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In the little more than a decade since it was launched commercially, the Internet has changed the way Canadians conduct their everyday activities, from viewing weather, news and sports to banking and paying bills. The Internet has also changed the way many Canadians obtain health information, and potentially, their relationship with physicians.

In 2005, an estimated 8.7 million adults used the Internet to search for medical or health-related information, and of those in this group who visited a family doctor that year, more than a third discussed the information they obtained from their online search.

Based on findings from the 2005 Canadian Internet Use Survey (CIUS), this article examines adults' use of the Internet to access health information. The aim is to determine how individuals who use the Internet for health information differ from other Internet users and from people who do not use the Internet at all. The CIUS also identifies the types of searches conducted by those who sought health information.

Who accesses online health information?

An estimated 16.8 million Canadians aged 18 or older (68%) used the Internet for personal non-business reasons during 2005. Just over 15 million of them (about 90%) accessed it from home. Almost 6 of every 10 (58%) home Internet users went online at some point that year to search for health information.

CIUS respondents were divided into three groups according to their reported pattern of Internet use (see *The data*). An estimated 35% (8.7 million) were defined as *health users*, in that they went online at

home during 2005 to search for health information. Another 25% (6.2 million) who went online at home that year, but not to search for health information, were defined as *other users*. The 32% (7.9 million) who reported that they had never used the Internet for personal, non-business reasons, or who had used it in the past, but not in the 12 months before the survey, were classified as *non-users*. A residual group (around 7% or 1.8 million) who used the Internet in 2005, but not from home, were excluded from this analysis because they were not asked about specific uses.

Women more likely than men to seek health information

Going online to search for health information in 2005 was related to social and economic characteristics (Table 1). Consistent with a previous study,¹ proportionately more women than men were health users.

Table 1

Socio-demographic characteristics of home Internet users and non-users, household population aged 18 or older, Canada excluding territories, 2005

	Health users	Other users	Non-users
Average age	41	40	58*
		%	
Female	55	45*	51
Married	56	50*	55
University degree	32	24*	7*
Employed	74	77*	44*
Children younger than 18 in household	42	44	21*
Urban	82	79*	69*
Household income more than \$80,000	43	37*	13*

* significantly different from estimate for health users (p < 0.01)

Source: 2005 Canadian Internet Use Survey.

The average age of health users and other users did not differ, but non-users were older than the other two groups. In addition, health users tended to have a higher level of education than either other users or non-users, and were more likely to report a higher household income.

Provincial differences

Provincial differences in the use of the Internet to search for health information mirrored overall Internet use, with a lower rate in Quebec compared with other provinces (data not shown). There was a slight urban-rural difference as well—people in small towns and rural areas were less likely than urban residents to use the Internet to obtain health information (28% versus 41%). However, when other factors were taken into account, this urban-rural difference disappeared.

Health users more engaged

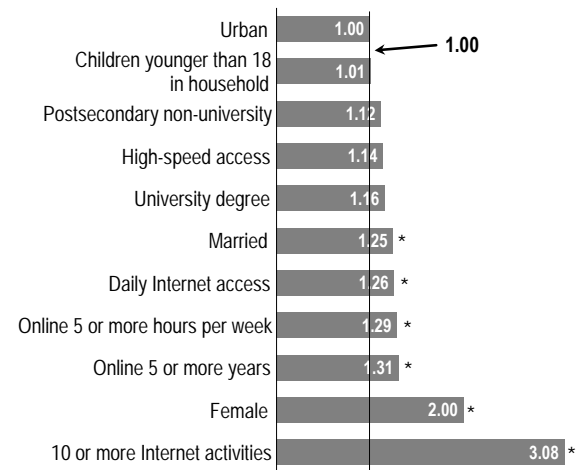
Health users’ overall online behaviour differed from that of other users (Table 2). Health users were more likely to access the Internet daily and to spend at least five hours a week online. They also reported more online activities, and were more likely to have been using the Internet for at least five years.

When selected socio-demographic and Internet use characteristics were considered together in a multivariate model, the primary predictor of whether Internet users would search for health

information was the number of online activities in which they were engaged—as the “breadth of use” increased, so did their odds of seeking health information (Figure 1). Breadth of use appears to indicate a level of Internet sophistication: an individual capable of conducting a variety of activities via the Internet differs considerably from a novice learning to manage email.²

A number of demographic factors also played a significant role in determining whether an Internet user would search for health information. For women, the odds of being a health user were double those of men. Being married increased the odds of accessing health information, with odds for married individuals one and a quarter times those of unmarried individuals. The presence of children younger than 18 in the household was not a

Figure 1
Odds ratios relating selected socio-demographic and Internet use characteristics to accessing health information online, household population aged 18 or older, Canada excluding territories, 2005



* significantly different from estimate for reference category (p < 0.01)
Notes: Reference category is absence of characteristic; for example, reference category for “married” is “not married.” Household income was not included because of high correlation with education. Respondent age was entered as a continuous control variable.

Source: 2005 Canadian Internet Use Survey.

Table 2
Internet characteristics of health users and other users, household population aged 18 or older, Canada excluding territories, 2005

	Health users	Other users
Average number of activities	10.1	7.4
	%	
Online 5 or more years	72	59*
Daily Internet access	72	56*
Online 5 or more hours per week	52	36*
Cable, satellite or high-speed connection	84	78*
10 or more Internet activities	57	31*
Electronic banking	64	50*

* significantly different from estimate for health users (p < 0.01)
Source: 2005 Canadian Internet Use Survey.

significant predictor of being a health user, a finding similar to that of other research.³

Other important predictors included the number of years an individual had been online, frequency of use, and intensity of use (see *The data*).

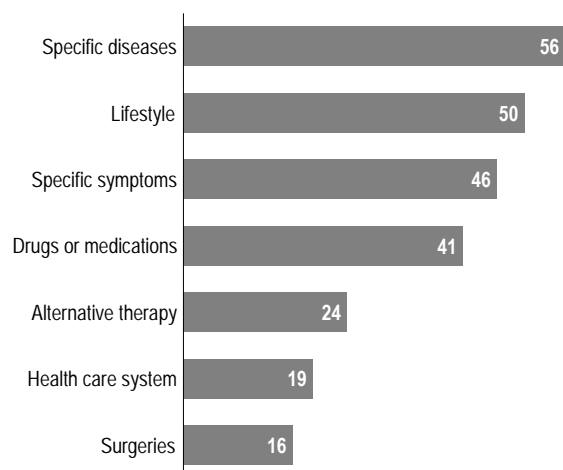
Specific diseases

Health users most commonly searched for information on specific diseases, with 56% (nearly 5 million) using the Internet for this purpose (Figure 2). Half of health users reported searching for particulars on lifestyle factors, such as diet, nutrition and exercise. Other topics frequently investigated were specific symptoms, drugs or medications, and alternative therapies. A similar pattern in search types was found among American Internet users.⁴

About three-quarters of health users searched for information on three or fewer topics, while the remaining quarter searched in at least four areas.

The type of information sought by health users varied with their age and sex. Proportionately more 18- to 44-year-olds looked for information on

Figure 2
Percentage of health users, by type of search, household population aged 18 or older, Canada excluding territories, 2005



Source: 2005 Canadian Internet Use Survey.

Table 3

Health users, by age, sex and type of search, household population aged 18 or older, Canada excluding territories, 2005

Type of search	18 to 44		45 or older	
	Men	Women	Men	Women
	%		%	
Lifestyle	52	53	44	48
Specific diseases	49	55*	59	66*
Specific symptoms	48	49	43	43
Drugs or medications	34	41*	44	48
Health care system	22	20	19	15*
Alternative therapy	19	26*	23	27
Surgeries	15	16	18	17

* significantly different from estimate for men in same age group ($p < 0.05$)

Source: 2005 Canadian Internet Use Survey.

lifestyle and the health care system, while comparatively more aged 45 or older sought information on specific diseases and on drugs or medications.

Regardless of age, female health users were more likely than male health users to seek information about specific diseases (Table 3). At ages 18 to 44, a higher percentage of women than men sought details about drugs or medications and about alternative therapies. At age 45 or older, men were more likely than women to look for information on the health care system or health care delivery.

Regional differences in search types were apparent (data not shown). For example, health users in Atlantic Canada were more likely to search for particulars about lifestyle (58%) and about drugs or medications (46%), compared with health users overall (50% and 41%, respectively). People in British Columbia were more likely to investigate alternative therapies (28% versus 24%). In Quebec, the proportion of health users seeking information on specific diseases (61%) exceeded the national figure (56%). By contrast, the proportion in Quebec searching for lifestyle information (44%) was significantly below the national level (50%).

A second opinion

More than a third (38%) of health users reported that they had discussed their findings with a family doctor or health care provider. Individuals searching

The data

This article is based on data from the 2005 Canadian Internet Use Survey (CIUS). Conducted in November 2005, the survey asked 30,466 Canadian residents aged 18 or older about their personal Internet use in the previous 12 months. As a supplement to the Labour Force Survey (LFS), the CIUS excludes residents of the territories, inmates of institutions, residents of Indian reserves, and full-time members of the Canadian Forces.

Population estimates are based on a CIUS person-weight, derived after adjustments to the LFS sub-weight. Standard errors and coefficients of variation are estimated using the bootstrap technique to account for survey design effects. More information on definitions, data sources and methods is available on the Statistics Canada website.⁵

Respondents to the 2005 CIUS were asked, "Have you ever used the Internet from home, work, school, or any other location for personal non-business use?" Those who reported personal, non-business use of the Internet at home were asked about a number of specific uses, including, "During the past 12 months, have you used the Internet at home to search for medical or health-related information?" An affirmative response led to a series of questions about medical and health use of the Internet. For example, "During the past 12 months, what kind of medical or health-related information did you search for using the Internet?" A list of possible responses was read to the respondents: lifestyle; alternative therapy; health care system or delivery; drugs or medication; surgeries; specific diseases; analysis of specific symptoms; or other. Respondents were then asked if they had communicated with their family doctor about their own health or that of another family member in the past 12 months. Those who had done so were asked, "During the past 12 months, have you discussed with your family doctor or general practitioner, medical or health information you obtained from the Internet?"

An *Internet user* is someone who used the Internet from any location in 2005 for personal, non-business reasons. A *home-user* is someone who reported using the Internet from home, for the same reasons.

Respondents who reported using the Internet from home to search for medical or health-related information were classified as *health users*.

Other users were respondents who used the Internet from home, but not to search for medical or health-related information.

Respondents who reported that they had never used the Internet for personal, non-business reasons, or who had used it, but not in the past 12 months, were classified as *non-users*.

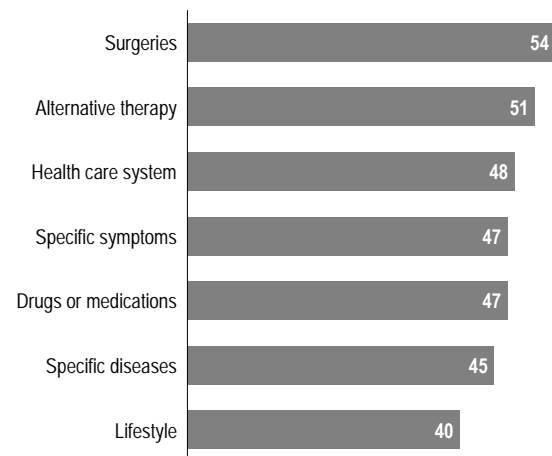
Duration of Internet use was measured in number of years respondents had been online.

Intensity of Internet use was measured in hours online per week.

Breadth of Internet use was measured by number of reported Internet activities in which the respondent engaged.

for information on surgeries were particularly likely to have done so (Figure 3). In fact, over half (54%) of people who sought information on surgeries and who had contacted a doctor during 2005 reported that they had discussed their Internet findings with a family doctor or health care provider.

Figure 3
Percentage of health users who discussed online health information with family doctor, by type of search, household population aged 18 or older, Canada excluding territories, 2005



Source: 2005 Canadian Internet Use Survey.

Summary

In 2005, more than one-third of Canadian adults used the Internet to search for health information. And of those who also visited a doctor, more than one-third discussed the results of their Internet search with their physician.

This study raises important considerations. First, it is anticipated that as more Canadians access the Internet, online searches for health information will increase. However, the accuracy and reliability of Internet information on any topic can vary widely. Internet sources of health information range from personal accounts of illnesses and patient discussion groups to clinical decision tools and peer-reviewed journal articles.

Second, the use of the Internet to search for health information appears to be unevenly distributed among Canadians. Searching for health information online is an example of what has been described as a second level digital divide among Internet users.⁶

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