

Comparing Health And Health Care Use In Canada And The United States

A survey conducted on both sides of the border finds that insured Americans and Canadians have much in common, but uninsured Americans lag behind.

by **Claudia Sanmartin, Jean-Marie Berthelot, Edward Ng, Kellie Murphy, Debra L. Blackwell, Jane F. Gentleman, Michael E. Martinez, and Catherine M. Simile**

ABSTRACT: Results from the Joint Canada/United States Survey of Health (2002–2003) reveal that health status is relatively similar in the two countries, but income-related health disparities exist. Americans in the poorest income quintile are more likely to have poor health than their Canadian counterparts; there were no differences between the rich. In general, Canadians were more like insured Americans regarding access to services, and Canadians experienced fewer unmet needs overall. Despite higher U.S. levels of spending on health care, residents in the two countries have similar health status and access to care, although there are higher levels of inequality in the United States. [*Health Affairs* 25, no. 4 (2006): 1133–1142; 10.1377/hlthaff.25.4.1133]

COMPARISONS OF HEALTH STATUS AND health system use in the United States and Canada continue to be of great interest in both countries.¹ The two countries share an open border and are similar in many ways yet are very different on several policy fronts, including the way health care services are financed, organized, and delivered. The most notable differences between the two countries are the role of private health care insurance and spending levels. Canadians have universal access to publicly funded health care services, primarily physician and hospital services. The majority of U.S. citizens require private insurance to cover the cost of medical care services; public insurance is provided for the poor (Medicaid) and for those over age sixty-five (Medicare). The United States spends

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Claudia Sanmartin (Claudia.Sanmartin@statcan.ca) is a senior analyst in the Health Analysis and Measurement Group (HAMG), Statistics Canada, in Ottawa, Ontario. Jean-Marie Berthelot is director of the HAMG. Edward Ng is a senior analyst there, and Kellie Murphy is an analyst. Debra Blackwell is a statistician at the National Center for Health Statistics (NCHS) in Hyattsville, Maryland. Jane Gentleman is director of the NCHS Division of Health Interview Statistics. Michael Martinez is an epidemiologist there, and Catherine Simile is a survey statistician.

more on health care than Canada as measured both in per capita spending (in 2001 U.S. dollars: \$4,884 versus \$2,792) and percentage of gross domestic product (GDP) (14 percent versus 10 percent), with more funding derived from private-sector spending in the United States.²

Given these differences, both countries are constantly scrutinized to determine which is producing better health and access to care. To facilitate comparisons between the two countries, the 2002–2003 Joint Canada/United States Survey of Health (JCUSH) was designed and conducted to collect the same information in the same way from residents of both countries on a comprehensive range of health status and health system factors. The survey represents the joint effort of Statistics Canada and the National Center for Health Statistics (NCHS) of the U.S. Centers for Disease Control and Prevention (CDC). The survey provides comparable information on measures of general health status, functional status, and depression; lifestyle factors such as smoking, obesity, and leisure-time activity levels; use of health care services such as visits to physicians and dentists; use of prescription drugs; insurance status; unmet health care needs; and demographic and socioeconomic information.³

This paper summarizes some of the key findings from the 2002–2003 JCUSH with a specific focus on comparing the health status and access to health care services of adults in the two countries.

Survey Data And Methods

■ **Survey data.** The JCUSH was conducted as a one-time telephone survey. Its content was drawn from the Canadian Community Health Survey (CCHS) and the National Population Health Survey (NPHS) in Canada, and the National Health Interview Survey (NHIS) in the United States. The target population includes residents of the two countries age eighteen or older residing in households with a land-line telephone. The survey does not include institutionalized people, full-time members of the Canadian or U.S. armed forces, or people living in either the Canadian or U.S. territories. The sample was designed to produce reliable national estimates for three age groups (18–44, 45–64, and 65 and older) by sex. Households were selected through a random-digit-dialing process. All interviews were conducted from Statistics Canada's regional offices, using the same questionnaire and the same interviewing team. The survey was conducted in English or French in Canada and in English or Spanish in the United States. Response rates were 66 percent in Canada and 50 percent in the United States. The final sample sizes were 3,505 (Canada) and 5,183 (U.S.).

■ **Analysis.** Comparisons between Canada and the United States were conducted for all respondents as well as by age and sex and, for some indicators, by income and health insurance status. Age-adjusted percentages were calculated for both countries using the direct standardization method based on weights from the projected 2000 standard U.S. population.⁴ Missing data, including responses of

“don’t know,” “not stated,” or “refusal,” were excluded from the analysis except for analyses by income, which has an appreciable item nonresponse rate. Weighted distributions and percentages were produced. The bootstrap technique was used to account for the sample design in estimating variances of percentages. Estimates with coefficients of variation (CV) between 16.6 and 33.3 are reported, with a cautionary note regarding high sampling variability. Pairwise differences between the two countries were deemed statistically significant based on a two-tailed test ($p < .05$), and 95 percent confidence intervals were produced.

Survey Findings

■ **Health status.** Several measures were used to compare the health status of those living in Canada and the United States, including self-reported health and mobility limitations.

General health status. Self-reported health provides a good indication of a person’s overall health status, which encompasses a range of dimensions including both physical and mental health. The majority of respondents in both countries were in good, very good, or excellent health (Exhibit 1), with the percentage being slightly higher among Canadians (88 percent versus 85 percent).

Mobility limitations. Mobility limitations are an important aspect of health status, because they can affect a person’s ability to participate in society. Information regarding mobility limitations also represents a more objective measure of health status. Respondents were asked if they had any difficulties with a range of activities, including walking, standing, or climbing. Overall, the proportion with any

EXHIBIT 1
Age-Adjusted Health Status Measures, Canada And The United States, 2002–03

	Canada		United States	
	Percent	95% CI	Percent	95% CI
General health status				
Excellent	23.9**	22.3, 25.4	26.4**	25.1, 27.7
Very good	36.3**	34.6, 38.1	32.4**	31.0, 33.9
Good	28.1	26.4, 29.7	26.6	25.2, 28.0
Fair	8.3**	7.3, 9.2	10.3**	9.4, 11.3
Poor	3.5**	2.9, 4.1	4.2**	3.6, 4.8
Mobility limitation				
Cannot do	4.0**	3.1, 4.9	5.7**	5.2, 6.3
Very difficult	4.0	3.6, 4.4	4.6	3.8, 5.4
Somewhat difficult	6.1	5.6, 6.6	6.5	5.9, 7.0
A little difficult	9.5**	8.9, 10.2	8.4**	7.2, 9.6
Any difficulty	23.7**	22.1, 25.2	25.2**	24.2, 26.2

SOURCE: Joint Canada/United States Survey of Health, 2002–03.

NOTES: Household population age eighteen and older. Missing data (“I don’t know,” “not stated,” “refusal”) have been excluded from the analysis. Significance relates to difference between Canada and the United States. CI is confidence interval.

** $p < .05$

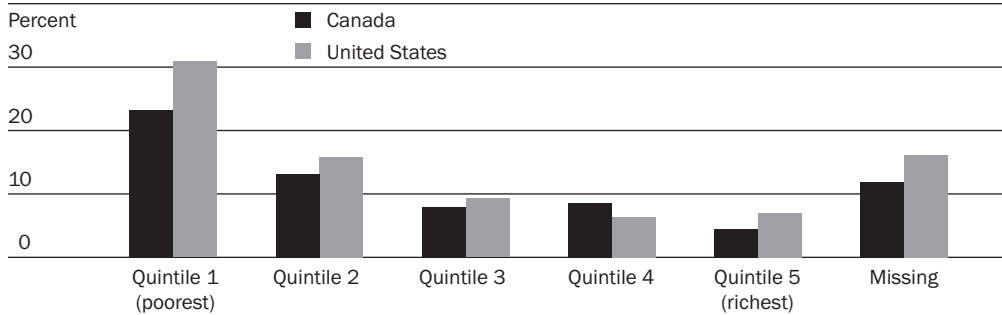
difficulty with mobility was slightly but significantly higher in the United States than in Canada. This is likely attributable to the higher proportion of U.S. residents who could not walk, stand, or climb relative to Canadian respondents (see Exhibit 1). This difference was exclusive to women: 7 percent of women in the United States could not do many of the identified activities, compared with only 4 percent of Canadian women. There were no differences between Canadian and U.S. men.

Household income and health. Health status tends to be associated with social position, often measured by income, in most industrialized countries. In both countries, those in the lower household income groups were more likely to be in fair or poor health. However, a higher proportion of those in the lowest income group (Exhibit 2) were in fair or poor health in the United States (31 percent) than in Canada (23 percent). There were no significant differences, however, between the middle and high income groups in either of the two countries. The gap between the lowest and highest income groups in the proportion of those in fair or poor health was greater in the United States (twenty-four percentage points) than in Canada (nineteen percentage points).

■ **Access to health care services.** Given the different approaches to financing health care services in the two countries, it is important to consider the role of health care insurance in the United States when examining access to health care services. Based on the survey results, approximately 11 percent of U.S. residents do not have health insurance. One in four Americans (26 percent) in the lowest income quintile are uninsured, representing 36 percent of all uninsured Americans.

Regular medical doctor. Access to a regular medical doctor or regular source of health care is clearly beneficial: Patients experience improved access to primary care services such as preventive care, and they are less likely to rely on emergency rooms for health care.⁵ Although a large majority in both countries had a regular

EXHIBIT 2
Residents In Fair/Poor Health, By Household Income Quintile, Canada And The United States (Age-Adjusted), 2002-03



SOURCE: Joint Canada/United States Survey of Health, 2002-03.

NOTES: Household population age eighteen and older. Missing data include "I don't know," "not stated," and "refusal." Canada/U.S. data for quintile 1 and "missing" categories are significant for difference between Canada and United States, $p < .05$.

medical doctor, the rate for Canada was five percentage points higher than that for the United States (85 percent versus 80 percent). The difference is likely attributable to the much lower proportion (43 percent) of those with a regular doctor among the U.S. uninsured. There was no difference in access to a regular medical doctor between Canadians and insured Americans.

Use of physician services. Canadians were similar to insured Americans regarding use of physician services in the previous twelve months. More than 80 percent of residents in both countries had had at least one contact with any medical doctor during this time period. As expected, differences were noted between the two countries by insurance status. Insured Americans were more likely than Canadians to have contacted any doctor (86 percent versus 83 percent), while uninsured Americans were less likely than Canadians to do so (61 percent).

Effect of household income on use of physician services. Given that one-third of the U.S. uninsured are in the lowest income quintile, it is not surprising that differences in the use of physician services were noted by income. Americans in the lowest household income quintile were less likely than their Canadian counterparts to have contacted any physician (62 percent versus 84 percent). No significant difference was detected between those in the highest income quintiles in the two countries. Furthermore, there was a ten-percentage-point difference in the rates of contact with physicians between the lowest and highest U.S. income quintiles, compared with only a two-percentage-point difference in Canada.

Use of prescription medications. Among Canadians age sixty-five and older, the cost of prescription drugs is partially covered by public insurance. At the time of the survey, Americans age sixty-five and older paid for prescribed medications with private insurance or, to a much lesser extent, through Medicare. In contrast, nonelderly Canadian and American adults typically depend on private insurance to cover the cost of prescription drugs. Thus, unlike the findings for other health care services, private drug coverage plays a similar role in both countries, particularly among nonelderly adults.

Overall, survey results indicate that the rate of private coverage was similar in both countries, with more than three-fourths of people age eighteen and older having such coverage. The rate was slightly higher in the United States (79 percent) than in Canada (77 percent). Additionally, more than half of adults in both countries had taken a prescription drug in the past month (Exhibit 3). The results varied, however, by insurance status and age. Insured Americans were more likely than insured Canadians to have taken at least one prescription drug (62 percent versus 58 percent). U.S. adults ages 45–64 were more likely than Canadians in the same age group to have taken a prescription drug in the past year (Exhibit 3).

■ **Unmet health care needs.** *All health care services.* Unmet needs for health care services provide another measure of access focused on people's experiences obtaining services when they need them. Respondents were asked whether there was a time in the previous twelve months that they felt they needed health care services

**EXHIBIT 3
Prescription Drug Coverage Status (Age-Adjusted), And Prescription Drug Use In
Previous Twelve Months, By Insurance Status (Age-Adjusted) And Age Group, Canada
And The United States, 2002–03**

	Canada		United States	
	Percent	95% CI	Percent	95% CI
Had prescription medication insurance	76.5**	75.0, 78.1	79.1**	77.9, 80.4
Prescription medication use by insurance status				
All	55.5	53.8, 57.2	57.6	56.2, 59.0
Insured	58.4**	56.5, 60.3	61.7**	60.1, 63.3
Uninsured	47.0	43.3, 50.6	42.4	39.2, 45.5
Prescription medication use by age group				
All (age-adjusted)	55.5	53.8, 57.2	57.6	56.2, 59.0
18–44	42.2	39.7, 44.7	42.6	40.4, 44.8
45–64	60.8**	57.5, 64.0	68.4**	66.1, 70.8
65+	87.9	85.5, 90.3	85.4	83.3, 87.6

SOURCE: Joint Canada/United States Survey of Health, 2002–03.

NOTES: Household population age eighteen and older. Missing data (“I don’t know,” “not stated,” “refusal”) have been excluded from the analysis. Significance relates to difference between Canada and the United States. CI is confidence interval. ***p* < .05

but did not receive them. Overall, slightly more Americans (13 percent) than Canadians (11 percent) had an unmet need. This difference is attributable to the high rate of unmet needs among the U.S. uninsured (40 percent). There was no significant difference when Canadians were compared with insured U.S. adults.

Those who had an unmet health care need in the past twelve months were asked their reasons for or barriers to not obtaining needed health care. The results clearly indicate that among those experiencing unmet health care needs, waiting excessively long for care was the primary reason (32 percent) in Canada, while cost was the primary reason (53 percent) among similar U.S. patients, regardless of insurance status (Exhibit 4). The proportion reporting cost as a reason for unmet health care needs in the United States was 40 percent among the insured and 84 percent among the uninsured.

Unmet needs by household income quintile. In both countries, the poor experienced higher levels of unmet needs compared with the rich (Exhibit 5). However, in the United States, significantly more people in the lowest household income quintile experienced an unmet health care need than low-income Canadians (27 percent versus 17 percent). Conversely, the rate of unmet needs was the same in both countries among higher income groups. As a result, the gap in unmet health care needs between the highest and lowest income groups was significantly larger in the United States (seventeen percentage points) than in Canada (eight percentage points).

Unmet needs for prescription drugs. Respondents were also asked if there was a time

EXHIBIT 4
Reasons For Unmet Needs In The Past Twelve Months, By Country And Insurance Status (U.S. Only), Canada And The United States, 2002-03

	Canada		United States		Insured		Uninsured	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
Reason for unmet need								
Waiting too long	32.4	27.2, 37.5	5.4 ^a	3.6, 7.2	6.7 ^a	4.2, 9.2	- ^b	- ^b
Cost	7.9 ^a	4.8, 11.0	53.2	48.8, 57.6	39.6	34.2, 44.9	84.3	78.2, 90.4
Service not available	22.4	17.7, 27.0	7.8	5.4, 10.2	9.5 ^a	6.3, 12.6	- ^b	- ^b
Personal ^c	24.1	19.5, 28.8	24.5	20.6, 28.4	29.8	24.9, 34.6	12.6 ^a	6.4, 18.7
Felt inadequate/afraid	9.1 ^a	5.8, 12.3	5.3 ^a	3.1, 7.6	7.5 ^a	4.2, 10.8	- ^b	- ^b
Language/transportation problems	2.8 ^a	1.2, 4.3	2.6 ^a	1.2, 3.9	2.4 ^a	0.9, 3.9	- ^b	- ^b
Other	13.8	10.0, 17.5	11.6	8.8, 14.5	13.8	10.1, 17.5	- ^b	- ^b

SOURCE: Joint Canada/United States Survey of Health, 2002-03.

NOTES: Household population age eighteen and older. Missing data ("I don't know," "not stated," "refusal") have been excluded from the analysis. CI is confidence interval.

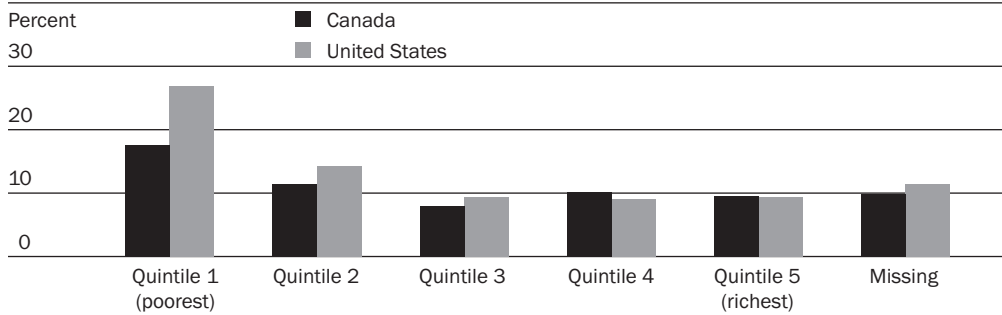
^a Interpret with caution (high sampling variability; coefficient of variation ≥16.6 and ≤33.3).

^b Estimate not provided because of extreme sampling variability or small sample size.

^c Personal reasons include "too busy," "didn't get around to it/didn't bother," "didn't know where to go," and "decided not to seek care."

during the past twelve months when they needed prescription medications but did not get them because of cost. Because adults under age sixty-five in both countries rely on private insurance to obtain prescription drugs or else pay out of pocket, it is reasonable to expect that the levels of unmet need for such medications would also be similar in the two countries. Overall, however, the rate of unmet needs was 10 percent in the United States and 5 percent in Canada. This pattern holds regardless of insurance status (Exhibit 6). As expected, unmet need for prescription drugs was inversely related to income status in both countries, with the poorest adults having the highest levels of unmet need. However, Americans in the lowest income quintile were much more likely to experience an unmet need

EXHIBIT 5
Residents With An Unmet Health Care Need, By Household Income Quintile, Canada And The United States (Age-Adjusted), 2002-03



SOURCE: Joint Canada/United States Survey of Health, 2002-03.

NOTES: Household population age eighteen and older. Missing data include "I don't know," "not stated," and "refusal." Canada/U.S. data for quintile 1 are significant for difference between Canada and United States, $p < .05$.

**EXHIBIT 6
Residents With Unmet Need For Prescription Drugs In The Past Twelve Months, By
Insurance Status And Income (Age-Adjusted), Canada And The United States, 2002-
03**

	Canada		United States	
	Percent	95% CI	Percent	95% CI
All	5.1**	4.3, 5.8	9.9**	9.0, 10.8
Insured	3.9**	3.1, 4.7	6.4**	5.6, 7.3
Uninsured	9.0**	6.8, 11.3	24.7**	21.8, 27.7
Income quintile				
1 (poorest)	13.4**	10.5, 16.3	23.4**	19.9, 26.9
2	6.8**	4.6, 9.0	12.0**	9.5, 14.5
3	2.3** ^a	1.0, 3.7	7.5**	5.3, 9.7
4	1.7** ^a	0.6, 2.7	4.2** ^a	2.8, 5.7
5 (richest)	– ^b	– ^b	2.3 ^a	1.2, 3.4
Missing	6.0** ^a	3.7, 8.4	10.1**	8.1, 12.1
Q1–Q5	12.0** ^c	8.9, 15.0	21.1** ^c	17.4, 24.7

SOURCE: Joint Canada/United States Survey of Health, 2002–03.

NOTES: Household population age eighteen and older. Missing data include “I don’t know,” “not stated,” and “refusal.” CI is confidence interval.

^a Interpret with caution (high sampling variability; coefficient of variation ≥ 16.6 and ≤ 33.3).

^b Estimate not provided because of extreme sampling variability or small sample size.

^c Significant difference between poorest and richest income quintile.

** $p < .05$

(23 percent) than their Canadian counterparts (13 percent). As a result, the gap between the highest and lowest income quintiles with respect to unmet prescription drug needs was higher in the United States (twenty-one percentage points) than in Canada (twelve percentage points).

Concluding Comments

The results of the JCUSH reveal several key findings regarding health status and access to care in Canada and the United States. Health status appears to be relatively similar in the two countries, but there are significant income-related disparities in access. One of the survey’s key findings is that Americans in the poorest income quintile are much more likely than their Canadian counterparts to be in fair or poor health and to have mobility impairment. At the other end of the income spectrum, there are no systematic health differences among adults in the most affluent households on either side of the border. In other words, affluent Canadians and Americans share very similar health characteristics, even while receiving health care under very different funding models. On the other hand, the least-well-off Americans, who are most at risk for being uninsured, have lower health status than their Canadian counterparts. There has been solid evidence for some time of a socioeconomic gradient in health in each of the two countries.⁶ In most cases, the evidence is based on an analysis of mortality, not health status per

se. The JCUSH has provided a rare opportunity to directly measure and compare systematic differences in health status across the socioeconomic spectra in the two countries. This kind of comparison is compelling in that although they share many cultural similarities, there are important differences between the two countries in terms of the provision of public goods such as health care, which could be one of the key contributors to the overall higher levels of health and lower levels of health disparities in Canada than in the United States.

■ **Role of private coverage.** Regarding access to health care, the survey findings revealed that in general, Canadians were more like insured Americans and less like uninsured Americans (except for prescription drugs). Overall, Canadians and insured, affluent Americans were similar regarding their access to physicians, including access to a regular medical doctor, and similar in terms of unmet health care needs. Conversely, less affluent, uninsured Americans had worse access to care (such as physician services) and higher levels of unmet health care need, particularly for prescription drugs, than did their Canadian counterparts at the same income level. The ability to conduct a direct comparison of Canadians and insured Americans using the JCUSH data has provided additional insights regarding the perceived advantages of privately funded health care.

■ **Barriers to care.** The findings also clearly highlight the differences between the two countries regarding barriers to care: Adults experiencing difficulties obtaining care in Canada are more likely to cite long waiting times as the primary barrier, while their American counterparts are more likely to cite cost. Similar results have been observed in Commonwealth Fund International Health Policy Surveys.⁷ There is clearly a degree of consensus regarding the primary barriers facing Canadians and Americans in their quest to obtain health care services when they need them. Thus, despite their geographic proximity and many social and economic similarities, Canada and the United States have developed very different arrangements for what amounts to rationing of health care: cost in the United States, waiting for care in Canada.

■ **Survey limitations.** Despite the stated advantages of the JCUSH, it has several limitations. First, it slightly underestimates the proportion of uninsured Americans. The use of random-digit dialing excludes households with no telephone. The percentages of households with no telephone are relatively small: 1.8 percent in Canada and 4.4 percent in the United States.⁸ U.S. data indicate that households without a landline telephone generally have lower income levels; they also tend to be uninsured. As a result, the differences reported between the two countries could be underestimated. Furthermore, the measure of “unmet need” is not specific to the type of services sought (that is, primary versus specialty care). It thus is not clear whether unmet needs differ in the two countries depending on the type of care.

■ **Survey advantages.** The JCUSH is a unique population health survey representing the joint efforts of two national statistical agencies. The use of a common questionnaire and identical data collection and processing methods provided highly

comparable data on a comprehensive range of health status and health system factors. As such, it provides a unique opportunity for policymakers and researchers to systematically investigate issues related to health status and access to care in the two countries, and gain a more in-depth understanding of the differences between the two systems.

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NOTES

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