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Health care use among gay, lesbian and bisexual Canadians

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Abstract

Objective
This article examines whether consultations with health care providers, not having a regular doctor, unmet health care needs, and receipt of preventive screening tests vary by sexual identity for Canadians aged 18 to 59.

Data source
Results are based on the Canadian Community Health Survey, combined 2003 and 2005 data.

Analytical techniques
Cross-tabulations were used to compare utilization rates of selected health care providers by sexual identity. Multiple logistic regression models that controlled for predisposing, enabling and health need variables were employed to ascertain if sexual identity was independently associated with health care use, not having a regular doctor, unmet health care needs, and receipt of preventive screening tests.

Main results
Gay men, lesbians and bisexual people were more likely than heterosexuals to consult mental health service providers. Lesbians had lower rates of consulting family doctors and were less likely to have had a Pap test, compared with heterosexual women. Bisexuals reported more unmet health care needs than did their heterosexual counterparts.

Keywords
Homosexuality, family physicians, health care services accessibility, health status, mammography, Pap smear test

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While a variety of factors have been studied in relation to the decision to seek health care,[1] relatively little research has examined health care use and access by sexual orientation.[2-4] Much of the information about the role of sexual orientation in access to care comes from American studies, the balance of which suggests that gay men, lesbians and bisexuals experience unique obstacles. This research shows that lesbians are less likely than heterosexual women to have a regular source of care such as a family doctor, and more likely to report difficulties in access due to cost.[2,5-8] Some gay men, lesbians and bisexuals have reported negative experiences with the health care system related to their sexuality,[8-10] and, as a result, avoid or delay seeking care.[11-13]

These findings, which are based primarily on data from the United States, may not reflect the situation in Canada, as the two countries have different health care systems. For instance, while many American studies have found an association between not having health insurance and lower rates of utilization, this should not be the case in the Canadian universal health insurance environment.[14]

As well, societal differences may limit the generalizability of American findings to a Canadian context.

The primary objective of this analysis is to determine if consultations with health care providers, not having a regular doctor, unmet needs, and receipt of preventive screening tests vary by sexual identity. The data come from Statistics Canada's Canadian Community Health Survey (CCHS), a large-scale national probability survey. The CCHS does not have the problems associated with non-probability surveys, such as volunteer bias, or with surveys based on small geographic areas whose results cannot necessarily be generalized. The CCHS collected information on a wide assortment of socio-demographic and health-related variables that can be used to control potential confounding when determining if health care use and access differ by sexual identity. The large sample size enables separate analyses for gay men, lesbians, and bisexuals, an important consideration, as some research has shown that bisexuals' health care utilization patterns differ from those of gay men, lesbians and heterosexuals.[3,5,15,16]

Methods

Data source

Estimates are based on combined data from the 2003 and 2005 CCHS, cycles 2.1 and 3.1. The CCHS covers the household population aged 12 or older in all provinces and territories, except members of the regular Forces and residents of institutions, Indian reserves, Canadian Forces bases and some remote areas.

Data for cycle 2.1 were collected from January through December 2003 from a sample of 135,573 people; the response rate was 81%. Data for cycle 3.1 were collected from January through December 2005 from a sample of 132,947 people; the response rate was 79%. In each cycle, about 25% of interviews were conducted in person, and 75%, by telephone. More information about the CCHS is available in a published report[17] and on Statistics Canada's Web site (www.statcan.ca).

Data for the population aged 18 to 59 who indicated their sexual identity were used in this analysis. Among men, 1,103 self-identified as gay, 498 as bisexual, and 72,972 as heterosexual. For women, 695 self-identified as lesbians, 833 as bisexual, and 83,723 as heterosexual. Respondents whose sexual identity was not known were excluded (3,662 men and 3,289); of these respondents, 767 men and 713 women refused to answer the question on sexual identity.

Analytical techniques

To compensate for the relatively small number of gay, lesbian and bisexual respondents, data from the 2003 and 2005 CCHS (cycles 2.1 and 3.1) were combined. This is feasible because the methodology is similar, and the wording of the questions used in this analysis is identical, except for how Aboriginal respondents were ascertained (see Definitions).[18]

For this analysis, the cycles were combined at the micro-data level, resulting in one dataset. Because sample weights were only available for each cycle separately, the total weighted population for the combined cycles would represent roughly twice the Canadian population. To obtain an estimate of the number of gay men, lesbians and bisexuals, the estimate was divided by two. Percentages and regression results did not have to be divided by two.

Between 2003 and 2005, the number of self-identified gay men, lesbians and bisexuals increased by 13% to 20% (depending on the group), which suggests that respondents might have been more likely to disclose a non-heterosexual identity in 2005 than in 2003. Results from the forthcoming 2007 CCHS (cycle 4.1) will confirm if this trend continues.

Andersen's health behaviour model[1] provided the framework for the selection of explanatory variables in the modelling of health care utilization. The Andersen model proposes that the decision to seek care is influenced by predisposing factors such as age, gender and health beliefs; enabling factors such as income education and service availblility; and need factors such as health status and chronic conditions.[1] For this analysis, the model provided guidance in variable selection, based on the information available in the CCHS.

Unadjusted logistic regression models were run by gender for each health care use variable: consultation in the past 12 months with: family doctor or general practitioner, medical specialist, nurse, social worker or counsellor, psychologist, alternative health care provider, self-help group; no regular doctor; unmet health care need; mammogram in past two years (women aged 50 to 59); and Pap test in past three years (all women). To improve comparability with adjusted logistic regression models, observations with missing data for independent variables used in the adjusted models (except income and education) were excluded from the unadjusted models. This ensured that the number of observations for each dependent variable was the same between the unadjusted and adjusted models. Regardless of statistical significance, the following variables were controlled in the adjusted logistic regression models: age (continuous), marital status, presence of child(ren) younger than 12 in household, education, household income quintile, place of residence, cultural or racial group, having a regular doctor (for all regression models except where it is the outcome), number of chronic conditions, self-perceived general health, two-week physical disability day, self-perceived mental health, diagnosed anxiety disorder, diagnosed mood disorder, two-week mental disability day, and survey cycle.

To account for survey design effects, standard errors and coefficients of variation were estimated with the bootstrap technique.[19,20] The significance level was preset at $p < 0.05$. Proportions were estimated using the CCHS sample weights.

Definitions

Epidemiological studies do not agree on a definition of sexual orientation—it depends on the research question and on data availability.[21] Sexual orientation consists of three distinct elements: 1) sexual attraction/fantasy; 2) sexual behaviour; and 3) self-identification.[21] Although the three overlap, each measures sexual orientation slightly differently, with sexual attraction/fantasy the most inclusive, yielding the highest prevalence, and self-identification the most restrictive, yielding the lowest prevalence.[22] The CCHS asked, "Do you consider yourself to be

heterosexual (sexual relations with people of the opposite sex), homosexual, that is lesbian or gay (sexual relations with people of your own sex) or bisexual (sexual relations with people of both sexes)?" This question was read to all respondents aged 18 or older in 2003, and to respondents aged 18 to 59 in 2005.

Health care use was determined by asking: "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 (GP), any other medical doctor (such as a surgeon, allergist, orthopedist, gynecologist or psychiatrist), a nurse for care or advice, a social worker or counsellor, a psychologist?"

Alternative health care was ascertained by the question: "People may also use alternative or complementary medicine. In the past 12 months, have you seen or talked to an alternative health care provider such as an acupuncturist, homeopath or massage therapist about your physical, emotional or mental health?"

Respondents were asked if they had attended a meeting of a *self-help group* such as AA or a cancer support group in the past 12 months.

Respondents were asked if they had a regular medical doctor. If they answered "no," they were considered to have *no regular doctor*.

Respondents who answered "yes" to the following question were considered to have *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?"

Female respondents aged 35 or older were asked about *mammography*: "Have you ever had a mammogram, that is, a breast x-ray?" Those who answered "yes" were asked, "When was the last time?", with the interviewer reading five categories: less than 6 months ago, 6 months to less than 1 year ago, 1 year to less than 2 years ago, 2 years to less than 5 years ago, and 5 or more years ago. For this analysis, mammogram use was determined for women aged 50 to 59, with these women dichotomized as either having had a mammogram in the past 2 years or more than 2 years ago/never.

Pap test was determined by asking female respondents, "Have you ever had a Pap smear test?" Those who answered "yes" were asked, "When was the last time?", with five categories read by the interviewer: less than 6 months, 6 months to less than 1 year ago, 1 year to less than 3 years ago, 3 years to less than 5 years ago, and 5 or more years ago. For this analysis, last Pap test was dichotomized as within 3 years or more than 3 years ago/never.

Four *age* groups were established: 18 to 24, 25 to 34, 35 to 44, and 45 to 59. In logistic regression analysis, age was entered as a continuous variable.

Marital status was categorized into three groups: married or common-law; previously married (divorced, separated or widowed); and single (never married).

Place of residence was determined by grouping Census Metropolitan Areas (CMAs) (http://www12.statcan.ca/english/census01/Products/Reference/dict/geo009.htm). A CMA consists of one or more adjacent municipalities situated around a major urban core with a population of at least 100,000.[23] Three groups were created: CMA with population greater than 2 million (Montreal, Toronto and Vancouver), CMA with population between 100,000 and 2 million, and area outside CMAs with population less than 100,000.

Based on their highest level of *education*, respondents were grouped into four categories: postsecondary graduation, some postsecondary, secondary graduation, and less than secondary graduation. Missing values were included in multiple logistic regression models.

Household income quintiles were determined with a method developed at Statistics Canada.[24] For each respondent, a household weight factor was calculated on household size. The first household member was assigned a weight of 1, the second, a weight of 0.4, and the third and subsequent members, a weight of 0.3. The household weight factor was then calculated as the sum of these weights. Household income was divided by this household weight factor to derive income adjusted for household size. In instances where household income range rather than exact household income was available, the mid-point of the reported range was used to calculate total household income. For this analysis, the weighted distribution of each CCHS cycle (2003 and 2005) for the population aged 18 to 59 was examined to establish cut-points for household income quintiles within each geographic classification (CMA population greater than 2 million, CMA population 100,000 to 2 million, and non-CMA with less than 100,000). Quintiles were calculated for each CCHS cycle and combined. In logistic regression analysis, records with missing income data (approximately 13% of the population) were included as a dummy variable.

To determine a respondent's *racial or cultural* group, the interviewer read the following statement: "People living in Canada come from many different cultural and racial backgrounds," and then asked if the respondent was: White, Black, South Asian, Southeast Asian, Filipino, Latin America, Arab, West Asian, Japanese, Korean, Aboriginal, or other. For this analysis, racial or cultural group was classified into two categories: White and non-white. In 2005 and part of 2003, a separate question was asked to determine Aboriginal identity. Respondents who self-identified as Aboriginal were not asked their racial or cultural group, but were included with other non-white respondents.

Self-perceived general health was assessed with the question, "In general, would you say your health is: excellent, very good, good, fair or poor?" Three categories were established: excellent or very good, good, and fair or poor.

Self-perceived mental health was assessed with the question, "In general, would you say your mental health is: excellent, very good, good, fair or poor?" Three categories were established: excellent or very good, good, and fair or poor.

Number of chronic conditions was determined by asking respondents if they had "long-term conditions that had lasted or were expected to last six months or more and that had been diagnosed by a health professional." The interviewer read a list of conditions; those included in this analysis (26) were: food allergies, other allergies, asthma, fibromyalgia, arthritis or rheumatism, back problems, high blood pressure, migraine, chronic bronchitis, diabetes, epilepsy, heart disease, cancer, stomach or intestinal ulcers, effects of stroke, urinary incontinence, bowel disorder, dementia, cataracts,

glaucoma, thyroid condition, chronic fatigue syndrome, multiple chemical sensitivity, emphysema or chronic obstructive pulmonary disease, or any other long-term physical or mental condition.

Mood disorder was determined by asking, "Do you have a mood disorder such as depression, bipolar disorder, mania or dysthymia?" that had been diagnosed by a health professional.

Anxiety disorder was determined by asking, "Do you have an anxiety disorder such as a phobia, obsessive-compulsive disorder or a panic disorder?" that had been diagnosed by a health professional.

Two-week disability (physical and mental) was measured in terms of bed-days and "cut-down" days over the previous two weeks. Respondents were asked about days they stayed in bed (including nights in hospital) and about days they cut down normal activities because of illness or injury. Those who reported at least one disability day were asked if it was due to their emotional or mental health or use of alcohol or drugs. Responses were dichotomized as "yes" (at least one disability day) or "no."

Results

Population characteristics

An estimated 346,000 adults self-identified as gay, lesbian or bisexual, together representing 1.9% of Canadians aged 18 to 59 (2.1% of men and 1.7% of women). The breakdown was: 130,000 gay men (1.4% of men aged 18 to 59), 59,000 bisexual men (0.7%), 71,000 lesbians (0.8% of women aged 18 to 59), and 85,000 bisexual women (0.9%).

Compared with the heterosexual population, a larger proportion of gay men and lesbians were aged 35 to 44, whereas bisexuals, especially women, were considerably younger (Table 1).

Not surprisingly, marital status varied by sexual identity. Gay men, lesbians and bisexuals were more likely than heterosexuals to be single (never married), and less likely to be married or in a common-law relationship.

About three in ten heterosexuals had a child younger than 12 living in their household. The proportions were much lower for gay men (2.6%) and lesbians (8.4%). Proportions were also low for bisexuals (18.5% of men and 26.1% of women),

although when never-married people were excluded, the difference between heterosexuals and bisexuals disappeared (data not shown).

Compared with heterosexuals, gay men and lesbians had high levels of education; the educational attainment of bisexual men was lower. Relatively large proportions of gay men and lesbians were in the highest household income quintile, compared with the heterosexual population; bisexual men and women were over-represented in the lowest quintile.

Cultural and racial background and place of residence also differed by sexual identity. Higher

Table 1
Distribution of household population aged 18 to 59, by gender, sexual identity, and selected socio-demographic and economic characteristics, Canada, 2003 and 2005 combined

	Men			Women		
	Hetero-sexual	Gay	Bi-sexual	Hetero-sexual	Lesbian	Bi-sexual
	%	%	%	%	%	%
Age group						
18 to 24	16.3	9.7*	23.9*	15.4	10.5*E	35.9*
25 to 34	21.8	22.5	18.1	22.3	22.1	26.8*
35 to 44	27.6	36.3*	22.2*	26.9	36.4*	21.2*
45 to 59	34.3	31.5	35.7	35.3	30.9	16.1*
Marital status						
Married or common-law	64.4	31.8*	39.9*	65.6	38.5*	40.9*
Previously married	6.0	4.0*	7.3E	10.1	9.3	10.5
Single (never married)	29.6	64.2*	52.9*	24.3	52.2*	48.6*
Children younger than 12 in household	29.5	2.6*E	18.5*E	31.1	8.4*	26.1*
Education (aged 25 to 59)						
Less than secondary	12.1	4.4*E	16.2	10.6	6.1*E	10.7
Secondary	16.7	10.2*	15.8E	18.1	13.4*	19.1
Some postsecondary	6.7	9.3	14.4E	6.8	6.1E	9.4E
Postsecondary	64.5	76.1*	53.6*	64.4	74.4*	60.7
Income quintiles						
Lowest	17.0	15.5	34.9*	22.0	19.0	42.7*
Second-lowest	19.5	14.6*	29.1*	21.2	15.3*	22.0
Middle	20.1	17.9	12.4*	20.3	22.1	14.5*
Second-highest	21.2	22.0	11.6*	19.2	20.0	12.0*
Highest	22.1	29.9*	12.0*E	17.3	23.4*	8.8*E
Racial or cultural group						
White	82.4	88.1*	76.0	82.7	89.1*	81.9
Non-white	17.6	11.9*	24.0	17.3	10.9*E	18.1
Place of residence						
Montreal, Toronto or Vancouver	34.9	55.9*	47.0*	35.1	41.0*	34.9
CMA 100,000 to 2 million	31.9	28.3*	24.9*	32.1	35.1	31.3
Non-CMA (less than 100,000)	33.1	15.8*	28.1	32.8	23.9*	33.8

* significantly different from estimate for heterosexual population of same gender (p < 0.05)
E use with caution (coefficient of variation 16.6% to 33.3%)
Note: Missing values are excluded.
Source: 2003 and 2005 Canadian Community Health Survey (combined data).

proportions of gay men and lesbians were White, compared with heterosexuals and bisexuals. As well, comparatively large percentages of gay men, lesbians and bisexual men lived in Montreal, Toronto or Vancouver.

Physical and mental health

The self-perceived general health of gay men and lesbians was similar to that of heterosexuals (Table 2). By contrast, bisexuals were more likely than heterosexuals to report fair or poor health.

Gay men and bisexual women tended to report more chronic conditions than did the heterosexual population. They were also more likely to have had at least one disability day due to physical illness in the previous two weeks.

Relatively large proportions of bisexuals reported mental health problems. Bisexual men were more than twice as likely as heterosexual men to perceive their mental health as fair or poor; for bisexual women, the proportion reporting fair or poor mental health was three times that of heterosexual women.

When respondents were asked if they had been diagnosed with a mood or anxiety disorder, all sexual minority groups reported levels above those for the heterosexual population. Such disorders were particularly prevalent among bisexual women, one in four of whom reported a mood disorder. The comparatively high prevalence of mood and anxiety disorders among gay men, lesbians and bisexuals was reflected in higher percentages reporting at least one disability day in the previous two weeks for mental or emotional reasons.

Health care

The use of health care services differed by sexual identity (Table 3). Compared with heterosexual men,

Table 2
Health status indicators, by gender and sexual identity, household population aged 18 to 59, Canada, 2003 and 2005 combined

	Men			Women		
	Hetero-sexual	Gay	Bi-sexual	Hetero-sexual	Lesbian	Bi-sexual
	%	%	%	%	%	%
Physical health						
Self-perceived general health						
Excellent or very good	63.9	65.4	57.1	63.8	63.2	51.6*
Good	28.5	26.0	30.9	27.5	26.9	32.2
Fair or poor	7.7	8.5	12.0*	8.7	9.8	16.2*
Chronic conditions						
None	50.5	42.1*	49.6	39.9	35.9	31.3*
One	27.9	28.9	25.5	27.6	29.4	27.8
Two	12.6	17.5*	13.6	15.9	15.9	16.9
Three or more	9.0	11.5*	11.3	16.5	18.7	23.9*
Disability day in past two weeks (physical)	13.6	17.9*	11.7	19.2	22.6	27.0*
Mental health						
Self-perceived mental health						
Excellent or very good	75.4	73.8	66.7*	74.8	72.8	57.5*
Good	20.3	20.5	23.9	19.9	20.6	25.5*
Fair or poor	4.3	5.7	9.4*E	5.3	6.7E	17.0*
Type of disorder						
Mood disorder	4.0	11.1*	11.4*E	7.7	11.4*	25.2*
Anxiety disorder	3.0	8.5*	10.1*E	5.8	8.7*	17.7*
Disability day in past two weeks (mental)	1.2	3.0*E	5.5*E	2.0	3.8E	6.6*E

* significantly different from estimate for heterosexual population of same gender (p < 0.05)
E use with caution (coefficient of variation 16.6% to 33.3%)
Note: Missing values are excluded.
Source: 2003 and 2005 Canadian Community Health Survey (combined data).

Table 3
Percentage consulting selected health care providers, lacking regular doctor, reporting unmet health care need and using preventive screening, by gender and sexual identity, household population aged 18 to 59, Canada, 2003 and 2005 combined

	Men			Women		
	Hetero-sexual	Gay	Bi-sexual	Hetero-sexual	Lesbian	Bi-sexual
	%	%	%	%	%	%
Consultation in past 12 months						
Family doctor or general practitioner	69.2	74.8*	72.1	82.6	76.9*	81.3
Medical specialist	19.0	29.4*	22.8	33.0	37.6	38.2
Nurse	8.4	14.7*	11.1	14.0	13.2	21.6*
Social worker or counsellor	3.5	6.8*E	9.3*E	5.7	8.6E	16.6*
Psychologist	2.5	7.7*	5.8*E	4.0	10.0*E	10.7*E
Alternative care provider	11.0	20.3*	13.4E	20.6	33.1*	27.3*
Self-help group	2.1	3.7*	4.5*E	3.0	6.5*E	9.4*
No regular doctor	21.9	22.2	26.2	11.6	19.0*	24.2*
Unmet health care need in past 12 months	10.9	14.2*	17.8*	14.8	19.6*	28.6*
Preventive screening						
Mammogram in past 2 years (aged 50 to 59)	...	...	...	71.1	71.9	49.0*
Pap test in past 3 years	...	...	...	77.1	64.0*	76.2

* significantly different from estimate for heterosexual population of same gender (p < 0.05)
E use with caution (coefficient of variation 16.6% to 33.3%)
... not applicable
Note: Missing values are excluded.
Source: 2003 and 2005 Canadian Community Health Survey (combined data).

gay men were more likely to have seen a family doctor, a medical specialist, or nurse in the previous 12 months. Utilization rates were also higher for social workers or counsellors, psychologists, alternative care providers, and self-help groups.

Consultations with doctors and nurses did not differ between bisexual and heterosexual men, but bisexual men had more frequent contact with social workers or counsellors and psychologists, and were more likely to report attending self-help groups.

Multivariate logistic regression models that controlled for predisposing, enabling and need characteristics were used to determine if sexual identity was independently associated with consulting health care professionals. Even when potentially confounding factors (notably, a higher prevalence of chronic conditions and mood disorders) were taken into account, compared with heterosexual men, gay men had increased odds of consulting medical specialists, nurses, social workers or counsellors, psychologists, and alternative care providers; bisexual men had higher odds for consultations with social workers or counsellors and alternative care providers (Table 4).

Among women, lesbians were slightly less likely to have seen a family doctor in the past 12 months, compared with heterosexual women, but more likely to have consulted psychologists and alternative care providers, and to have attended a self-help group (Table 3). Bisexual women had more contact with nurses, social workers or counsellors, psychologists and alternative care providers and were more likely to have attended self-help groups, compared with heterosexual women. Although odds ratios were somewhat attenuated in the multivariate regression models, the results were essentially unchanged (Table 5).

No regular doctor/Unmet health care needs

The proportions of gay, bisexual and heterosexual men who reported not having a regular doctor were statistically similar. Among women, the proportions who did not have a regular doctor were higher for lesbians and bisexuals than for heterosexuals. Results for both sexes remained the same when socio-demographic and health status variables were controlled in multivariate regression models.

Table 4
Unadjusted and adjusted odds ratios comparing gay and bisexual men with heterosexual men for selected health care provider consultations, lack of regular doctor and report of unmet health care need, household population aged 18 to 59, Canada, 2003 and 2005 combined

	Gay				Bisexual			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval
Consultation in past 12 months								
Family doctor or general practitioner	1.32*	1.09 to 1.59	1.18	0.95 to 1.45	1.15	0.85 to 1.56	1.23	0.88 to 1.71
Medical specialist	1.77*	1.47 to 2.12	1.40*	1.14 to 1.70	1.23	0.87 to 1.75	1.15	0.79 to 1.69
Nurse	1.88*	1.48 to 2.40	1.69*	1.32 to 2.17	1.33	0.94 to 1.90	1.23	0.86 to 1.74
Social worker or counsellor	2.01*	1.39 to 2.92	1.55*	1.01 to 2.38	2.71*	1.86 to 3.94	1.65*	1.10 to 2.46
Psychologist	3.21*	2.35 to 4.39	2.13*	1.46 to 3.11	2.29*	1.39 to 3.78	1.49	0.88 to 2.51
Alternative care provider	2.07*	1.68 to 2.54	1.89*	1.50 to 2.37	1.26	0.81 to 1.95	1.55*	1.00 to 2.39
Self-help group	1.71*	1.21 to 2.44	1.23	0.84 to 1.80	2.06*	1.22 to 3.48	1.30	0.75 to 2.24
No regular doctor	1.02	0.84 to 1.24	1.01	0.82 to 1.24	1.27	0.94 to 1.73	1.16	0.84 to 1.61
Unmet health care need in past 12 months	1.33*	1.06 to 1.67	1.17	0.92 to 1.48	1.76*	1.27 to 2.44	1.46*	1.02 to 2.09

* significantly different from estimate for heterosexual men (p < 0.05)
Notes: The following variables were controlled in the adjusted model: age (continuous), marital status, child(ren) under 12 in household, education (including missing values), income quintile (including missing values), place of residence, racial or cultural group, self-rated general health, number of chronic conditions, two-week physical disability day, self-rated mental health, anxiety disorder, mood disorder, two-week mental health disability day, having a regular doctor (except for regression models where not having a regular doctor is the outcome), and survey cycle.
Sources: 2003 and 2005 Canadian Community Health Survey (combined data).

Table 5
Unadjusted and adjusted odds ratios comparing lesbian and bisexual women with heterosexual women for selected health care provider consultations, lack of regular doctor, report of unmet health care need and use of preventive screening, household population aged 18 to 59, Canada, 2003 and 2005 combined

	Lesbian				Bisexual			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval
Consultation in past 12 months								
Family doctor or general practitioner	0.70*	0.54 to 0.90	0.70*	0.53 to 0.92	0.94	0.71 to 1.24	0.97	0.70 to 1.34
Medical specialist	1.21	0.97 to 1.52	1.13	0.90 to 1.41	1.24	0.99 to 1.57	1.04	0.80 to 1.34
Nurse	0.91	0.69 to 1.20	0.90	0.67 to 1.21	1.69*	1.32 to 2.17	1.16	0.90 to 1.50
Social worker or counsellor	1.56*	1.04 to 2.35	1.36	0.85 to 2.18	3.29*	2.50 to 4.32	1.56*	1.14 to 2.15
Psychologist	2.65*	1.76 to 3.97	2.09*	1.32 to 3.31	2.86*	1.92 to 4.24	1.57*	1.05 to 2.35
Alternative care provider	1.91*	1.53 to 2.38	1.66*	1.32 to 2.09	1.47*	1.16 to 1.86	1.56*	1.24 to 1.96
Self-help group	2.24*	1.27 to 3.95	2.00*	1.10 to 3.64	3.34*	2.41 to 4.62	2.48*	1.76 to 3.48
No regular doctor	1.78*	1.36 to 2.33	1.68*	1.28 to 2.21	2.44*	1.86 to 3.19	2.04*	1.55 to 2.70
Unmet health care need in past 12 months	1.41*	1.07 to 1.85	1.24	0.92 to 1.68	2.32*	1.84 to 2.92	1.36*	1.04 to 1.78
Preventive screening								
Mammogram in past 2 years (aged 50 to 59)	1.03	0.67 to 1.60	1.20	0.78 to1.84	0.41*	0.22 to 0.76	0.46*	0.24 to 0.90
Pap test in past 3 years	0.52*	0.42 to 0.66	0.60*	0.47 to 0.77	0.96	0.73 to 1.25	1.32*	1.01 to 1.74

*   significantly different from estimate for heterosexual women (p < 0.05)
Notes: The following variables were controlled in the adjusted model: age (continuous), marital status, child(ren) under 12 in household, education (including missing values), income quintile (including missing values), place of residence,racial or cultural group, self-rated general health, number of chronic conditions, two-week physical disability day, self-rated mental health, anxiety disorder, mood disorder, two-week mental health disability day, having a regular doctor (except for regression models where not having a regular doctor is the outcome), and survey cycle.
Sources: 2003 and 2005 Canadian Community Health Survey (combined data).

Gay men, lesbians and bisexuals were more likely than heterosexuals to report having had an unmet health care need in the past year. However, in multivariate regression models, only bisexual men and women had increased odds of reporting an unmet health care need.

Mammograms and Pap tests

The likelihood that women had had a mammogram in the past two years differed somewhat by their sexual identity. Lesbians and heterosexual women aged 50 to 59 had similar levels of utilization, but the proportion was much lower for bisexual women, a difference that persisted in multivariate regression models.

Receipt of the Papanicolaou (Pap) test also varied by sexual identity. Fewer than two-thirds of lesbians reported having had a Pap test within the past three years, well below the figures for heterosexual (77.1%) and bisexual women (76.2%). Results changed somewhat in multivariate regression models that accounted for differences in socio-demographic characteristics and health status. Compared with heterosexual women, lesbians still had reduced odds of having had a Pap test, but the odds for bisexual women were actually higher.

Discussion

Consultations with health care professionals varied by sexual identity, independent of socio-demographic and health status differences. As well, disparities were evident in the proportions who did not have a regular doctor and who reported unmet health care needs, and in women's receipt of two preventive cancer screening procedures (mammograms and Pap tests).

While the odds of consulting a family doctor in the past 12 months were similar for men regardless of their sexual identity, lesbians were less likely than heterosexual women to have done so. A possible reason could be some lesbians' unwillingness to disclose their sexual orientation to health care providers.[11,25] In fact, research has shown more use

of the health care system among lesbians who have told their doctor about their sexual orientation.[12,26] American studies have also demonstrated that some lesbians delay or avoid seeking care because of factors related to their sexual orientation such as fear of disclosing that they are lesbian to their doctor or past negative experiences.[9,11,13,25] Differences in childbearing[6] might also explain some of this disparity, although the CCHS results did not change when pregnant women and those who had given birth within the past two years were excluded from the regression model (data not shown).

The similar levels of contact with family doctors by gay, bisexual and heterosexual men was not unexpected. An American study showed that men living in same-sex relationships had increased odds of having visited a health professional in the past 12 months.[2] The authors suggested that the HIV epidemic might have made some gay men more likely to seek preventive care and to discuss HIV-related concerns, and to be more open to health care providers about their sexual orientation.

Utilization rates of health professionals who provide emotional or mental support were generally higher among gays, lesbians and bisexuals, mirroring other research.[3,16,27-30] It has been suggested that lesbians and bisexual women consider psychological counselling important,[31] and that a positive norm for using mental health services might exist in the gay, lesbian and bisexual communities.[28,32] As well, minority stress issues (the stress faced by individuals who belong to a stigmatized social category) could trigger seeking this type of care.[29,33]

Lesbians and bisexual women had high odds of not having a regular doctor, and bisexuals of both sexes had high odds of reporting unmet health care needs. Some evidence suggests that, compared with gay men, lesbians and bisexuals consider health care providers' attitudes toward non-heterosexual issues a more important factor when choosing a doctor.[34]

Women's use of preventive screening for cancer varied by sexual identity. While mammography rates among lesbians and heterosexual women aged 50 to 59 did not differ significantly, bisexual women were less likely to have ever had a mammogram. Results from other research have been mixed, with some studies showing lesbians less likely to have mammograms,[6,35,36] others showing no difference,[5,7,37] and one study showing higher rates.[38] The reason for the lower mammography rate among bisexual women is not known, but it is noteworthy because a large American non-probability study found that bisexual women aged 50 to 79 were more likely than other women to have breast cancer.[36]

Consistent with other research,[5,7,31,35-39] CCHS results showed that lesbians had lower rates of Pap test screening than did heterosexual and bisexual women. The impact of this difference is not known, as little or no data exist on rates of cervical cancer among lesbians.[6,40,41] Nonetheless, they have many of the same risk factors as heterosexual women, including unprotected sexual intercourse with men at some point in their lives.[42-45] As well, HPV (genital human papillomavirus) infection, a precursor to some cervical cancers, can be transferred between women through intimate sexual contact.[43,45] The lower screening rates among lesbians could be in response to past negative experiences with health care providers,[8-10,41] the belief that the test is not necessary,[41] or not usually taking birth control pills, renewal of prescriptions for which can be an opportunity for doctors to discuss and administer the Pap test.[6]

This study has several limitations. While survey questions that use the concept of sexual identity are considered to have excellent specificity (heterosexual people would not be classified as gay, lesbian or bisexual), their sensitivity has been criticized (some gay, lesbian and bisexual respondents would be classified as heterosexual).[22] Therefore, the CCHS results represent only people willing to self-identify as gay, lesbian or bisexual in an interview for a national survey. The degree of non-disclosure of sexual orientation is not known. Moreover, research has shown that a patient's "outness" predicts disclosure of sexual orientation to their health care providers, which has been associated with regular health care use.[26] Respondents who disclosed their sexual identity to a CCHS interviewer might be more open about their sexuality to others, and as a result, might be more inclined to use the health care system, compared

with other members of the gay, lesbian and bisexual communities.[12]

This analysis is based on self-reported data; no independent verification of the information was undertaken. The degree to which the data are biased because of reporting error is unknown.

The sample size for some characteristics of the gay, lesbian and bisexual populations is small, thereby limiting the statistical power to detect differences.

Health status was not fully controlled in the multivarate logistic regression models, as the severity of chronic conditions was not ascertained. Furthermore, HIV/AIDS status was not known.

The questions on mood and anxiety disorders are not standardized measurement tools, and should not be considered as measures of the prevalence of these disorders.

Conclusion

This analysis provides evidence, based on a national probability sample, that the use of health care in Canada varies by sexual identity, independent of predisposing, enabling and health need factors.

Overall, compared with the heterosexual population, gays, lesbians and bisexuals were more inclined to consult mental health service providers. Lesbians were less likely to have a regular doctor, and not surprisingly, had lower utilization rates of family doctors and of receipt of the Pap test. Compared with heterosexuals, bisexuals reported higher levels of unmet health care needs.

The reasons for the different care-seeking behaviours of the gay, lesbian and bisexual populations could not be ascertained with CCHS data and require further study. Nonetheless, the findings illustrate that gay men, lesbians and bisexuals should not be considered a homogenous

What is known on this topic?

■ Gay, lesbian and bisexual Americans experience more barriers to health care than do heterosexual Americans.

■ Most American studies show that lesbians and bisexual women undergo preventive cancer screening tests less frequently than do heterosexual women.

■ Much of this research was based on non-probability surveys.

What does this study add?

■ Gays, lesbians and bisexual Canadians have different health-care-seeking behavior than do other Canadians, independent of predisposing, enabling and health need factors.

■ Disparities in health care use were particularly evident among lesbians, who are less likely to have a regular doctor and who have lower utilization rates of GPs and Pap tests.

■ Bisexuals were more likely to report unmet health care needs, compared with heterosexual Canadians.

■ Evidence from this study is based on a large national probability survey.

group with regard to health care use, and should be analyzed separately in future studies.

These results are a first step in describing health care use patterns among adult Canadians who self-identify as gay, lesbian or bisexual. Further in-depth research would be useful to determine if the disparities persist across different segments of these groups (young and old, urban and rural), as well as the reasons for these disparities. ●

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