

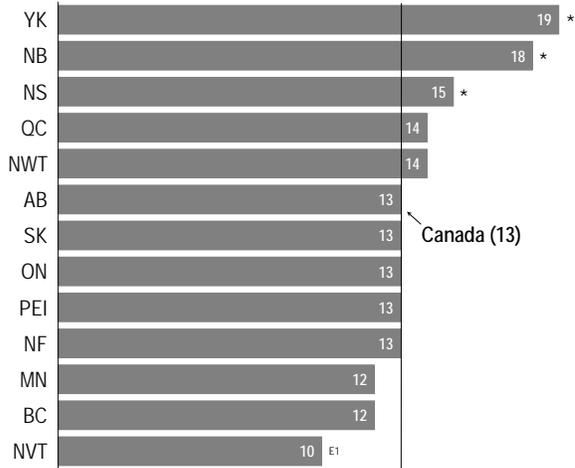
USE OF HOSPITAL EMERGENCY ROOMS by Gisèle Carrière

About one in eight Canadians aged 15 or older—an estimated 3.3 million—reported in 2003 that their most recent contact with a health professional or treatment for their most serious activity-limiting injury occurred in a hospital emergency room (ER) (Table A). Rates of ER use were highest among teenagers and young adults, reflecting the elevated risk of serious injury at these ages.¹ Similarly, at least in Ontario, administrative records for the year 2000 showed that trauma represented the largest proportion of all ER visits.²

Estimates from the 2003 Canadian Community Health Survey show that men were slightly more likely than women to have used ER services: 14% versus 12%. Among men, the most likely to have sought help in an ER were 15- to 24-year-olds (20%). For women, the proportion of ER users peaked at 18% in the 15-to-17 age group, followed closely by 17% for those aged 18 to 24. Beyond these ages, ER use for both sexes declined, falling to 11% for seniors.

ER use is inversely associated with household income. While 18% of people in the lowest income group had received their most recent treatment in an ER, the figure for those in the highest income group was 13%.

The provinces/territories—percentage of people reporting at least one emergency room visit



Data source: 2003 Canadian Community Health Survey
 * Significantly different from estimate for Canada (p < 0.05)
 E1 Coefficient of variation between 16.6% and 25.0%

Percentage of people reporting at least one emergency room visit

	Both sexes	Men	Women
	%	%	%
All ages	13	14*	12
15 to 17	19*	20*	18*
18 to 24	18*	20*	17*
25 to 44	14	16*	11
45 to 64	11*	11*	10*
65 or older	11*	11*	11

Data source: 2003 Canadian Community Health Survey
 * For all ages, significantly different from estimate for women; for age groups within each sex, significantly different from total for that sex (both p < 0.05).

Across the country

Generally, ER use was similar in the provinces and territories. Notable exceptions were New Brunswick, Nova Scotia and Yukon, where the proportions of people using an ER were significantly higher than for Canada as a whole. Across the country, residents of rural areas were more likely than urban dwellers to have used an ER: 15% versus 13% (data not shown).

Poor health, injury linked to use

As might be expected, among people who sustained a serious injury, the proportion who used ER services was high at 44%. As well, relatively high proportions of people who reported fair or poor health or at least one chronic condition used ER services: 17% and 14%, respectively. And a substantial percentage (18%) of people who reported that they had consulted a mental health

professional had accessed an ER; in particular, those with mood (20%) or anxiety disorders (19%).

Percentage of people with selected health conditions using emergency rooms†

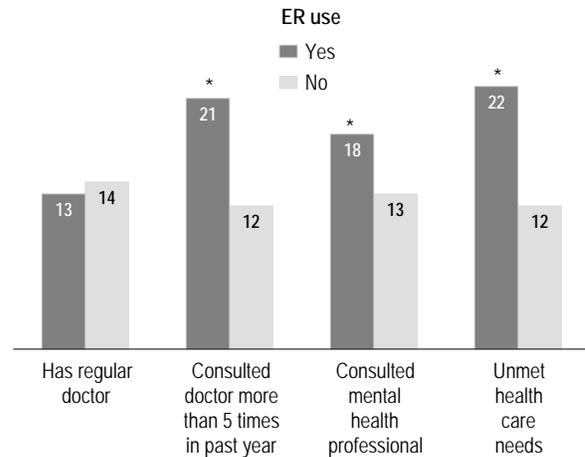
	%		%
Activity-limiting injury in past year		Arthritis/Rheumatism	
Yes	44*	Yes	13
No‡	8	No‡	13
Self-perceived health		Chronic bronchitis	
Excellent/Very good	12*	Yes	19*
Good	13*	No‡	13
Fair/Poor‡	17	Chronic obstructive pulmonary disease	
At least one chronic condition		Yes	21*
Yes	14*	No‡	11
No‡	11	Heart disease	
Diabetes		Yes	16*
Yes	13	No‡	13
No‡	13	Stroke	
Asthma		Yes	21*
Yes	18*	No‡	13
No‡	13	Mood disorder	
Self-medicated asthma		Yes	20*
Yes	18	No‡	13
No‡	19	Anxiety disorder	
Fibromyalgia		Yes	19*
Yes	16	No‡	13
No‡	13		

Data source: 2003 Canadian Community Health Survey
 † At least once in past year
 ‡ Reference category
 * Significantly different from estimate for reference category (p < 0.05)

Heavy users of medical care

People who reported having a “regular doctor” were just as likely to report ER use as those who said they did not have a “regular” physician. However, those who had consulted a doctor more than five times in the past year were more likely to report use of an ER than were people who went to the doctor less frequently: 21% versus 12%. Consistent with what others have found,³ this suggests that ER users are heavy users of other medical services, perhaps reflecting their need for ongoing care related to the health problem or injury that brought them to the ER.

Percentage of people reporting emergency room visit, by use of other health care services/unmet needs



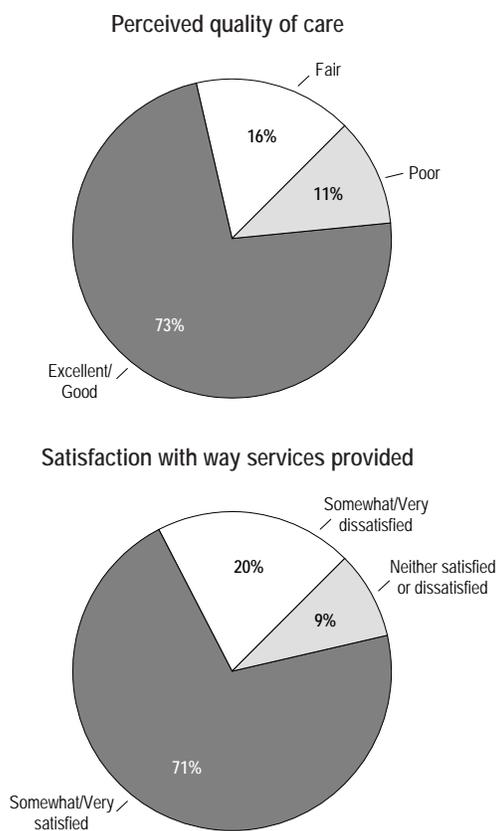
Data source: 2003 Canadian Community Health Survey
 * Significantly different from those who responded “no” to the category (p < 0.05)

Most ER patients satisfied

Of the 2.4 million people whose most recent hospital visit had been in an ER, just under three-quarters (73%) reported receiving excellent or good care. Another 16% felt their care was fair; 11%, poor. Although most people (71%) were satisfied with ER services, one-fifth (20%) said that they were “somewhat” or “very dissatisfied” with “the way services were provided.” No significant differences in the likelihood of dissatisfaction emerged across income levels or age groups, between the sexes, or by the presence of a chronic condition. However, those who consulted physicians more frequently were more likely to be dissatisfied with the ER service received. Predictably, people who reported unmet health care needs were also much more likely than those with no unmet needs to be dissatisfied.

It is possible that dissatisfaction with service may be related to over-crowding, waiting times or lack of understanding for the way hospitals prioritize treatment; however, such information is not available from the CCHS.

Perceived quality of care and satisfaction with service for most recent emergency room visit in past year



Data source: 2003 Canadian Community Health Survey

Dissatisfaction varied by province

Striking differences in the proportions of residents reporting dissatisfaction with their most recent hospital ER service emerged among the provinces and territories. Relative to the rate of 20% for Canadians overall, statistically significant lower rates of dissatisfaction were reported by residents of Québec and Yukon. In Ontario, 24% of residents reported dissatisfaction with ER services, much higher than the national rate.

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Percentage of emergency room users who reported being somewhat to very dissatisfied with service

	%		%
Both sexes	20	Education†	
Men	19	Less than high school graduation	21
Women†	22	High school graduation	17
Age group†		Some postsecondary	21 ^{E1}
15-17	16 ^{E1}	Postsecondary graduation	20
18-24	25	Household income†	
25-44	21	Lowest	18 ^{E2}
45-64	19	Lower-middle	15 ^{E1}
65+	15 ^{E1}	Middle	23
Province/Territory†		Upper-middle	18
Newfoundland and Labrador	28 ^{E1}	Highest	20
Prince Edward Island	18 ^{E1}	Has regular doctor	
Nova Scotia	25	Yes	20
New Brunswick	18	No†	23
Québec	15*	Consultations with doctor in past year	
Ontario	24*	More than 5†	25*
Manitoba	16 ^{E1}	5 or fewer	18
Saskatchewan	16 ^{E1}	Chronic conditions	
Alberta	24	At least one	21
British Columbia	17	None†	19
Yukon	11* ^{E2}	Unmet health care needs	
Northwest Territories	18 ^{E2}	Yes	35*
Nunavut	F	No†	16
Residence			
Urban	22*		
Rural†	15		

Data source: 2003 Canadian Community Health Survey

† Reference category

‡ Reference category = national figure for both sexes

* Significantly different from estimate for reference category ($p < 0.05$)

E1 Coefficient of variation between 16.6% and 25.0%

E2 Coefficient of variation between 25.1% and 33.3%

F Coefficient of variation greater than 33.3%

Data source

Information on emergency room use is from cycle 2.1 (2003) of the Canadian Community Health Survey (CCHS).⁴ The CCHS is a general health survey that covers the population aged 12 or older living in private households. It does not include residents of Indian reserves, Canadian Forces bases, and some remote areas. The overall response rate for cycle 2.1 was 80.6%; the total sample size was 135,573.

This analysis is based on a sample of 42,693 respondents aged 15 or older who answered questions about their use of hospital emergency rooms in the past 12 months.

Variance on estimates and on differences between estimates was calculated using the bootstrap technique, which accounts for the complex sampling design of the survey.^{5,6} Statistical significance was set at $p < 0.05$.

The Questions

Respondents to the Canadian Community Health Survey (CCHS) were asked about their most recent hospital visit, the place of most recent contact with doctors or nurses, and the location of treatment for their most serious injury.

To determine *ER use*, responses to the following questions were used: "Not counting when you were an overnight patient, in the past 12 months, how many times have you seen, or talked on the telephone, about your physical, emotional or mental health with: a family doctor or general practitioner? an eye specialist (such as an ophthalmologist or optometrist)? any other medical doctor (such as a surgeon, allergist, orthopedist, gynecologist or psychiatrist)?" Responses to these three items were used to establish if a respondent had *consulted a doctor more than 5 times in the past 12 months*, and respondents were also asked where these most recent contacts with doctors or nurses took place. If the reply was "hospital," the interviewer probed to clarify if that meant as an inpatient, outpatient or as a *patient of a hospital emergency room*. Because respondents were asked only about their *most recent* hospital visit and *most serious* injury, it is likely that these data underestimate ER use and should not be interpreted as representing the total number of visits to hospital ERs.

Other health service use was measured by asking respondents if they had a *regular doctor*, and if they had *consulted a mental health professional in the past year*.

Respondents were asked about *injuries* other than repetitive strain that had "occurred in the past 12 months, and were serious enough to limit your normal activities, for example, a broken bone, a bad cut or burn, a sprain, or poisoning." They were also asked where they were injured, if they had received medical attention within 48 hours and, if so, where they had been treated; *hospital emergency room* was among the possible responses.

The CCHS also asked: "In the past 12 months, have you received any health care services at a hospital, either as an inpatient, an outpatient or an emergency room patient?" Respondents who said "yes" were asked if they had been an inpatient, outpatient, or an *emergency room patient*.

Patient satisfaction was measured by asking respondents to think of their most recent hospital visit and rate the quality of health care as excellent, good, fair or poor. They were also asked about their satisfaction with the way hospital services were provided: very satisfied; somewhat satisfied; neither satisfied nor dissatisfied; somewhat dissatisfied; and very dissatisfied. As these questions measure only patients' perceptions, the responses should not be used to assess the medical advice given or care received.

The following question was used to determine *unmet health care needs*: "During the past 12 months, was there ever a time when you felt that you needed health care but you didn't receive it?"

References

- 1 Wilkins K. Injuries. *Health Reports* (Statistics Canada, Catalogue 82-003) 2004; 15(3): 43-8.
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- 4 Béland Y. Canadian Community Health Survey—methodological overview. *Health Reports* (Statistics Canada, Catalogue 82-003) 2002; 13(3): 9-14.
- 5 Rao JNK, Wu CFJ, Yue K. Some recent work on resampling methods for complex surveys. *Survey Methodology* (Statistics Canada, Catalogue 12-001) 1992; 18(2): 209-17.
- 6 Rust KF, Rao JNK. Variance estimation for complex surveys using replication techniques. *Statistical Methods in Medical Research* 1996; 5: 281-310.

Table A

Percentage of people reporting at least one emergency room visit in past year, by sex and selected characteristics, household population aged 15 or older, Canada, 2003

	Both sexes		Men		Women	
	'000	%	'000	%	'000	%
Total	3,300	13	1,796	14*	1,503	12
Age group, overall†	3,300	13	1,796	14	1,503	12
15-17	266	19*	142	20*	123	18*
18-24	510	18*	284	20*	226	17*
25-44	1,286	14	763	16*	523	11
45-64	828	11*	429	11*	399	10*
65 or older	410	11*	177	11*	233	11
Canada‡	3,300	13	1,796	14	1,503	12
Newfoundland and Labrador	59	13	33	15	26	12
Prince Edward Island	14	13	6	12	8	14
Nova Scotia	108	15*	55	16	53	14*
New Brunswick	106	18*	57	20*	49	16*
Québec	833	14	423	14	410	13*
Ontario	1,232	13	702	15	529	11*
Manitoba	104	12	52	12	51	12
Saskatchewan	100	13	55	15	45	12
Alberta	325	13	182	15	143	12
British Columbia	409	12	225	14	184	11
Yukon	4	19*	2	20*	2 ^{E1}	18 ^{E1*}
Northwest Territories	4	14	2	14	2 ^{E1}	13 ^{E1}
Nunavut	1 ^{E1}	10 ^{E1}	1 ^{E2}	11 ^{E2}	1 ^{E2}	10 ^{E2}
Education‡	3,246	13	1,767	15	1,479	12
Less than high school graduation	823	15*	465	17*	358	13
High school graduation	607	13	322	15	286	11
Some postsecondary	308	15	162	16	147	14
Postsecondary graduation	1,507	12*	819	13*	689	11
Household income‡	2,767	13	1,531	14	1,236	12
Lowest	94	18*	49 ^{E1}	23 ^{E1*}	45	14
Lower-middle	188	15	75 ^{E1}	16	113	15*
Middle	562	14	269	15	293	13
Upper-middle	929	13	516	14	413	11
Highest	994	13	622	14	372	11
Has regular doctor						
Yes	2,807	13	1,473	14	1,334	12
No‡	491	14	322	15	168	13
Consultations with doctor in past year						
5 or fewer	2,468	12*	1,431	13*	1,037	10*
More than 5‡	824	21	361	24	463	20
Chronic conditions						
At least one	2,518	14*	1,273	16*	1,246	13*
None‡	778	11	523	12	255	8
Unmet health care needs						
Yes	670	22*	304	23*	366	21*
No‡	2,626	12	1,490	13	1,135	10

Data source: 2003 Canadian Community Health Survey

† Reference category

* Significantly different ($p < 0.05$) from value in reference category; for total row, estimate for men is significantly higher than that for women

E1 Coefficient of variation between 16.6% and 25.0%

E2 Coefficient of variation between 25.0% and 33.0%