Factors Associated With Human Papillomavirus Infection Among Women in the Northwest Territories

Paul Brassard, MD, MSc,^{1,2} Ying Jiang, MSc,³ Alberto Severini, MD,⁴ Vanessa Goleski, BSc,⁴ Maria Santos, MSc,⁵ Susan Chatwood, BScN, MSc,^{6,7} Candice Lys, MA,⁷ Gordon Johnson, MD,⁸ Tom Wong, MD, MPH,^{7,9} Andrew Kotaska, MD,¹⁰ Kami Kandola, MD, MPH,⁵ Howard Morrison, PhD,³ Yang Mao, PhD³

ABSTRACT

Background: In some regions, Aboriginal women have higher rates of cervical cancer compared to other Canadian women. However, little data are available regarding the co-factors of HPV infection in the Aboriginal population of Canada. We examined factors associated with high-risk human papillomavirus (HR-HPV) infection in a population of women (both Aboriginal and non-Aboriginal) in the Northwest Territories (NWT).

Methods: We used a cross-sectional design using a convenience sample of all women aged 14 years or older presenting for Papanicolaou (Pap) testing across all regions of the NWT from March 2009 to March 2010. Women answered a questionnaire on demographic characteristics, sexual behaviour, and gynaecological and obstetrical events. We used multiple regression analysis to explore factors associated with HR-HPV infection according to age and cultural background. HPV typing was done using the Luminex assay.

Results: Of the total 1,279 participants, 178 had missing HPV results. We obtained data on 1,101 women and overall HR-HPV prevalence was 14.2%. Younger age, single marital status, Aboriginal background, current smoking, lifetime deliveries, use of hormonal contraceptives, and the numbers of sexual partners in the last year were associated with prevalent HR-HPV.

Discussion: Our findings tend to indicate that Aboriginal women have different predictors of HR-HPV than non-Aboriginal women that may affect HPV progression to cervical cancer. These findings can help to better target public health practices for the women at higher risk of HPV infection and cervical cancer.

Key words: Human papillomavirus; determinants; Aboriginal

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

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Cervical cancer is the second leading cause of cancer-related deaths among women worldwide. Human papillomavirus (HPV) has been found to be the precursor for cervical cancer in 99% of the cases. Global HPV prevalence among women is estimated at 10%, with approximately 75% of the female population acquiring an HPV infection at least once in their lives. Furthermore, some population groups appear to be at higher risk for infection than others.^{1,2}

In Canada, approximately 1,300 new cervical cancer cases are diagnosed each year and 380 deaths are due to the disease.¹ In some regions, Aboriginal women have higher rates of cervical cancer compared to other Canadian women.³⁻⁶ Data from Manitoba show that in comparison with non-Aboriginal women, Aboriginal women had 1.8 and 3.6 times the age-standardized incidence rates of in situ and invasive cervical cancer, respectively.⁴ In addition to oncogenic high-risk HPV (HR-HPV), several co-factors are needed in cervical carcinogenesis and little data are available regarding the determinants of HPV infection in the Aboriginal population of Canada.⁷

Aboriginal groups make up approximately half of the population of the Northwest Territories (NWT).⁸ A recent study among women in the NWT found that HPV prevalence was approximately 50% higher among Aboriginal than non-Aboriginal women (28% versus 18.8%, respectively).⁹ We wished to examine co-factors associated with HR-HPV infection in a population of women (both Aboriginal and non-Aboriginal) in the Northwest Territories. The identification of various factors associated with high-risk HPV could

help in the planning of cervical cancer prevention and intervention programs in this region.¹⁰⁻¹²

METHODS

This cross-sectional design consisted of a convenience sample of all women aged 14 years or older presenting for a Papanicolaou (Pap) test across all regions of the NWT from March 2009 to March 2010. Participants were asked by their local health care provider to complete a questionnaire and to give written consent to both the questionnaire and HPV testing. Refusals to participate were not tabulated. The questionnaire consisted of 20 short multiple-choice

Author Affiliations

1. Division of Clinical Epidemiology, McGill University Health Centre, Montreal, QC
2. Department of Medicine, McGill University, Montreal QC
3. Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada, Ottawa, ON
4. National Microbiology Laboratory, PHAC, Winnipeg, MB
5. Department of Health & Social Services, Yellowknife, NT
6. Institute for Circumpolar Health Research, Yellowknife, NT
7. University of Toronto, Toronto, ON
8. Dynacare Kasper Medical Laboratories, Edmonton, AB
9. Centre for Communicable Diseases and Infection Control, PHAC, Ottawa, ON
10. Department of Obstetrics and Gynaecology, Stanton Territorial Hospital, Yellowknife, NT

Correspondence: Dr. Paul Brassard, Division of Clinical Epidemiology, McGill University Health Centre, 687 Pine Avenue West, R4-29, Montreal, QC H3A 1A1, Tel: 514-340-7563, Fax: 514-340-7564, E-mail: paul.brassard@mcgill.ca

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Table 1. Determinants of Prevalent HR-HPV Infection

Characteristics	Other n (%)	HR-HPV n (%)	OR (95%)	
			Crude	Adjusted*
Demographic				
Age (years) (N=1064)				
<20	44 (69.8)	19 (30.2)	1.00(Ref)	1.00(Ref)
20-29	235 (78.3)	65 (21.7)	0.64 (0.34-1.17)	0.62 (0.35-1.12)
30-39	222 (89.5)	26 (10.5)	0.27 (0.14-0.53)	0.30 (0.15-0.61)
40-49	240 (90.9)	24 (9.1)	0.22 (0.12-0.45)	0.27 (0.13-0.55)
50-59	149 (92.0)	13 (8.0)	0.20 (0.08-0.44)	0.27 (0.12-0.61)
60+	24 (88.9)	3 (11.1)	0.28 (0.08-1.08)	0.33 (0.08-1.33)
Marital status (N=1077)				
Married or living with partner	647 (89.1)	79 (10.9)	1.00(Ref)	1.00(Ref)
Single	276 (78.6)	75 (21.4)	2.23 (1.58-3.15)	2.07 (1.45-2.95)
Educational attainment (N=1075)				
Grade school	323 (81.4)	74 (18.6)	1.00(Ref)	1.00(Ref)
College	273 (86.4)	43 (13.6)	0.69 (0.46-1.04)	0.69 (0.45-1.06)
University	326 (90.1)	36 (9.9)	0.48 (0.31-0.74)	0.64 (0.39-1.02)
Cultural background (N=993)†				
Non-Aboriginal	514 (90.3)	55 (9.7)	1.00(Ref)	1.00(Ref)**
Aboriginal				
First Nations	200 (79.1)	53 (20.9)	2.48 (1.64-3.74)	2.54 (1.65-3.91)**
Métis	97 (80.2)	24 (19.8)	2.31 (1.37-3.91)	2.24 (1.31-3.82)**
Inuit	39 (78.0)	11 (22.0)	2.46 (1.16-5.21)	2.40 (1.11-5.19)**
All Aboriginals (N=998)†				
Yes	341 (79.5)	88 (20.5)	2.41 (1.68-3.47)	2.40 (1.65-3.49)***
** Ratio is adjusted without Aboriginal variable				
*** Ratio is adjusted without cultural background variable				
Employed (N=1044)				
Yes	755 (87.1)	112 (12.9)	1.00(Ref)	1.00(Ref)
No	139 (78.5)	38 (21.5)	1.84 (1.22-2.78)	1.54 (0.99-2.40)
Clinical				
Ever had sexually transmitted infection (N=1033)				
Yes	312 (83.9)	60 (16.1)	1.00(Ref)	1.00(Ref)
No	576 (87.1)	85 (12.9)	0.77 (0.54-1.09)	0.99 (0.97-1.01)
Lifetime deliveries (N=1060)				
0	308 (78.8)	83 (21.2)	1.00(Ref)	1.00(Ref)
1	155 (82.4)	33 (17.6)	0.79 (0.51-1.24)	0.73 (0.46-1.17)
2+	445 (92.5)	36 (7.5)	0.30 (0.20-0.46)	0.25 (0.16-0.39)
Birth control method (N=547)				
Non-hormonal	218 (88.6)	28 (11.4)	1.00(Ref)	1.00(Ref)
Hormonal	234 (77.7)	67 (22.3)	2.23 (1.38-3.59)	2.25 (1.38-3.66)
Behavioural				
Current smoker (N=1079)				
No	655 (88.8)	83 (11.2)	1.00(Ref)	1.00(Ref)
Yes	269 (78.9)	72 (21.1)	2.11 (1.49-2.98)	1.81 (1.24-2.62)
Lifetime no. of sexual partners (N=981)				
<10 partners	637 (87.1)	94 (12.9)	1.00(Ref)	1.00(Ref)
≥10 partners	206 (82.4)	44 (17.6)	1.45 (0.98-2.14)	1.21 (0.81-1.81)
Age at first sexual intercourse (N=1040)				
11-15	232 (81.1)	54 (18.9)	1.00(Ref)	1.00(Ref)
16-19	524 (86.6)	81 (13.4)	0.66 (0.45-0.97)	0.74 (0.50-1.09)
20+	136 (91.3)	13 (8.7)	0.41 (0.22-0.78)	0.62 (0.31-1.23)
No. of sexual partners in past year (N=1053)				
0	90 (92.8)	7 (7.2)	1.00(Ref)	1.00(Ref)
1	694 (87.2)	102 (12.8)	1.89 (0.85-4.19)	1.64 (0.73-3.70)
2-4	97 (76.4)	30 (23.6)	3.97 (1.66-9.50)	2.90 (1.18-7.11)
5+	22 (66.7)	11 (33.3)	6.43 (2.23-18.48)	5.41 (1.79-16.39)

OR (95%) = Odds ratio (95% confidence interval).

* Odds ratios are adjusted for all other characteristics.

HR-HPV = high-risk human papillomavirus; Other = HPV negative and low-risk human papillomavirus.

** or *** = adjusted ratio using a different model (see details in table) to avoid over-adjustment.

† The reason for the different numbers (N=993 vs. N=998) is that 5 Aboriginal subjects could not be classified as Métis, First Nations or Inuit.

questions and collected information known to be associated with HPV infection such as demographic characteristics, sexual behaviour, and gynaecological and obstetrical events. It was self-administered and reviewed by the health care provider in order to ensure completeness and to clarify any misunderstandings the study participant may have.

To avoid repeated measures, if more than one Pap test was performed over the study period, only the first sample (and accompanying questionnaire) was kept for analysis. Universal coverage of health care is present in the NWT, thus there are no other Pap test

providers in the area. As of 2008, 88% of NWT women aged 18-69 reported having had a Pap test in the previous 3 years.⁸

Samples were collected through liquid-based cervical scrapes, stored in the NWT regional laboratory, and shipped to the DynaLIFE_{DX} Laboratory in Edmonton, Canada. Approximately half of the medium was retained for Pap testing. The remainder was shipped to the Public Health Agency of Canada National Microbiology Laboratory (NML) in Winnipeg, Canada for HPV typing.

HPV types are classified as being high-risk (HR) or low-risk (LR) based on their oncogenic potential in cervical cancer.¹³

Table 2. Determinants of Prevalent HR-HPV Infection Among Aboriginal Women

Characteristics	Other n (%)	HR-HPV n (%)	OR (95%)	
			Crude	Adjusted*
Demographic				
Age (years) (N=418)				
<20	19 (59.4)	13 (40.6)	1.00(Ref)	1.00(Ref)
20-29	94 (70.1)	40 (29.9)	0.62 (0.28-1.38)	0.68 (0.30-1.55)
30-39	90 (85.7)	15 (14.3)	0.24 (0.10-0.59)	0.30 (0.12-0.74)
40-49	82 (91.1)	8 (8.9)	0.14 (0.05-0.39)	0.17 (0.06-0.50)
50-59	42 (87.5)	6 (12.5)	0.21 (0.07-0.63)	0.30 (0.09-0.95)
60+	7 (77.8)	2 (22.2)	0.42 (0.07-2.34)	0.55 (0.09-3.52)
Marital status (N=427)				
Married or living with partner	220 (84.3)	41 (15.7)	1.00(Ref)	1.00(Ref)
Single	120 (72.3)	46 (27.7)	2.06 (1.28-3.31)	1.83 (1.12-3.00)
Educational attainment (N=424)				
Grade school	181 (77.0)	54 (23.0)	1.00(Ref)	1.00(Ref)
College	119 (82.6)	25 (17.4)	0.70 (0.41-1.19)	0.66 (0.38-1.15)
University	38 (84.4)	7 (15.6)	0.62 (0.26-1.46)	0.63 (0.25-1.58)
Cultural background (N=422)				
First Nations	200 (79.1)	53 (20.9)	1.00(Ref)	1.00(Ref)
Métis	97 (80.2)	24 (19.8)	0.93 (0.54-1.60)	0.84 (0.47-1.51)
Inuit	38 (79.2)	10 (20.8)	0.99 (0.46-2.12)	0.96 (0.43-2.12)
Clinical				
Ever had sexually transmitted infection (N=391)				
Yes	185 (81.1)	43 (18.9)	1.00(Ref)	1.00(Ref)
No	127 (77.9)	36 (22.1)	1.22 (0.74-2.01)	1.12 (0.66-1.91)
Lifetime deliveries (N=415)				
0	75 (64.1)	42 (35.9)	1.00(Ref)	1.00(Ref)
1	59 (75.6)	19 (24.4)	0.58 (0.30-1.09)	0.62 (0.31-1.24)
2+	196 (89.1)	24 (10.9)	0.22 (0.12-0.39)	0.23 (0.12-0.43)
Birth control method (N=219)				
Non-hormonal	83 (84.7)	15 (15.3)	1.00(Ref)	1.00(Ref)
Hormonal	82 (67.8)	39 (32.2)	2.63 (1.35-5.14)	2.95 (1.49-5.87)
Behavioural				
Current smoker (N=376)				
No	182 (83.5)	36 (16.5)	1.00(Ref)	1.00(Ref)
Yes	116 (73.4)	42 (26.6)	1.69 (1.05-2.73)	1.89 (1.15-3.12)
Lifetime no. of sexual partners (N=352)				
<10 partners	198 (81.1)	46 (18.9)	1.00(Ref)	1.00(Ref)
≥10 partners	81 (75.0)	27 (25.0)	1.44 (0.83-2.46)	1.46 (0.83-2.57)
Age at first sexual intercourse (N=394)				
11-15	116 (73.4)	42 (26.6)	1.00(Ref)	1.00(Ref)
16-19	182 (83.5)	36 (16.5)	0.55 (0.33-0.90)	0.52 (0.30-0.88)
20+	15 (83.3)	3 (16.7)	0.55 (0.15-2.00)	0.70 (0.17-2.83)
No. of sexual partners in past year (N=407)				
0	29 (90.6)	3 (9.4)	1.00(Ref)	1.00(Ref)
1	226 (81.0)	53 (19.0)	2.27 (0.67-7.72)	1.87 (0.53-6.56)
2-4	56 (73.7)	20 (26.3)	3.45 (0.95-12.58)	3.04 (0.81-11.43)
5+	13 (65)	7 (35)	5.20 (1.16-23.38)	4.59 (0.96-21.97)

OR (95%) = Odds ratio (95% confidence interval).

* Odds ratios are adjusted for all other characteristics.

HR-HPV = high-risk human papillomavirus; Other = HPV negative and low-risk human papillomavirus.

HPV typing was done using a Luminex assay, a method developed at the NML in Canada which detects 46 HPV types.^{14,15} These include 24 of the 25 IARC high-risk (HR) types found in group 1, 2a, and 2b (HPV 16, 18, 26, 30, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 70, 73, 82, 85 and 97) as well as 22 types considered of low (LR) or unknown risk (6, 11, 13, 32, 40, 42, 43, 44, 54, 61, 62, 71, 72, 74, 81, 83, 84, 86, 87, 89, 90, and 91).¹³ The sensitivity and specificity of the NML Luminex assay, using direct sequencing as a gold standard, were 98.8% and 96.4%, respectively.^{15,16}

When present, contraception methods were classified as either hormonal-based or non-hormonal. Birth control pills and medroxyprogesterone injections were classified as hormonal, while IUDs, condoms, diaphragms, and tubal ligations were classified as non-hormonal. Sexually transmitted infections are reported as a subset for participants who answered “yes” to ever having had an STI. STI categories were not mutually exclusive as participants could report having had more than one STI. Lifetime number of sexual partners was dichotomized based on the median distribution. Grade school was

defined as attendance from grades 1 through 12. The number of lifetime deliveries was reported as the number of live birth deliveries.

Univariate unconditional logistic regression was performed on all independent variables to assess their association with HR-HPV infection. Multivariate analysis was conducted on variables found statistically significant on univariate analysis results and predictors of HR-HPV infection that were identified in previous literature. Odds ratios (ORs) and their associated 95% confidence intervals (CIs) were calculated. Findings were considered to be statistically significant when the 2-sided p-value was ≤0.05.

Ethics approval was obtained from the Health Canada Ethics Review Board, McGill University, and Stanton Territorial Health Authority. A license to conduct research was also obtained from the Aurora Research Institute in accordance with the NWT Scientists Act.

RESULTS

A total of 1,279 women participated in this study. Overall, 478 (37.4%) participants self-identified as Aboriginal and 677 (52.9%)

Table 3. Determinants of Prevalent HR-HPV Infection Among Non-Aboriginal Women

Characteristics	Other n (%)	HR-HPV n (%)	OR (95%)	
			Crude	Adjusted*
Demographic				
Age (year) (N=547)				
<20	17 (77.3)	5 (22.7)	1.00(Ref)	1.00(Ref)
20-29	125 (86.2)	20 (13.8)	0.54 (0.18-1.63)	0.55 (0.17-1.73)
30-39	111 (93.3)	8 (6.7)	0.25 (0.07-0.84)	0.33 (0.09-1.20)
40-49	133 (91.7)	12 (8.3)	0.31 (0.09-0.98)	0.43 (0.13-1.49)
50-59	93 (93.0)	7 (7.0)	0.26 (0.07-0.90)	0.39 (0.10-1.46)
60+	15 (93.8)	1 (6.3)	0.23 (0.02-2.16)	0.47 (0.05-4.93)
Marital status (N=564)				
Married or living with partner	373 (92.3)	31 (7.7)	1.00(Ref)	1.00(Ref)
Single	136 (85.0)	24 (15.0)	2.13 (1.20-3.75)	1.48 (0.79-2.78)
Clinical				
Ever had sexually transmitted infection (N=558)				
Yes	115 (89.1)	14 (10.9)	1.00(Ref)	1.00(Ref)
No	389 (90.7)	40 (9.3)	0.84 (0.44-1.61)	0.95 (0.49-1.84)
Lifetime deliveries (N=558)				
0	210 (87.1)	31 (12.9)	1.00(Ref)	1.00(Ref)
1	82 (85.4)	14 (14.6)	1.16 (0.58-2.28)	1.27 (0.62-2.57)
2+	211 (95.5)	10 (4.5)	0.32 (0.15-0.67)	0.37 (0.17-0.79)
Use of birth control (N=567)				
Yes	249 (88.3)	33 (11.7)	1.00(Ref)	1.00(Ref)
No	263 (92.3)	22 (7.7)	0.63 (0.36-1.11)	0.80 (0.44-1.46)
Behavioural				
Current smoker (N=566)				
No	420 (91.1)	41 (8.9)	1.00(Ref)	1.00(Ref)
Yes	91 (86.7)	14 (13.3)	1.57 (0.82-3.01)	1.23 (0.61-2.50)
Lifetime no. of sexual partners (N=544)				
<10 partners	382 (90.7)	39 (9.3)	1.00(Ref)	1.00(Ref)
≥10 partners	109 (88.6)	14 (11.4)	1.26 (0.66-2.40)	0.80 (0.38-1.66)
Age at first sexual intercourse (N=559)				
11-15	93 (91.2)	9 (8.8)	1.00(Ref)	1.00(Ref)
16-19	293 (88.3)	39 (11.7)	1.37 (0.62-2.94)	1.73 (0.77-3.86)
20+	118 (94.4)	7 (5.6)	0.61 (0.22-1.71)	0.85 (0.29-2.48)
No. of sexual partners in past year (N=560)				
0	57 (95.0)	3 (5.0)	1.00(Ref)	1.00(Ref)
1	406 (91.4)	38 (8.6)	1.78 (0.53-5.95)	1.71 (0.50-5.91)
2-4	33 (76.7)	10 (23.3)	5.76 (1.48-22.42)	3.95 (0.96-16.25)
5+	9 (69.2)	4 (30.8)	8.44 (1.61-44.14)	5.18 (0.93-28.75)

OR (95%) = Odds ratio (95% confidence interval).

* Odds ratios are adjusted for all other characteristics.

HR-HPV = high-risk human papillomavirus; Other = HPV negative and low-risk human papillomavirus.

self-identified as non-Aboriginal (9.7% had missing information on their cultural background). Among the Aboriginal women, 286 (59.8%) were of First Nations origin, 138 (28.9%) were Métis and 54 (11.3%) were Inuit. Most women were married or living with a partner (65.1%), had either grade school or community college education (63.4%), reported at least one full-term pregnancy (59.6%), and reported one sexual partner in the past year (72.1%).

When comparing our sample of women to the Canadian 2006 Census results for the NWT, our study had a statistically significant larger coverage of more educated, married, and younger women, as well as a smaller representation of Aboriginal women. Our participants matched the NWT general population on smoking and employment.¹⁷

Of the 1,279 participants, there were 178 (13.9%) women with missing HPV results (sample mislabelled or lost during transport). These were excluded from the logistic regression analysis. For the remaining 1,101 women, overall HR-HPV prevalence was 14.2%. HR-HPV was most prevalent among women aged 20 years or less (30.2%), with decreasing prevalence with increasing age (Table 1).

We examined co-factors of HR-HPV infection for the entire cohort in univariate and multivariate analysis. In the multivariate model, increasing age and number of lifetime deliveries were protective, while single marital status, Aboriginal background, use of hormonal contraceptives, current smoking, and the number of sex-

ual partners in the last year increased the risk of prevalent HR-HPV (Table 1).

We then explored the co-factors for HR-HPV among women of Aboriginal background (First Nations, Métis and Inuit) and among non-Aboriginal women in the NWT (Tables 2 and 3). In multivariate analysis, only the number of lifetime deliveries was found to be protective of prevalent HR-HPV in non-Aboriginal women. In Aboriginal women, being single, hormonal contraception, current smoking, and age at first sexual intercourse were significant risk factors, while increasing age and number of lifetime deliveries were found to be protective. Among Aboriginal women, no difference in risk of HR-HPV infection was noted for the three different cultural groups.

DISCUSSION

This study demonstrates the differences in predictors of HR-HPV infection for different population groups. Aboriginal women were more than twice as likely to have HR-HPV as non-Aboriginal women (OR=2.40, 95% CI: 1.65-3.49, Table 1). It is important to note that between the different cultural groups of Aboriginal women in the NWT, there was no group that was more at risk than another. Overall, ever having had a sexually transmitted infection (STI) was not associated with a higher risk for HR-HPV, although this has been previously identified as a predictor of HPV infection.¹²

We recorded self-reported information and may be dealing with a recall bias influencing our results. We also observed a decrease in risk of HPV infection with an increase in parity. Previous studies have reported similar findings.^{18,19} However, some studies have reported an increase in risk with number of births.²⁰ More studies are needed to better conclude the effects of parity on the risk of HPV infection.

Overall, the number of sexual partners in the previous year was more indicative of current infection than was the number of lifetime partners. When we looked at this characteristic by Aboriginal status, although showing a clear trend in both groups, the number of sexual partners in the previous year did not reach statistical significance after adjusting for covariates.

Selection bias is a potential limitation associated with convenience sampling and could have influenced our findings. Our study had a larger coverage of more educated, married, and younger women, and a smaller representation of Aboriginal women than the overall NWT population. Women who participated in this study were those who presented for a Pap test and therefore, they could be prone to more preventive behaviour and healthier lifestyles than the general population. However, as of 2008, 88% of NWT women aged 18-69 reported having had a Pap test in the previous three years.⁷ As very few women do not access the service over a three-year period, we can consider our sample somewhat representative in terms of accessing time-appropriate cervical cancer screening. Although recent literature is showing a pattern of increasing cervical cancer screening coverage among several different Aboriginal populations across Canada,²¹ there is still cause for concern, given that there is a high prevalence of HR-HPV in this population. Additionally, it is not yet clear if the increase in screening rates will lead to a reduction in cervical cancer incidence and mortality if high-risk subsets of the population are systematically underscreened for cervical cancer. Unfortunately, we were not able to explore coverage according to geographical areas in the NWT as there could well be differences among rural/urban centres.

Our sample of women matched the general NWT population on smoking coverage, with 36.1% being smokers in the Census and 30.8% being smokers in our sample.¹⁷ Furthermore, regardless of an under-representation of Aboriginal women, where in the worst scenario the most at risk would not attend Pap screening, had missing HPV results, or refused to participate in our study, we were able to describe a number of significant predictors for HR-HPV infection. Indeed, a notable number of co-factors were found among Aboriginal women and not among the non-Aboriginal group and tend to indicate that the former group have been exposed to a different degree to risk factors that affect HPV progression to cervical cancer that may be amenable to individual lifestyle promotion programs.

Although different according to cultural background, overall determinants of HR-HPV for this cohort of women are consistent with the literature, which has identified age, multiparity, hormonal contraceptive use, smoking, and markers of sexual activity as risk factors for HPV infection. This study was not designed to investigate the complex social determinant pathways of cervical cancer risk; nonetheless, these findings can help to better target current public health practices for women at greater risk of HPV infection and cervical cancer. Future research should evaluate the efficacy of improvements that have been made in terms of screening and prevention.²²

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RÉSUMÉ

Contexte : Dans certaines régions, les taux de cancer du col utérin des femmes autochtones sont plus élevés que ceux des autres Canadiennes. Il existe cependant peu de données sur les cofacteurs de l'infection à VPH dans la population autochtone du Canada. Nous avons examiné les facteurs associés à un risque élevé d'infection par le virus du papillome humain à haut risque oncogène (VPH-HR) dans une population de femmes (autochtones et non-autochtones) des Territoires du Nord-Ouest (T.N.-O.).

Méthode : Nous avons mené une étude transversale auprès d'un échantillon de commodité de l'ensemble des femmes de 14 ans et plus s'étant présentées pour un test de Papanicolaou (frottis) dans toutes les régions des T.N.-O. entre mars 2009 et mars 2010. Ces femmes ont répondu à un questionnaire sur leur profil démographique, leur comportement sexuel et leurs événements gynécologiques et obstétricaux. Au moyen d'une analyse de régression multiple, nous avons étudié les facteurs associés aux infections à VPH-HR selon l'âge et le milieu culturel. Le typage du VPH a été effectué à l'aide de dosages par Luminex.

Résultats : Sur les 1 279 participantes, 178 n'avaient pas de résultats pour le VPH. Nous avons donc obtenu des données sur 1 101 femmes, chez qui globalement la prévalence du VPH-HR était de 14,2 %. La jeunesse, le fait d'être célibataire, les antécédents autochtones, l'usage actuel du tabac, les accouchements durant la vie, l'utilisation de contraceptifs hormonaux et le nombre de partenaires sexuels au cours de la dernière année étaient associés aux infections à VPH-HR prévalentes.

Discussion : Nos constatations tendent à indiquer que les prédictors du VPH-HR chez les femmes autochtones sont différents de ceux des femmes non autochtones, ce qui peut influencer sur l'évolution du VPH en cancer du col utérin. Ces constatations pourraient contribuer à mieux cibler les pratiques de santé publique à l'égard des femmes plus vulnérables à l'infection à VPH et au cancer du col utérin.

Mots clés : papillomavirus humain; déterminants; Indiens d'Amérique du Nord