



*Cervical cancer is largely
a preventable disease.*

*If caught early,
cervical cancer can be cured.*

CONTENTS

- 1** Introduction
 - 2** Cervical Cancer – the Basics
 - 2** What Is Cervical Cancer?
 - 3** What Causes Cervical Cancer?
 - 3** The Human Papilloma Virus (HPV)
 - 3** How Many First Nations Women Are Affected by Cervical Cancer?
 - 4** Screening and Prevention
 - 4** Can Cervical Cancer Be Prevented?
 - 4** How Is Cervical Cancer Screened?
 - 4** What Makes a Good Screening Program?
 - 5** National Screening Guidelines for Cervical Cancer
 - 5** What are the Barriers to Screening in First Nations Women?
 - 5** Personal Barriers
 - 6** Cultural Barriers
 - 6** Systemic Barriers
 - 6** How Can Barriers to Screening Be Overcome?
 - 7** What Role Does the HPV Vaccine Play in Preventing Cervical Cancer?
 - 8** Cervical Cancer Prevention in My Community
 - 8** Program Development Checklist
- 9** References

INTRODUCTION

Cervical cancer is largely a preventable disease. If caught early, cervical cancer can be cured. The rates of cervical cancer have been declining over the past decade in both First Nations and Canadian women as a whole (see Figure 1), which can be attributed to more women being screened. Even so, there are regional differences in incidence rates and cervical cancer is still the cause of death for 1 in 423 women (Assembly of First Nations, 2009; Public Health Agency of Canada [PHAC], 2009).

A community that has an effective cervical cancer prevention program gives women the opportunity to remain cancer free. **This guide provides information on cervical cancer and its prevention through screening programs and vaccination.** The guide also gives information about what healthcare managers and providers can do to encourage First Nations women to use screening programs and prevent cervical cancer.



Rate per 100,000

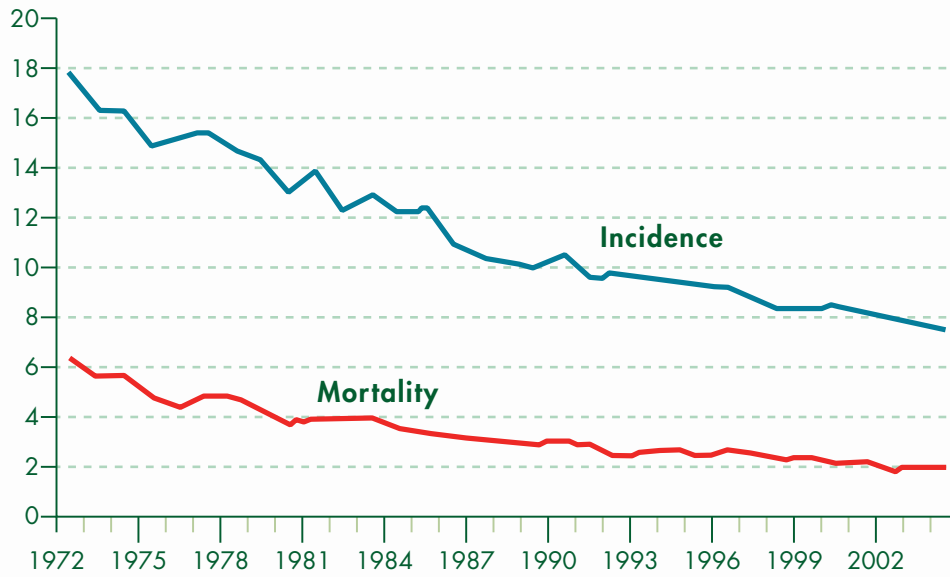


Figure 1 —
Age-standardized
incidence and mortality
rates of cervical cancer
in Canada from 1972
to 2004 (PHAC, 2009)





Cervical Cancer – The Basics

What is Cervical Cancer?

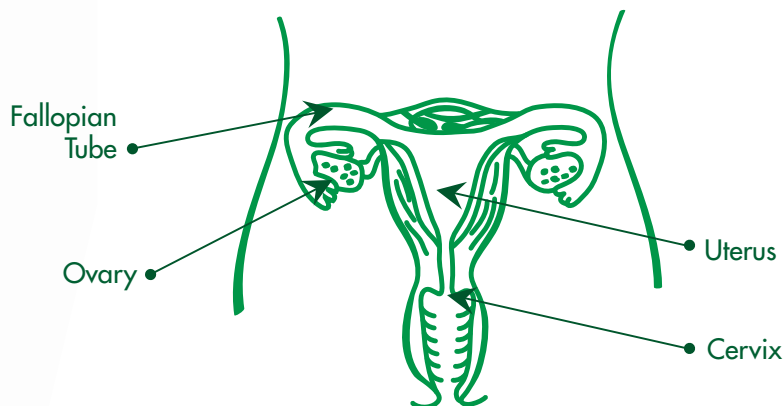
The cervix is the narrow lower end of the uterus that enters into the vagina (see Figure 2). Most cervical cancer develops when the cells on the surface of the cervix slowly change and become increasingly abnormal. Unlike in many other cancers, the cervical cells change in a predictable pattern. Before the surface cells of the cervix become cancerous, they go through an abnormal, or precancerous, stage (dysplasia). These abnormal cells may return to normal or they may develop into cancer.

In the beginning, most cervical cancer is only on the surface of the cervix ("non-invasive"). At this stage the cancer is easily cured. Left

untreated, the cancer will grow deeper and invade the cervix ("invasive") and eventually the uterus and nearby organs. The more invasive the cancer, the more difficult treatment becomes. The predictable nature of changes in cervical cells is illustrated in Figure 3.

In the early stages cervical cancer usually has no symptoms and can only be discovered through a screening procedure. Once the cancer has become invasive, there may be symptoms such as bleeding after sexual intercourse, recurrent bladder infections, ulcers on the cervix, and persistent pain (Duarte-Franco & Franco, 2003).

Figure 2 – The Female Reproductive System



What Causes Cervical Cancer?

Almost all cases of cervical cancer are caused by infection with the sexually transmitted human papilloma virus (HPV) (Canadian Cancer Society, 2009).

Other known factors that increase the risk of developing cervical cancer include:

- High lifetime number of sexual partners
- Young age of first intercourse
- Early age of first birth
- Long smoking duration (Green et al., 2003)

The Human Papilloma Virus (HPV)

Over 100 different types of HPV exist but two types (16 and 18) are considered high risk and are associated with 70% of all cervical cancer. HPV infections are transmitted through direct sexual contact. A condom reduces but does not eliminate the risk of HPV infection. An infected mother can also pass on the virus to her baby during birth. Infection with HPV is common but is symptomless. The infection usually clears on its own so most women never know they were infected. HPV also causes genital warts but the virus types are different than those that cause cervical cancer.

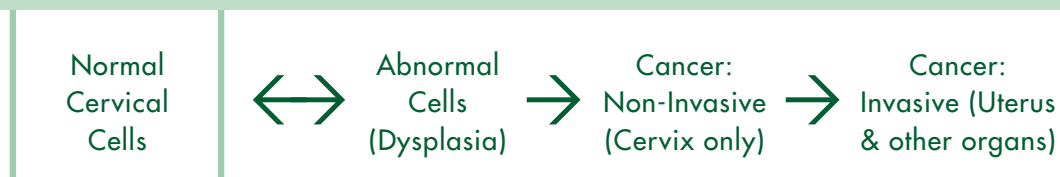
Studies have shown the prevalence of HPV infection to range from 10% to 30% of the female population at any one time, varying with age, place of residence, and ethnicity. The lifetime risk of being infected is 80%. Inuit women have significantly higher rates of HPV infection. (National Advisory Committee on Immunization [NACI], 2007).

How Many First Nations Women are Affected by Cervical Cancer?

National data for cancer rates among First Nations women does not currently exist. Older studies suggested a higher incidence of cervical cancer in certain First Nations populations. Recently the rates of cervical cancer in First Nations and Canadian women are comparable, although regional variations continue to exist (Cancer Care Ontario, 2004). One in 150 women in Canada is expected to develop cervical cancer during her lifetime and 1 in 423 will die because of it. Most cervical cancer occurs in women between the ages of 30 and 59 (PHAC, 2009).

Figure 3 – The Pattern of Change

The pattern of change in cervical cells is slow and predictable, which makes cancer prevention possible when screening guidelines are followed.





Screening and Prevention

Can Cervical Cancer be Prevented?

Cervical cancer is the most treatable and preventable of all cancers (PHAC, 2009). The very slow and predictable pattern of changes in the cells and the easy access to the cervix make screening straightforward. Because of the association of HPV infection and cervical cancer, the advent of HPV vaccination has made prevention even easier.

How is Cervical Cancer Screened?

Cervical cancer is one of the few cancers with an available routine screening test (Canadian Cancer Society's Steering Committee on Cancer Statistics, 2009). The Papanicolaou (Pap) test is the primary screening tool for cervical cancer and has resulted in the drastic drop in cervical cancer rates in the last few decades. The Pap test looks at a sample of cervical cells to detect cancer as well as abnormal (pre-cancerous) changes. Early detection through screening means precancerous cells can be monitored and cervical cancer can be treated. Generally a doctor or a nurse practitioner performs a Pap test, but this may vary by province.

Although around 80% of women undergo regular cervical cancer screening, up to 60% of cervical cancers are found in women who have never had a Pap test or do not have Pap tests regularly (NACI, 2007; Amankwah,

Ngwakongwi, & Quan, 2009). The rates for screening for First Nations women on and off-reserve are comparable to the women in the rest of Canada (Amankwah et al., 2009).

In addition, there are now self-administered tests that check for changes in cervical cells. So far, these do not seem to be in widespread use because they are not as reliable as the Pap test.

What Makes a Good Screening Program?

Organized screening programs can reduce the number of deaths caused by cervical cancer by 70%. These programs also reduce the costs associated with treating the disease and help to preserve fertility (Murphy & Howlett, 2007).

Organized screening programs involve:

- **Recruitment** of women in the target population
- Adherence to screening **guidelines** including follow-up in the case of abnormal results
- Sending **reminders** to women for repeat tests or for those overdue for screening
- **Education** for the community and health-care professionals (Murphy & Howlett, 2007)

NATIONAL SCREENING GUIDELINES FOR CERVICAL CANCER

Target Population → Women over the age of 18 who have been sexually active.

First Screening → Within three years after becoming sexually active. Cervical screening is not recommended before the start of sexual activity, regardless of age.

Frequency of Screening → Pap test every three years after there have been two annual tests with normal results.

Last Screening → At the age of 70.

(MURPHY & HOWLETT, 2007)

In Canada, only a few provinces and territories have implemented programs with all of these elements. Cervical cancer screening is mostly opportunistic, so most women are

screened because they are already seeking other medical advice (NACI, 2007).

Each province has its own provincial screening guidelines that are similar to the national guidelines but with slight differences.

The steps taken when screening for cervical cancer are illustrated in Figure 4.

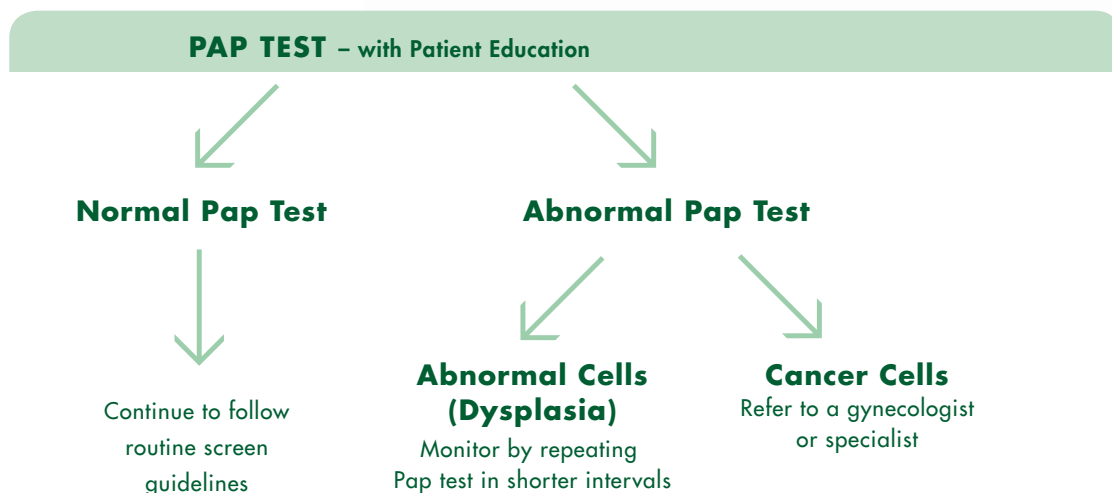
What are the Barriers to Screening in First Nations Women?

There may be many obstacles that prevent a woman from being screened for cervical cancer. Barriers may be on a number of levels including personal, cultural, and systemic:

PERSONAL BARRIERS

- Responsibilities of daily life such as child care
- More prevalent or pressing health concerns such as respiratory disease or mental health issues

Figure 4 — Steps to follow when screening for cervical cancer



- Fear of cancer and a cancer diagnosis, leading to denial and avoidance of screening
- Negative experience at a previous screening appointment or mistrust of the healthcare system in general
- Discomfort or anxiety in discussing the topic and undergoing the screening procedure, particularly if there is a history of sexual abuse

CULTURAL BARRIERS

- Beliefs about cancer, e.g., cancer is unavoidable
- Belief that screening procedures are invasive and embarrassing, especially when performed by a male healthcare provider
- Lack of culturally safe programs and services
- Range of cultural, language, and geographic diversity that affect the development and delivery of screening programs appropriate to a particular community

SYSTEMIC BARRIERS

- Restricted access to healthcare services
- Geographic location (distance to screening facilities)
- Difficulty getting appointments due to a shortage of healthcare providers
- Shortage of female healthcare providers to perform the procedure
- Delays between screening and referrals for follow-up
- High staff turnover, resulting in inconsistency or lack of continuity of care
- Lack of a tracking system for follow-up

- Absent or ineffective public health messaging, leading to a lack of awareness about cervical cancer and screening

(Assembly of First Nations, 2009; Becker, Affonso, & Blue Horse Beard, 2006; Clarke, Deschamps, Hislop, Band, & Atleo, 1998; O'Brien, Mill, & Wilson, 2009; Murphy & Howlett, 2007)

It is important to note that not all of the above barriers exist in each community. First Nations communities across Canada show diversity in culture, resources, health status, and access to healthcare. Some communities may currently face many challenges and barriers. Others may have found effective solutions for overcoming obstacles and developing successful screening programs.

How Can Barriers to Screening be Overcome?

First, it is important to assess what barriers exist in your community. This can be done through observation, surveys, and/or focus groups of women in different stages of life such as school-age girls, young mothers, and older women. Each group may have distinct barriers that may need to be addressed separately.

A healthcare provider can help a woman overcome her **personal** barriers to screening by creating a safe environment (O'Brien et al., 2009). Listening to concerns and answering questions facilitates trust and decision making better than forcing a particular program or health agenda.

Creating **culturally** appropriate education and programming comes from being intentional and responsive to a community's cultural beliefs regarding cancer, its prevention, and treatment (Young, Kliewer, Blanchard, & Mayer, 2000). If a community holds the belief that cancer is unavoidable, widespread education about the ability to prevent cervical cancer with regular screening would be an example of a culturally specific intervention.

Overcoming **systemic** problems is often more difficult, as some obstacles are out of the control of the community. Each community must assess its own needs and resources to design creative solutions. The distance to the nearest medical clinic or specialist may be a barrier for consistent care. One solution might be that a community health centre arranges for a healthcare provider to visit them in conjunction with nearby communities.

What Role Does the HPV Vaccine Play in Preventing Cervical Cancer?

The HPV vaccines currently used in Canada are about 70% effective at preventing all cervical cancer. The HPV vaccination consists of a series of 3 injections over a 6-month period (NACI, 2007; PHAC, 2011).

HPV vaccines authorized for use in Canada include (PHAC, 2011):

1. Gardasil®

- Protects against HPV types 16 and 18, associated with cervical cancer
- Protects against HPV types 6 and 11, associated with genital warts
- Is approved for use in females and males aged 9 to 26

- Consists of 3 injections over a 6-month period, with doses given at 0, 2, and 6 months

2. Cervarix®

- Protects against HPV types 16 and 18, associated with cervical cancer
- Is approved for use in females aged 10 to 25
- Consists of 3 injections over a 6-month period, with doses given at 0, 1, and 6 months

School-based vaccination programs began in certain communities in September 2007. The HPV vaccine is given in schools anywhere from grade 4 to grade 9. Each province has slightly different recommendations, with each community being responsible for its own program (Colucci, Hryniuk, & Savage, 2008). The vaccine is more effective if given before the start of sexual activity and immunity is stronger and longer lasting when the vaccine is given to girls between the ages of 9 and 13 (Shier & Bryson, 2007).

The HPV vaccine does not replace the need for regular Pap tests, even for women who have been vaccinated. No vaccine is 100% effective, particularly if the recommended schedule for the three doses is not followed. The approved vaccines do not protect against all types of HPV and a few rare types of cervical cancer are not caused by HPV.

If women still need to get a Pap test, why bother with the vaccine? The answer is that among women who receive the HPV vaccine, fewer will develop cervical cancer. This decreases the burden of disease in any given population.



Cervical Cancer Prevention in Your Community

As a healthcare manager or provider, you can do many things to help prevent cervical cancer in your community. Here is a checklist to determine if your prevention program needs adjustment to be more effective.

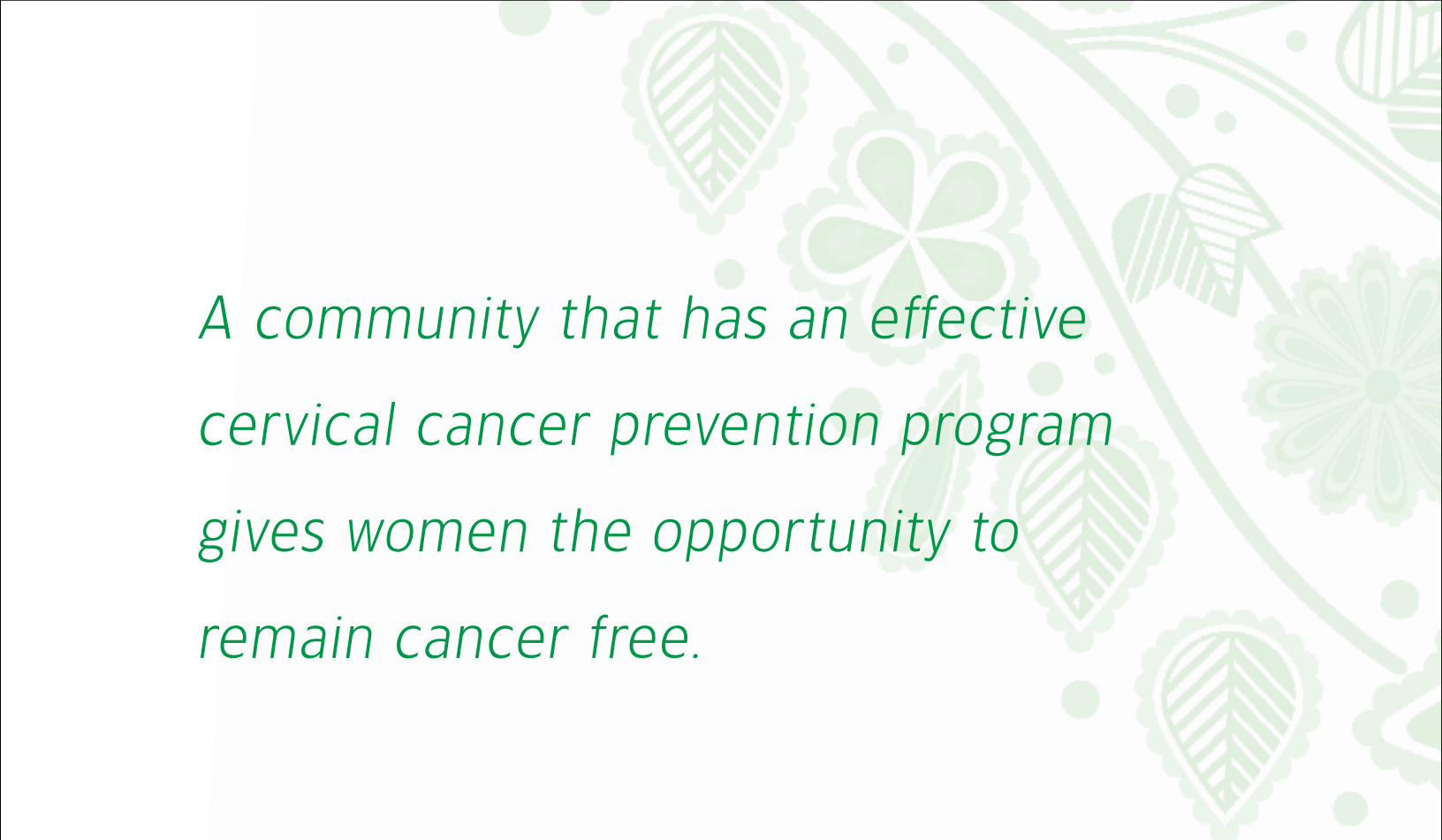
Program Development Checklist

- Identify the barriers to screening in your community.
- Develop therapeutic relationships with patients that facilitate trust.
- Create a healthcare setting that accommodates the community's language, beliefs, values, and practices.
- Have female healthcare providers available to perform the pelvic exam and Pap test if possible. Some women do not want a male to examine them.
- Make sure the educational tools (pamphlets, posters, etc.) used are culturally safe.
- Use a number of methods to communicate that regular screening can prevent cervical cancer (radio, newspaper, flyers, speaking engagements, etc.).
- Visit and speak in your community's schools to educate young women about Pap tests and HPV vaccination.
- Compare the existing HPV vaccination program in your community with your provincial guidelines to ensure young women are being adequately vaccinated.
- Start an HPV vaccination program and find out if there are other accessible programs and supports for community members nearby.
- Send reminders to women in your community about having regular screening.
- Create a follow-up protocol to ensure women with abnormal Pap tests are monitored as needed.
- Look for alternate outside sources of funding if local resources are inadequate to support a good screening and vaccination program.

Cervical cancer can be prevented with screening and vaccination programs. These programs are effective and can save lives. As a healthcare manager or provider, you can help reduce the incidence of cervical cancer in your community.

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For queries or copyright requests, please contact:

First Nations Centre
National Aboriginal Health Organization, 220 Laurier Ave. West, Suite 1200, Ottawa, Ontario K1P 5Z9
Tel: 613-237-9462 | Toll-free: 1-877-602-4445 | Fax: 613-237-1810
E-mail: fnc@naho.ca | Web site: www.naho.ca/fnc

www.naho.ca/firstnations

FIRST NATIONS CENTRE
220 Laurier Ave. W.
Suite 1200
Ottawa, ON K1P 5Z9

Phone: 613.237.9462
Toll Free: 877.602.4445
Fax: 613.237.1810
Email: fnc@naho.ca

