendez-vous auprès du patient est un moyen pratique de corriger ce problème; toutefois, cela ne règle pas les problèmes sociaux sous-jacents qui nuisent à l'accès aux soins (p. ex. la dépendance à l'égard des transports en commun, les obstacles liés à la pauvreté).

► Bon nombre des patients de cette clinique dépendaient des transports publics (p. ex. transport en commun, transport adapté) pour avoir accès aux soins. Les personnes au statut socio-économique inférieur dépendent souvent des transports en commun pour avoir accès aux services de santé; en plaidant en faveur d'un accès accru aux transports en commun dans les zones à faible revenu et d'un ajustement des tarifs en fonction du revenu, on pourrait aider les patients à accéder aux soins.

The non-attendance of medical appointments is a multifactorial issue that negatively affects patient health, physician time, and resource management. Patient well-being might suffer owing to non-attendance, as individuals who miss appointments will not receive evaluation of their complaint<sup>1</sup> or preventive care. These patients might have undiagnosed or undertreated conditions leading to worsening health status. Non-attendance also consumes health care resources that could be redeployed to help others.<sup>2</sup> The effect of non-attendance on health care resources is considerable, as missed general practitioner and nursing appointments in the United Kingdom were estimated to have had a cost of £150 million in the year 2000.<sup>3</sup>

In this study we aimed to review medical records to determine the rate at which appointments were missed, whether certain patient populations were more likely to miss appointments, and when appointments were being missed. We also aimed to determine the social causes behind non-attendance by surveying patients. Our goal was to gather information that will allow for the development of novel approaches to aid patients in accessing care and attending appointments.

## — Methods —

This study was conducted at the West Side Community Clinic in Saskatoon, Sask. This clinic serves a primarily First Nations and low-income population. Frequent health problems seen include diabetes, HIV, hepatitis C, addiction, and other conditions related to poverty and social marginalization. Along with this, the clinic provides initiatives for skill building and advocacy on behalf of those living in poverty. This multidisciplinary practice includes 5 family physicians, a nurse practitioner, nursing staff, social workers, physiotherapists, dietitians, and more.

Charts from 2 family physicians at the clinic were reviewed for patients booked between January and June of 2016. Appointments were counted as not attended if the patient did not attend, if the patient registered but left before seeing a doctor, or if the patient canceled on the day of the appointment. Missed appointments were reviewed for the following information: demographic information, the time of the appointment, when the appointment was booked, and when the patient was seen next. Non-attendance was also explored specifically in new patients and opioid-replacement-therapy appointments.

Telephone surveys of patients were conducted over the course of July and August of 2016. We attempted by telephone to contact all patients who missed an appointment over the study period and who were older than 18 years of age. Telephone calls were conducted on weekdays between 12 PM and 4 PM and between 7:45 PM and 8:30 PM. If the initial call was not answered, a second attempt to contact the patient on another day was made. The telephone survey asked for the following

information: the reason for missing the appointment, how the patient traveled to the clinic, whether the patient required assistance to get to the clinic, whether the patient was able to attend an appointment without assistance, and the patient's preferred method of appointment reminders (telephone call, automated call, text message, or e-mail message). With the exception of the question regarding appointment reminders, questions were open ended and patients were not provided with answer options.

## — Results —

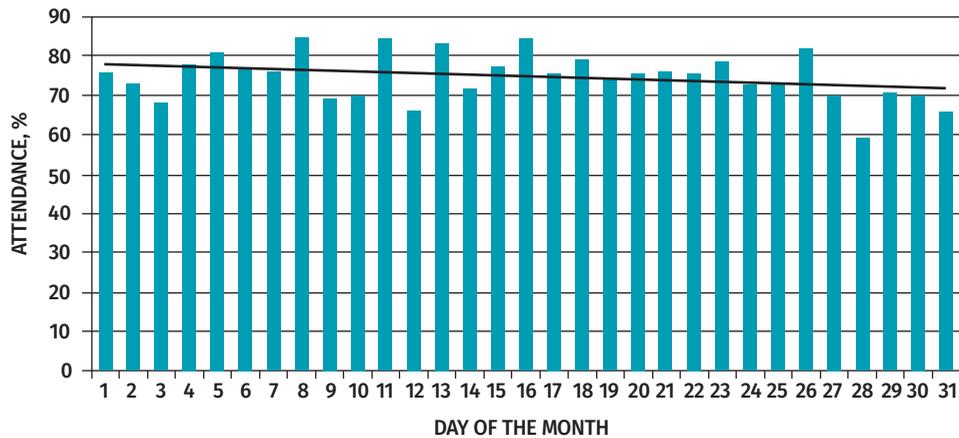
A total of 1976 appointments were booked during the study period. Of these, 487 (24.6%) appointments were missed. The average age of patients who did not attend was 36.9 years; 65.3% were female and 34.7% were male. Among the missed appointments, 85.6% of them involved the patient not showing up, 8.2% were same-day cancellations, and 6.2% had patients checking in but leaving before their appointment began. Among those who did not attend an appointment, 19.9% missed more than 1 appointment.

At this clinic, appointments between 9 AM and 12 PM are walk-in only; 123 (15.5%) of the 792 appointments made before 12 PM were not attended. Appointments made after 12 PM are by appointment only; 367 (31.0%) of these 1184 appointments were not attended. The average attendance at the clinic is lower on days that are closer to the end of the month (**Figure 1**). Attendance ranged from 84.0% to 59.0% per day.

There was a total of 72 new patient appointments and 32 (44.4%) of them were missed. Among the 187 methadone appointments that were booked during this study period, 44 (23.5%) were not attended.

Review of the booking time of missed appointments revealed that 77.8% (379 of 487) of the missed appointments were made more than a week before the appointment. Among patients who missed their appointment, the average time from booking to appointment was 12.1 days. Patients who did attend their appointments, booked their appointments an average of 11.1 days in advance (n=159). Two hundred and fifty-two (51.7%) of the missed appointments were followed by a physician visit at a later date (up to July 31), taking an average of 18.5 days to see a physician; 31.4% of those who missed their appointments came in to see a physician at the clinic within a week.

A total of 43 of 285 patients contacted (15.1% response rate) responded to the telephone survey; 29 (67.4%) women and 14 (32.6%) men responded to the survey. Out of those who did not respond, 158 (65.3%) were female and 84 (34.7%) were male. The average participant age was 46.4 years. The average age of those who did not respond was 37.7 years, with 65% being female and 35% being male.

**Figure 1.** Average attendance of appointments for each day of the month

**Table 1** summarizes participants' reasons for missing their appointments: 32.6% stated that they missed their appointment because they forgot about it, whereas 23.3% stated that they felt too sick to attend. Social determinants of health such as access to transportation (11.6%) and child care (4.7%) were also reported.

When participants were asked about how they got to the clinic for their appointment, the following methods were reported (some provided more than 1 method of transportation): 37.2% walked, 30.2% used public transportation, 23.3% drove, 11.6% used a taxi, 9.3% used

special transportation services (such as services for those with disabilities or reduced mobility), and 14.0% used other methods. Among the survey participants, 23.3% stated that they always relied on someone to get them to their appointment, whereas 25.6% sometimes relied on others. Three respondents (7.0% of survey participants) reported being completely unable to attend their appointments if no one was available to help them, whereas 9.3% reported that they could sometimes attend without assistance.

When asked about preferred methods for appointment reminders, participants reported the following (some gave more than 1 answer): 62.8% preferred telephone calls, 18.6% preferred text reminders, 11.6% preferred e-mail messages, 7.0% requested automated voice messages, and 11.6% did not want appointment reminders.

**Table 1.** Participants' reasons for missing doctor's appointment: 43 participants responded to the survey and some gave more than 1 response.

REASON	PARTICIPANTS WHO MENTIONED THIS REASON, %	RESPONSES, N
Forgot appointment	32.6	14
Felt too sick	23.3	10
Transportation related	11.6	5
Slept in	7.0	3
Child care related	4.7	2
Weather	4.7	2
Work related	2.3	1
Felt better	2.3	1
Was not reminded	2.3	1
Other*	18.6	8
Did not recall missing	14.0	6

\*Other reasons for missing appointments included anxiety, having other commitments, running late, not feeling like going, and being unoptimistic about care.

## — Discussion —

Almost a quarter of the appointments at this clinic were missed during the study period, with forgetting the appointment being the most commonly cited reason. Another study that surveyed a low-income and minority patient population similarly found that 35.5% of patients cited forgetting as the reason for missing their appointment.<sup>4</sup> Reminding patients of appointments is a practical way of addressing this issue (however, it does not address the underlying social issues affecting access to care). Most survey participants stated that they would appreciate a reminder in the form of a telephone call. A study at a clinic with a "no show" rate of 23.1% indicated that a telephone call reminder from a staff member 3 days before an appointment reduced the non-attendance to 13.6%, whereas automated reminders reduced the rate to 17.3%.<sup>5</sup>

A large number of patients at this clinic depend on public transportation to access care. Among the survey participants, 30.2% used public transit, 9.3% used specialized transit (eg, transit for those with reduced mobility), and a considerable percentage reported relying on others to make it to their appointments. Individuals with low-socioeconomic status frequently have to rely on public transportation to access health services because of disability or reduced mobility or financial barriers.<sup>6</sup> Advocating for increased access to public transportation in low-income areas and adjustment of fares according to income might aid patients in accessing care.<sup>6</sup>

Patients who have never been to the clinic before were found to have a non-attendance rate of 44.4%. These patients did not meet the survey criteria, as their ages are unknown. The social causes that prevent the initiation of care need to be further studied.

Our results indicate that attendance was lower near the end of each month. A number of social assistance payments are made during this time.<sup>7,8</sup> It might be that patients facing barriers related to poverty prioritize other tasks (eg, buying groceries) over medical appointments during this period. Patients struggling with addiction are more likely to increase use of substances after the receipt of social assistance,<sup>9</sup> which might affect their ability to access care. Physicians can provide "opportunistic care" to help patients who attend inconsistently; this involves taking the time to do preventive care-related tasks for patients who have inconsistent access to care and only present for acute complaints.<sup>10</sup>

## Limitations

The limitations of this study include being conducted in 1 clinic and having a small sample size. We were unable to contact patients who did not have regular access to telephones or who might have been unavailable during call hours. Many patients registered telephone numbers that were no longer in service and some gave telephone numbers of facilities at which they no longer resided (such as homeless shelters). Those patients who we were unable to contact were likely the most underprivileged out of this patient population. As patients younger than age 18 were not surveyed, we did not document barriers specific to children and adolescents. The use of a telephone survey might skew the results toward those who prefer telephone reminders.

## Conclusion

This study contributes to the literature on appointment attendance by exploring the social causes behind missed appointments. Further studies with multiple clinics and a broader patient population are required to continue to explore causes of non-attendance and possible avenues of addressing this issue. 

**Dr Shahab** is starting residency training in neurology at the University of Saskatchewan in July 2019. **Dr Meili** is a family physician in Saskatoon, Assistant Professor in the College of Medicine at the University of Saskatchewan, and the Founding Director of Upstream: Institute for a Healthy Society.

### Acknowledgment

The University of Saskatchewan's College of Medicine paid for **Dr Shahab's** salary via the Dean's Project award.

### Contributors

**Dr Shahab** completed the chart review, evaluated the surveys, and wrote the paper. **Dr Meili** designed the study, was the project supervisor, and contributed to revising the manuscript.

### Competing interests

None declared

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This article has been peer reviewed.

Cet article a fait l'objet d'une révision par des pairs.

*Can Fam Physician* 2019;65:e264-8