Beyond Access: Who Reports That Health Care Is Not Being Received When Needed in a Publicly-funded Health Care System?

Naomi M. Kasman, MSc[1]
Elizabeth M. Badley, PhD[1,2]

ABSTRACT

Objectives: To examine the relationship between reporting that health care was not received when needed in Canada's publicly-funded health care system and contact with the health care system, and to explore whether there is a differential impact of specific chronic conditions.

Methods: Analyses were carried out on the 2000/2001 Canadian Community Health Survey. The proportion of survey respondents who reported that they had not received health care when it was needed was determined overall, and for individuals with selected socio-demographic, health status, and health care utilization characteristics, as well as stratified by various chronic conditions. Multivariate logistic regression was then employed to examine possible predictors of having reported that health care was not received when it was needed during the previous year.

Results: Approximately 13% of Canadians reported that health care was not received when they felt it was needed during the previous year. These individuals reported higher rates of health care utilization, worse health status, were more likely to have chronic health conditions (particularly conditions such as fibromyalgia, Crohn's disease, and chronic bronchitis for which there is no effective treatment), and were more likely to be female, younger, white, have higher education and lower income.

Conclusion: Reporting that health care was not received when it was needed may not be related to accessibility but rather to a perceived failure of the system to meet the individual's needs.

La traduction du résumé se trouve à la fin de l'article.

1. Arthritis Community Research and Evaluation Unit, Department of Outcomes and Population Health, Toronto Western Hospital Research Institute and the University Health Network
2. Department of Public Health Sciences, University of Toronto

Correspondence and reprint requests: Elizabeth Badley, Toronto Western Hospital, 399 Bathurst Street, MP10-316, Toronto, ON M5T 2S8, Tel: 416-603-6269, Fax: 416-603-6288, E-mail: acreu@uhnres.utoronto.ca

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Health surveys and opinion polls conducted in Canada have consistently shown accessibility to health care to be of concern for the public.[1] The issue of timeliness of access was a major concern in the recent federal government review of the health of Canadians.[2] Research indicates that reported rates of not receiving care have increased from 4.6% in 1994/95 to 5.9% in 1998/99 for Canadians aged 25 and over,[1] and that patient satisfaction with health care that was received has found higher levels of dissatisfaction for those who are younger, female and have higher levels of education.[1,3-6] However, previous research has not taken into account contact with the health care system.[1] It is not clear whether not receiving needed care refers to an inability to access the health care system, or whether this relates to the failure to deliver the type of care needed. Wilson and Rosenberg[1] did find that those with a chronic condition were more likely than those without to report they had not received health care when it was needed. Such individuals are likely to have more need for health care, as well as higher usage rates for ongoing treatment. They are also more likely to have low income and low education, which could confound the relationship with feeling that needed health care was not received. Earlier research did not examine specific chronic conditions for their differential impact, nor did it adjust for socio-economic variables and level of health care utilization.[1]

The objectives of this study are to examine the relationship between reporting that health care was not received when needed and contact with Canada's publicly-funded health care system, and to explore whether there is a differential impact of specific chronic conditions.

METHODS

Study population

Analyses were carried out on the 2000/2001 Canadian Community Health Survey (CCHS) which is a cross-sectional survey that collects information related to the health status, health care utilization and health determinants of Canadians. The CCHS was designed with a very large sample size (N=130,880) to provide reliable estimates at the regional level. The target population of the CCHS was all

persons aged 12 or older living in private occupied dwellings in the ten Canadian provinces and the three territories at the time of the survey. Excluded from the sampling frame were individuals living on Indian Reserves and on Crown Lands, institutional residents, full-time members of the Canadian Armed Forces, and residents of certain remote regions. Details about the survey methodology have been published elsewhere.[7]

Variables

This study only included respondents who were over the age of 15 at the time of the survey. The variables included were selected on the basis of previous research findings linking them to health care utilization. The format in which they were used in the analyses is shown in Table I. The answer to the question, "During the past 12 months, was there ever a time when you felt that you needed health care but you didn't receive it?" was the primary outcome variable for this study.

Statistical analyses

The survey data (n=130,880) were weighted (see reference 8 for the procedure) to ensure that the results were representative of the Canadian household population aged ≥15 years (n=25,787,000).

Bivariate analyses were performed to determine what proportion of survey respondents reported that they had not received health care when they felt it was needed. These were then stratified by selected socio-demographic, health status and health care utilization characteristics. Chi-square analyses were carried out to test for significant differences between individuals with, and those without, specific characteristics who reported the outcome.

To determine how various chronic conditions affected the proportion of individuals who felt that health care was not received when it was needed, stratified analyses were also carried out for the following chronic conditions: arthritis and rheumatism, asthma, chronic back pain, chronic bronchitis/emphysema, Crohn's disease/ colitis, diabetes, fibromyalgia, hypertension/chronic heart disease, and migraine. These conditions were selected on the basis of previously documented associations with long-term disability and high rates of health care utilization, as well as sample size considerations. The association between these conditions and health status – measured as long-term disability, presence of pain, and self-rated health – was also determined.

Multivariate logistic regression was employed to examine possible predictors of having reported that health care was not received when it was needed. The variables controlled for in the adjusted regression were: age, gender, race, education, income, long-term disability, two-week disability, pain, number of chronic conditions, self-rated health, three or more consultations with a general practitioner, and at least one consultation with a specialist or physiotherapist.

For statistical analyses, the original expansion weights were rescaled by dividing the expansion weights by the mean weights. As we were unable to calculate the design effect factor for each individual variable, the rescaled weights were then divided by the average design effect factor provided by Statistics Canada to accommodate the stratified-cluster sampling scheme. As this study was based on a very large sample size, a stringent cut point for statistical significance of 0.01 was used. All statistical analyses were performed using SAS version 8.02.

TABLE I

Characteristics of 2000/2001 Canadian Community Health Survey Respondents Reporting Needed Health Care Not Received in Previous Year

	Percentage of Respondents Who Felt That Needed Health Care was not Received in the Previous Year (%)	Chi-square Test for Significance (p value)
Overall sample	12.8	
Gender		
Male	11.1	0.001
Female	14.5	
Age		
15-44	14.4	0.001
45-64	12.1	
65+	8.3	
Race		
White	13.2	0.001
Visible minority	10.3	
Education		
Less than secondary school	11.0	
Secondary school completed	11.8	0.001
Some/All post-secondary school	14.1	
Income*		
Lowest	16.8	
Mid-low	13.0	0.001
Mid-high	12.7	
Highest	11.9	
Pain		
None	10.1	0.001
Present	26.3	
Long-term disability		
None	9.7	0.001
Present	17.2	
Two-week disability		
None	10.4	0.001
Present	25.1	
Self-rated health		
Good/very good/excellent	11.3	0.001
Poor/fair	23.5	
Long-term chronic conditions†		
<2 conditions	9.6	0.001
2+ conditions	18.2	
Health care consultations in previous year		
Consulted a GP <3 times	10.1	0.001
Consulted a GP ≥3 times	17.1	
Did not consult a specialist	10.6	0.001
Consulted a specialist	17.5	
Did not consult a physiotherapist	12.1	0.001
Consulted a physiotherapist	21.4	

* Lowest income - < $15,000 if 1 or 2 people, < $20,000 if 3 or 4 people, < $30,000 if 5+ people
Lower middle income - $15,000 to $29,999 if 1 or 2, $20,000 to $39,999 if 3 or 4, $30,000 to $59,999 if 5+
Upper middle income - $30,000 to $59,999 if 1 or 2, $40,000 to $79,999 if 3 or 4, $60,000 to $79,999 if 5+
Highest income - > $60,000 if 1 or 2, > $80,000 if 3+

† A long-term chronic condition was defined as a condition that has been diagnosed by a health professional and that has lasted or is expected to last 6 or more months

TABLE II

Percentage and Ranking of Particular Chronic Conditions and Selected Health Outcomes

	Percentage (Rank)			
	Needed Health Care was not Received in the Previous Year (%)	Long-term Disability (%)	Pain (%)	Poor Self-rated Health (%)
Fibromyalgia	29.6 (1)	86.3 (1)	76.7 (1)	49.1 (1)
Crohn's disease	25.9 (2)	70.9 (6)	45.0 (3)	36.5 (4)
Chronic bronchitis/emphysema	24.5 (3)	75.5 (3)	40.3 (5)	41.8 (3)
Migraine	23.4 (4)	55.1 (8)	33.7 (6)	20.4 (9)
Chronic back pain	22.0 (5)	66.4 (7)	41.8 (4)	23.6 (7)
Asthma	20.2 (6)	55.0 (9)	26.1 (9)	21.7 (8)
Arthritis or rheumatism	17.8 (7)	79.5 (2)	45.7 (2)	31.8 (6)
Diabetes	13.4 (8)	74.4 (4)	32.0 (7)	42.6 (2)
Heart disease/ high blood pressure	13.0 (9)	72.4 (5)	29.5 (8)	33.1 (5)

TABLE III

Risk Factors for Reporting Health Care Not Received When Needed in Previous Year (2000/2001 Canadian Community Health Survey)

	Unadjusted OR (99% CI)	Adjusted OR (99% CI)
Gender *(vs. Male)*		
Female	1.36* (1.27, 1.45)	1.14* (1.06, 1.23)
Age *(vs. 65+)*		
15-44	1.86* (1.66, 2.08)	3.51* (3.06, 4.03)
45-64	1.52* (1.35, 1.72)	2.02* (1.75, 2.31)
Race *(vs. Visible minority)*		
White	1.32* (1.19, 1.47)	1.32* (1.18, 1.49)
Education *(vs. <Secondary school)*		
Secondary school	1.06 (0.96, 1.18)	1.13* (1.01, 1.28)
Some/All post-secondary school	1.31* (1.21, 1.42)	1.42* (1.29, 1.56)
Income *(vs. Highest)*		
Lowest	1.51* (1.36, 1.69)	1.03 (1.12, 1.44)
Mid-low	1.11* (1.01, 1.22)	1.07 (0.96, 1.19)
Mid-high	1.08* (1.00, 1.18)	1.27* (0.94, 1.12)
Health Status		
Pain *(vs. None)*	3.18* (2.96, 3.43)	1.96* (1.79, 2.16)
Long-term disability *(vs. None)*	1.92* (1.80, 2.06)	1.43* (1.31, 1.56)
Two-week disability *(vs. None)*	2.91* (2.70, 3.13)	1.76* (1.61, 1.92)
Poor self-rated health *(vs. Good)*	2.40* (2.20, 2.60)	1.49* (1.33, 1.66)
2+ chronic conditions *(vs. <2)*	2.11* (1.97, 2.26)	1.41* (1.29, 1.53)
Health care consultations		
Consulted a GP 3+ times *(vs. < 3 consults)*	1.85* (1.73, 1.97)	1.17* (1.08, 1.17)
Consulted a specialist *(vs. No consults)*	1.80* (1.67, 1.93)	1.26* (1.16, 1.37)
Consulted a physiotherapist *(vs. No consults)*	1.99* (1.79, 2.20)	1.17* (1.04, 1.32)

* p≤0.01 (relative to the reference group which is shown in parentheses)

RESULTS

Bivariate analyses

Table I shows that 12.8% of respondents reported that health care was not received when they felt it was required. Being female, younger, white, with higher levels of education and lower levels of income also made an individual more likely to report having not received care when it was needed. Health status characteristics were strongly associated with the outcome, with a higher proportion of individuals who reported the presence of pain, long-term or two-week disability, poor/fair self-rated health, and two or more chronic conditions reporting that health care was not received when it was needed (p<0.001). As well, a higher proportion of individuals who had consulted with a general practitioner (three or more times), a specialist (at least once), or a physiotherapist (at least once) were also more likely to have reported that health care was not received when needed.

Individuals with fibromyalgia had the highest proportion of respondents who reported that health care was not received when it was needed (29.6%), followed by Crohn's disease (25.9%), chronic bronchitis/ emphysema (24.5%) and migraine (23.4%), while respondents with high blood pressure/heart disease and diabetes had the lowest percentages (13.0% and 13.4%, respectively). Further analyses involving the chronic conditions (Table II) showed that individuals with fibromyalgia also had the highest proportion of respondents who reported long-term disability, pain, and fair/poor self-rated health.

Multivariate analyses

The results of both the unadjusted and adjusted logistic regression analyses are shown in Table III. Following adjustment, few changes were seen in either the direction or the statistical significance of associations. Therefore, only adjusted values will be discussed in the text.

Of the socio-demographic characteristics, being female, under the age of 65, white, falling into the lowest income quartile, and having completed secondary school were all associated with a statistically significant increased risk of reporting that health care was not received when it was needed. The strongest health status predictor for the study outcome was pain. Reporting long-term or two-week disability, two or more chronic conditions, and fair/poor self-rated health also significantly increased the odds of reporting that health care was not received when it was needed. Consultations with general practitioners, specialists, and physiotherapists all had significant odds ratios.

DISCUSSION

A fairly small proportion (13%) of Canadians aged 15 years and older reported that health care had not been received when they felt it was required during the year prior to the survey, which suggests that Canada's public health care system is, for the majority, effective. However, this figure is over double that reported for 1998/99,[1] although this latter study was restricted to those aged ≥25 years. This makes it difficult to tell whether there has been a marked decrease in ease of access since 1999, or whether this difference could be attributed to a higher rate of perceived access issues in the younger population.

Individuals reporting that needed health care was not received are indeed more likely to be younger. They are also more likely to be female, and to have high levels of education and low levels of income. Studies that have examined patient satisfaction with health care that was received have also found that younger individuals provide the least favourable assessments.[3-6] This may reflect a reticence of the older people to report unfavourable assessments[4] or it may be that younger people have higher expectations of health services.[5]

Another possibility is that the older respondents do not remember that there was a time in the last 12 months that they wanted to access health care and could not. Research on the recall of health care utilization of older adults has found that the accuracy of recall of the volume of contacts with the health care system in the past 12 months decreases with age.[9]

People who reported that health care had not been received also reported poorer health status than the rest of the population; with a higher proportion claiming disability, pain, fair/poor self-rated health, and two or more chronic conditions.

Perhaps the most noteworthy finding of our study is that respondents who reported not receiving health care when it was required were more likely to have consulted with a general practitioner three or more times and with a specialist or a physiotherapist at least once during the previous year. This suggests that the issue may not be one of accessibility to health care services; rather, that due to poor health status, being diagnosed with a chronic disease, lack of effective treatments, or other unknown reasons, certain individuals are dissatisfied with the quantity, quality, or timeliness of health care they are receiving. The possibility of a lack of available treatments is further supported by our findings on the differential impact of chronic conditions. High blood pressure and diabetes were the two chronic conditions with the smallest proportion of individuals who reported not receiving needed health care. Both are largely asymptomatic, as opposed to more poorly understood disorders with many symptoms and few treatment options such as fibromyalgia and Crohn's disease. Health status is an issue of particular importance for patients with chronic conditions, since by definition cure is not possible.[10] Studies of usual medical care have repeatedly found serious deficiencies in care for major chronic illnesses; with the acute symptoms of patients crowding out the less urgent concerns related to daily living of patients with chronic illness.[10,11] Another possible explanation for our findings is that it was an issue of timeliness as opposed to accessibility; waiting lists – particularly for specialists who are often required to treat chronic conditions – can be lengthy.[12,13] Waiting times were found in the earlier study to be the most frequently reported barrier to receiving care.[1] Alternatively, it could be an underlying characteristic that makes individuals prone to diseases such as fibromyalgia also be more likely to be demanding of the health system.

The current study has a number of limitations due to the data source used. The CCHS relies on self-reported health information which raises questions of validity. The question about whether health care had not been received in the last 12 months when it was required could have several interpretations. Some individuals who eventually received care may answer 'no', while others may answer 'yes', as shown in previous reports that the most often cited reason for answering yes is timeliness concerns.[1] Further, the question did not discern as to what service was not received. If the service not received was a private sector service, such as a dentist, it does not reflect on the public health system.

Another limitation of these surveys is that they are cross-sectional, which makes it difficult to differentiate between cause and effect. There are also issues around attributions of health care consultation; it is not possible to determine whether visits to physicians can be attributed to chronic conditions, or what kinds of specialists were consulted.

Differential access across the provinces of Canada was beyond the scope of this study but would be an interesting area for future research. Further research should also include a more detailed investigation into the differential impact of chronic conditions on reporting that health care was not received when needed to determine whether it represents individual characteristics or a lack of effective treatments.

CONCLUSIONS

In this study, individuals who reported that health care was not received when it was needed were actually more likely to have utilized health care services and to have reported more health problems. This may reflect a perceived failure of the health care system to meet the needs of certain individuals in a timely manner. It could be that this is related to the limitations of an acute care-focussed health care system to meet the needs of individuals with chronic conditions, or the general intractability and lack of effective treatment for many chronic conditions.

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RÉSUMÉ

Objectifs : Examiner la relation entre, d'une part, les déclarations selon lesquelles des soins de santé n'ont pas été reçus au moment nécessaire, dans le cadre du système de soins de santé canadien financé par l'État, et d'autre part, les contacts avec le système de soins de santé, puis déterminer si certains états chroniques ont des répercussions différentes.

Méthode : Nous avons analysé les résultats de l'Enquête sur la santé dans les collectivités canadiennes (2000-2001). La proportion des répondants ayant déclaré ne pas avoir reçu des soins de santé au moment voulu a été déterminée globalement et individuellement – pour les personnes présentant certaines caractéristiques socio-démographiques, d'état de santé et d'utilisation des soins de santé – puis stratifiée selon divers états chroniques. Par régression logistique à plusieurs variables, nous avons ensuite analysé les prédicteurs éventuels du fait de n'avoir par reçu des soins de santé au moment nécessaire au cours de l'année précédente.

Résultats : Environ 13 % des Canadiens ont déclaré n'avoir pas reçu des soins de santé au moment où ils le jugeaient nécessaire au cours de l'année précédente. Ces personnes ont déclaré des taux supérieurs d'utilisation des soins de santé, un moins bon état de santé, elles étaient plus susceptibles d'avoir des troubles médicaux chroniques (surtout des troubles comme la fibromyalgie, la maladie de Crohn et la bronchite chronique, pour lesquels il n'existe pas de traitement efficace) et d'être des femmes, jeunes, de race blanche, relativement plus scolarisées et à faible revenu.

Conclusion : Les déclarations selon lesquelles des soins de santé n'ont pas été reçus au moment nécessaire pourraient ne pas être liées à l'accessibilité des soins de santé, mais plutôt au défaut perçu du système de répondre aux besoins de l'individu.

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