

The Health of Ontario First Nations People

Results from the Ontario First Nations Regional Health Survey

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ABSTRACT

Objective: To describe the health of First Nations adults residing on Ontario reserves using data from the Ontario First Nations Regional Health Survey (OFNRHS).

Method: Communities were randomly selected; individuals were systematically selected based on gender and age. Health questions were parallel to those used in the National Population Health Survey (NPHS) and included general health, chronic conditions, substance use, and health service utilization.

Results: Response rate was 86% (N=1094) in participating communities; 23 of 30 selected communities participated. Most OFNRHS respondents reported that their health was good or better. Comparisons of OFNRHS participants with NPHS Ontario respondents showed: some chronic health conditions (including diabetes, high blood pressure) were more common; a greater proportion reported smoking; and a substantially lower proportion indicated that they consumed alcohol in the past year.

Conclusions: The OFNRHS provides important province-wide data to inform decisions by the First Nations people about how to intervene effectively to improve their health status.

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

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Over the past several decades, many studies have examined the health of Canada's Aboriginal people,¹ but few have involved province-wide community-based samples; fewer still have been conducted using a process directed by a First Nations steering committee. The largest population survey to date, the national Aboriginal Peoples Survey (1991), was conducted without First Nations direction; further, 181 reserves opted out of the APS.² The purpose of this article is to provide an overview of chronic health conditions reported by Ontario First Nations people living on reserve, as well as information about specific risk behaviours and health service contact, using data from the Ontario First Nations Regional Health Survey (OFNRHS). Where possible, this information is compared to findings from the National Population Health Survey (NPHS).³ These results are intended to inform First Nations communities about the health status of their people, both problem areas and strengths, in order to aid their decisions about how to intervene effectively.

METHODS

First Nations communities in Ontario were randomly selected within urban, rural, special access and remote strata. In each community, individuals were systematically selected from six strata based on gender and age (child: newborn to age 11, youth: age 12-17 and adult: age 18+). Females are over-represented in the adult sample: when a child or youth was selected to participate, the "person most knowledgeable" provided information on that child; this person (usually the mother) was also interviewed about her health. Health questions were parallel to those used in the NPHS³ and included general health, chronic conditions, tobacco and alcohol use, and health service utilization.

The NPHS had a stratified two-stage design whose sampling unit was the household.³ However, the data presented here derive from the health portion of the interview; only one member of the household responded to this section. Respondents aged 18 and over from Ontario were selected for comparisons here (NPHS-O).

All analyses were run in SUDAAN (Version 7.5.3) on weighted data. Prevalence estimates and standard errors

TABLE I
Characteristics of Adult Respondents by Gender

	First Nations			NPHS Ontario 1994		
	Male % (s.e.)* N=325	Female % (s.e.)* N=769	Total % (s.e.)* N=1094	Male % (s.e.)* N=2178	Female % (s.e.)* N=2662	Total % (s.e.)* N=4840
Age group						
18-44	70.3 (3.0)†	78.0 (2.2)†	74.2 (2.1)	58.7 (0.9)	55.8 (2.6)	57.2 (1.8)
45+	29.8 (3.0)	22.0 (2.2)	25.8 (2.1)	41.3 (0.9)	44.2 (2.6)	42.8 (1.8)
Married or common-law	58.2 (3.9)	58.4 (2.6)	58.3 (2.8)	67.4 (1.4)	61.9 (1.0)	64.6 (1.2)
Household size 1-3 persons	56.0 (4.6)	42.4 (3.8)	49.1 (3.6)	61.1 (2.2)	62.0 (3.6)	61.6 (2.8)
Some high school or less	69.8 (2.8)†	62.0 (2.9)†	65.9 (2.1)	30.9 (3.6)	31.0 (3.3)	31.0 (3.5)
Working for pay or profit	48.6 (2.8)†	44.5 (2.6)	46.5 (1.5)	66.7 (1.7)	46.3 (1.6)	56.3 (1.4)
Urban region	48.8 (2.6)†	51.5 (2.8)†	50.1 (2.6)	88.9 (4.1)	89.3 (3.1)	89.1 (3.6)

* s.e. indicates standard error

† statistically significant difference between OFNRHS and NPHS-O

TABLE II
Health Rating and Chronic Conditions by Sample and Gender

	First Nations			NPHS Ontario 1994		
	Male % (s.e.)* N=325	Female % (s.e.)* N=769	Total % (s.e.)* N=1094	Male % (s.e.)* N=2178	Female % (s.e.)* N=2662	Total % (s.e.)* N=4840
Self-rating of health						
Excellent/very good/good	78.3 (3.3)†	77.6 (2.9)	77.9 (2.1)	90.3 (0.6)	87.5 (0.6)	88.9 (0.5)
High blood pressure	26.0 (2.2)†	19.2 (1.6)†	22.6 (1.5)	8.5 (0.2)	10.8 (0.6)	9.7 (0.4)
Arthritis or rheumatism	17.2 (2.5)	18.7 (2.4)	18.0 (2.0)	12.1 (1.4)	19.2 (1.9)	15.7 (1.6)
Heart problems	11.7 (2.1)	7.1 (1.0)	9.3 (1.1)	5.2 (0.4)	4.3 (0.4)	4.7 (0.4)
Breathing problems	7.7 (1.6)	9.9 (1.2)†	8.8 (1.1)	2.5 (0.9)	4.1 (0.5)	3.3 (0.7)
Asthma	5.1 (1.3)	12.6 (1.0)†	8.9 (0.7)	6.5 (0.5)	5.8 (0.6)	6.1 (0.2)
Tuberculosis	(C)	(C)	5.5 (1.7)	—	—	—
Cancer	(C)	(Q) 4.7 (1.2)	3.1 (0.6)	1.1 (0.2)	2.6 (0.3)	1.9 (0.2)
Diabetes	14.4 (3.1)†	15.1 (2.0)†	14.8 (1.7)	3.0 (0.1)	3.7 (0.3)	3.4 (0.1)

* s.e. indicates standard error

† statistically significant difference between OFNRHS and NPHS-O

(C) confidential: cell size too small for reliable estimate

(Q) qualified estimate: high sampling variability

were calculated. Because the OFNRHS and the NPHS-O had different sampling designs, t-values were calculated with the standard error of the difference equal to the square root of the sum of the squared standard errors. Health conditions and risk factors vary by gender, so males and females were tested separately. Because of the number of tests done, alpha was set at 0.001; using a conservative estimate of degrees of freedom ($df = 100$), the critical t value was 3.39. Significant differences noted in tables are based on this value.

RESULTS

Sample

Of the 30 communities randomly selected, 23 participated in the survey and 1 was ineligible, for a response rate of 79.3% (23/29). A total of 1,094 of the 1,271 adults selected completed the questionnaire, giving a response rate of 86.1%. Almost 12% refused to complete the questionnaire while 2.4% had either moved, could not be located or were deceased. Non-responders were similar to responders

in age, community and region; however, significantly more males than females did not participate. The NPHS Ontario sample provided 4,840 respondents (2,178 men; 2,662 women) aged 18 and over. Table I shows the characteristics of adult respondents by gender, and demographic characteristics of the samples. Respondents in the OFNRHS were significantly younger than those in the NPHS-O. Significantly fewer had graduated from high school, and significantly fewer males were working for pay or profit.

General health and chronic conditions

In response to the question, "In general, how would you rate your health," 22% of males and 22% of females age 20 and older described their health as either fair or poor (see Table II). Significantly more OFNRHS males rated their health as fair or poor than their counterparts in the NPHS-O. Table II also shows the percentage of adult respondents who indicated that they had been told by a health care professional that they have specified health conditions. The most frequently reported conditions were

high blood pressure, arthritis/rheumatism and diabetes. While the prevalence of some conditions varied by gender, most differences did not reach statistical significance. Two exceptions include asthma and cancer which were both more common in First Nations women compared to men. Because of small sample sizes, some of the confidence intervals for males and females were quite wide, however, for less common conditions such as tuberculosis. This lack of precision could limit the likelihood of finding a clinically significant difference by gender that does exist for some conditions. Similarly, small sample sizes precluded analysis of the effect of health behaviours on rates of specific conditions. Number of chronic conditions increased significantly with age for OFNRHS men ($r=0.45$, $p<0.0001$) and women ($r=0.41$, $p<0.0001$).

Rates for high blood pressure, breathing problems, asthma and diabetes were significantly higher for OFNRHS women compared with NPHS-O women; rates for high blood pressure and diabetes were significantly higher in OFNRHS than in NPHS-O men.

TABLE III
Alcohol and Tobacco Use by Sample and Gender

	First Nations			NPHS Ontario 1994		
	Male % (s.e.)* N=325	Female % (s.e.)* N=769	Total % (s.e.)* N=1094	Male % (s.e.)* N=2178	Female % (s.e.)* N=2662	Total % (s.e.)* N=4840
Ever smoked cigarettes	86.7 (3.7)†	75.4 (3.7)†	81.0 (3.5)	65.6 (1.2)	52.6 (3.4)	59.0 (2.4)
Currently smoking cigarettes	68.9 (5.0)†	55.4 (3.7)†	62.0 (3.9)	25.0 (2.5)	22.9 (1.2)	24.0 (1.8)
Someone regularly smoking inside the house	50.9 (4.7)†	50.1 (4.0)†	50.9 (3.3)	34.0 (2.1)	33.1 (1.4)	33.5 (1.7)
During the past 12 months, how often drank alcoholic beverages:						
More than once a week	10.3 (2.2)†	3.4 (0.8)†	6.8 (1.3)	34.5 (1.1)	15.3 (0.9)	24.7 (0.9)
Once a week or less	54.1 (5.2)	51.4 (3.8)	52.7 (3.8)	49.4 (1.1)	58.6 (0.9)	54.1 (0.9)
No drink in last 12 months	35.6 (4.7)†	45.3 (3.8)†	40.5 (3.5)	21.2 (1.4)	16.1 (0.9)	26.1 (2.0)
Drank 5+ drinks on one occasion in last 12 months	57.8 (4.7)	43.3 (3.1)†	50.5 (3.4)	47.5 (3.0)	24.1 (2.5)	35.5 (2.8)

* s.e. indicates standard error
† statistically significant difference between OFNRHS and NPHS-O

TABLE IV
Utilization of Health Services by Sample and Gender

	First Nations			NPHS Ontario 1994		
	Male % (s.e.)* N=325	Female % (s.e.)* N=769	Total % (s.e.)* N=1094	Male % (s.e.)* N=2178	Female % (s.e.)* N=2662	Total % (s.e.)* N=4840
General practitioner or family physician	59.4 (4.8)†	69.8 (3.1)†	64.6 (3.3)	76.7 (1.1)	85.9 (1.3)	81.4 (1.2)
Eye specialist	37.7 (2.9)	46.4 (2.9)	42.1 (2.7)	34.6 (1.1)	41.3 (0.7)	38.0 (0.9)
Other medical doctor	16.9 (2.7)	28.7 (2.7)	22.9 (1.9)	23.2 (1.8)	31.8 (0.6)	27.6 (1.0)
A nurse for care or advice	24.6 (4.7)†	31.4 (3.0)†	28.1 (3.6)	5.7 (1.1)	8.9 (1.1)	7.4 (1.1)
Dentist or orthodontist	42.4 (4.0)†	47.9 (2.5)†	45.1 (2.8)	62.4 (1.9)	61.2 (1.7)	61.8 (0.8)
Traditional healer (medicine person)	14.7 (2.8)	19.7 (1.9)	17.2 (2.1)	—	—	—
Physiotherapist	9.7 (2.6)	6.1 (1.2)	7.9 (1.7)	6.1 (0.8)	8.0 (0.4)	7.1 (0.5)
Social worker or counsellor	14.1 (2.5)†	16.5 (2.7)†	15.4 (2.4)	4.3 (0.3)	6.7 (0.2)	5.5 (0.1)
Psychologist	(C)	4.1 (1.2)	4.0 (0.8)	1.8 (0.2)	1.4 (0.2)	2.2 (0.3)
Speech, audiology or occupational therapist	(C)	(C)	(C)	1.7 (0.4)	1.3 (0.2)	1.5 (0.2)
Alternative health care provider	16.4 (2.6)†	21.3 (1.9)†	18.9 (2.0)	2.3 (0.4)	4.8 (0.6)	3.6 (0.5)
Been a patient overnight in a hospital, nursing home or convalescent home	12.0 (2.0)	17.6 (1.5)	14.8 (1.4)	7.0 (0.4)	12.5 (1.2)	9.9 (0.7)

* s.e. indicates standard error
† statistically significant difference
(C) confidential: cell size too small for reliable estimate

Tobacco and alcohol use

Table III displays the rates of smoking and drinking in the OFNRHS and NPHS-O sample; significantly more OFNRHS men and women had ever smoked, were currently smoking, and had someone regularly smoking inside the house than NPHS-O men and women. Significantly higher proportions of OFNRHS men and women reported drinking no alcohol in the previous 12 months and significantly lower proportions drank more than once a week, compared with NPHS-O respondents. Significantly more females reported having five or more drinks on one occasion than their counterparts in the NPHS-O. Four OFNRHS communities (totalling 186/1,094 individual respondents) were “dry”.

Health service utilization

About 9% of respondents indicated that they did not receive health care or advice when it was needed in the previous year; this is not significantly different from the

5% in the NPHS-O sample. Only 28% believed that First Nations and Inuit people have the same level of health services as the rest of Canada; a relatively large percentage (22%) said that they did not know or refused to answer.

Table IV summarizes contact with a range of health care professionals in the previous 12 months. Utilization included having been seen by or having telephone contact with a health professional about one’s physical, emotional or mental health. Significantly fewer OFNRHS men and women had contact with a general practitioner or dentist in the previous year; however, significantly more had contact with a nurse, social worker and alternative health care provider, compared with men and women in the NPHS-O. Proportions of those hospitalized were similar in the two surveys.

Family physician use was much higher in urban (73%) and rural (71%) than in remote/special access communities (43%) ($\chi^2=7.75$, $df=2$, $p=0.037$). This trend was

different for nurse contact, with 19%, 39% and 35% in urban, rural and remote areas ($\chi^2=8.25$, $df=2$, $p=0.032$).

DISCUSSION

Despite high prevalence rates of several chronic conditions, it is encouraging that the majority of First Nations respondents described their health generally as good, very good or excellent. Nevertheless, these figures for chronic health problems are substantially higher than those from the Ontario portion of the NPHS. While it was not possible in this survey to ask more detailed questions about the reasons for the various health ratings, it would be useful to understand the nature of health problems experienced by people who did not rate their health as good or better, using qualitative methods.

The rates of chronic health conditions were generally higher among First Nations adults compared with the NPHS-O. This is particularly noteworthy since on average

OFNRHS males and females were significantly younger than their NPHS-O counterparts. In a recent review, Young and colleagues highlight the factors that may be related to the rise in diabetes among Aboriginal populations since the 1950s.⁴ Some of the key elements include genetic susceptibility, obesity, and lack of physical activity.

Heart problems and breathing problem rates showed an approximately two-fold increase above those reported in the NPHS-O sample. However, the definition varied slightly between the OFNRHS and the NPHS. A recent study that assessed patterns in admission rates for ischemic heart disease in Ontario found that hospitalizations in the Native population have doubled whereas rates in the general population have been declining.⁵

Among the Ontario First Nations respondents, 69% of males and 55% of females indicated that they are smoking at present while rates for males and females in the NPHS-O are 25% and 23% respectively. This is consistent with earlier studies that examined the prevalence of smoking among Canada's First Nations people compared to the general population.⁶⁻⁸ A recent summary of tobacco use based on the national results of the First Nations and Inuit Regional Health Survey (FNIRHS) indicates that 62% of respondents smoked cigarettes at the time of the survey.⁹ However, Young suggests that prevalence rates of smoking may vary by region or community.⁸ For example, a recent article based on data from Santé Quebec surveys indicates that the prevalence of regular smoking among Inuit women showed a two-fold increase compared to Cree and southern Quebec women.¹⁰ In the FNIRHS, such information is not available, since no attempts were made to compare rates across regions.

In the FNIRHS tobacco report, Reading emphasizes that attempts to reduce tobacco use must take into account the sacred role that tobacco has had in the spiritual lives of many Aboriginal people.⁹ He discusses some of the current tobacco use cessation programs, and calls for the evaluation of such approaches.

It is of note that a substantially lower proportion of respondents to the OFNRHS (59%) indicated that they had an alcoholic drink during the previous 12

months compared to those in the NPHS-O (74%). This finding is consistent with the pattern of alcohol consumption reported by women in the Santé Quebec surveys; while approximately 75% of women in southern Quebec had consumed alcohol in the preceding year, only 42% of Cree and 52% of Inuit women had done so.¹⁰ However, in the OFNRHS, among those who had consumed alcohol in the previous year, 43% of women had consumed five or more alcoholic drinks on one occasion. The pattern was again very similar to that of women in Quebec, where 58% of Cree and 61% of Inuit women had consumed five or more alcoholic drinks on the days they consumed alcohol, compared to 42% of women in southern Quebec. The comparable figure from the NPHS-O was 24%.

The data also suggest that fewer First Nations adults living on reserve drink alcohol compared to the general population, contrary to some earlier findings that alcohol abuse is higher among Aboriginal communities, and has been a source of concern for Aboriginals themselves.¹¹ Such information could be very useful in identifying those at risk for health problems associated with excessive alcohol intake.

Ontario First Nations respondents had much higher rates of contact with nurses (28% versus 7%), social workers or counsellors (15% versus 6%), and alternative health care providers (19% versus 4%) than those in the NPHS-O. It would be useful to understand whether these findings were due to variation in accessibility to different health care professionals or

preference on the part of those utilizing the services. Previous reports indicate that Aboriginal people have less access to health care services compared to other Canadians because of a shortage of trained personnel and geographic isolation.^{12,13} It is of note that only 65% of respondents had contact with a general practitioner or family physician, while the rate was 81% for Ontario respondents to the NPHS.

It is necessary to review the strengths and limitations of the OFNRHS. First and foremost, it is important to underscore that this survey was successfully conducted with a partnership between a First Nations advisory committee and a research team. Second, it provides important community-based data about the distribution of physical health problems among Ontario First Nations people living on reserve.

While this survey cannot identify the cause of increased health problems among First Nations people due to the cross-sectional design, it can serve as the basis for a future longitudinal study. The OFNRHS was limited to self-report data; this may have resulted in over- or under-estimates of conditions or behaviours, influenced by recall, social desirability, stigma or other factors. It would be important to consider ways of gathering both self-report and record data (for example, regarding health service utilization) in the future. It is hoped that the information contained in this report can be utilized by First Nations people to determine their own health care needs, and to advocate for services.¹¹

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RÉSUMÉ

Objectif : Décrire, à partir des données de l'enquête Ontario First Nations Regional Health Survey (OFNRHS), l'état de santé des membres adultes des Premières nations vivant dans les réserves de l'Ontario.

Méthode : Les communautés ont été sélectionnées au hasard; les participants ont été choisis de façon systématique selon leur sexe et leur âge. Les questions sur la santé, tirées de l'Enquête nationale sur la santé de la population (ENSP), portaient notamment sur l'état de santé général, les troubles chroniques, la consommation d'alcool, ainsi que sur le recours aux services de santé.

Résultats : Pour les 23 communautés participantes (sur une possibilité de 30), le taux de réponse s'élevait à 86 % (n=1 094). La plupart des répondants ont indiqué être en bonne ou en très bonne santé. En comparant les répondants de l'OFNRHS aux répondants ontariens de l'ENSP, nous avons déterminé que certains problèmes chroniques, notamment le diabète et l'hypertension artérielle, sont plus fréquents chez les Autochtones. De plus, une plus grande proportion d'entre eux se déclarent fumeurs, alors qu'une proportion considérablement moindre indiquent avoir consommé de l'alcool au cours de la dernière année.

Conclusions : L'OFNRHS fournit d'importantes données qui pourront aider les Premières nations ontariennes à prendre des décisions qui leur permettront d'intervenir efficacement pour améliorer leur état de santé.

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