

# PREVENTING CERVICAL CANCER IN MINNESOTA

# 2012

## INTRODUCTION

Historically cervical cancer has been one of the most common causes of cancer-related deaths among women in the United States. While the rates of cervical cancer have improved over the years due to better screening and prevention efforts, it continues to affect thousands of women each year.

Research shows that persistent Human Papillomavirus (HPV) infections are the cause of essentially all cervical cancers, as well as most cases of anal cancer.<sup>1</sup> Recent medical advances have also shown that cervical cancer is preventable with the HPV vaccination – the first cancer prevention vaccination of our time – and regular pap tests for screening.<sup>2</sup> Despite the fact that we know cervical cancer’s primary cause and how to prevent it, 12,000 American women will be diagnosed with cervical cancer each year and 4000 will die from it annually.<sup>3</sup>



Planned Parenthood Minnesota, North Dakota, South Dakota (PPMNS) works to help women prevent cervical cancer in three important ways: we offer routine Pap screenings that can detect cellular changes in the cervix, treatment for abnormal cervical cells that can lead to cancer, and the HPV vaccine – to both females and males – that can prevent HPV infection. This approach, combined with intensive education and outreach efforts in communities across the state, is an important strategy for reducing the incidence of cervical cancer in Minnesota and protecting the public’s health.

## HPV AND CERVICAL CANCER

HPV is a group of more than 100 related viruses, and about 40 of them can be transmitted through sexual contact. Most strains of the HPV virus will not cause cervical cancer, but 16 HPV types are regarded as “high-risk,” meaning that they may cause abnormal cellular growth that leads to cancers in the cervix, vulva, vagina, anus, or penis.<sup>4</sup>

**By the age of 50,  
more than 80% of  
women will have  
been infected with  
HPV.**

More than half of all sexually active people will acquire HPV at some point in their lives.<sup>5</sup> Up to 75% of all new infections occur among young people ages 15–24. By the age of 50, more than 80% of women will have been infected with HPV.<sup>6</sup> While younger women have the highest prevalence of HPV, the risk of developing cervical cancer remains as women age.<sup>7</sup> This means it is important to continue to get screened through regular pap tests.

HPV is often acquired very quickly after first sexual intercourse. In fact, one study revealed that the probability of a young woman acquiring HPV within two years after first sexual intercourse is nearly 40%,<sup>8</sup> making it even more essential that HPV education and prevention efforts reach Minnesota’s young people before they are sexually active.

## CERVICAL CANCER IN MINNESOTA

Minnesota's rates of cervical cancer and cervical cancer mortality are lower than national rates. As of 2007, the most current data available, the state ranks 32nd out of the 39 states that report cervical cancer death rates, and 33rd out of the 45 states that report overall cervical cancer incidence.<sup>9</sup>

Every year in Minnesota, 165 women are diagnosed with invasive cervical cancer. 45 will die.

The Minnesota Department of Health attributes these relatively good outcomes to the state's effective screening programs.<sup>10</sup> In spite of these efforts, approximately 165 women are diagnosed with invasive cervical cancer each year in Minnesota and around 45 women die annually from this preventable disease.<sup>11</sup>

Women of color have been hit the hardest by cervical cancer. They suffer both higher rates of cervical cancer than non-Hispanic white women and higher death rates associated with the disease. This means they have historically been more at risk for acquiring cervical cancer and, when they do, they are more likely to die from it. In 2007, Hispanic women had the highest incidence rate of cervical cancer nationally and black women had the highest death rate from cervical cancer.<sup>12</sup> In Minnesota, between 2003 and 2007, women of color were two to three times more likely to be diagnosed with or die from invasive cervical cancer than non-Hispanic white women. Researchers attribute this to less frequent and less effective screening and treatment for cervical cancer among women of color.<sup>13</sup>

Cervical cancer deaths are directly related to late-stage diagnoses. Women cite a number of economic, cultural, and other barriers to obtaining the screening needed to detect abnormal cervical cells sooner, when they can often be successfully treated, including:

- Cost
- Lack of or inadequate health insurance
- Poor access to health care
- Inadequate information about the benefits of prevention

## THE HPV VACCINE: A REVOLUTION IN CANCER PREVENTION

In 2006, the Food and Drug Administration licensed Gardasil, the first of two vaccines developed to prevent HPV. The agency approved Cervarix, a second vaccine, in 2009. The HPV vaccine is the only vaccine proven to prevent cancer and has been widely hailed as a critical advance. Both Gardasil and Cervarix are effective in preventing infections with HPV types 16 and 18, two high-risk strains that cause 70% of all cervical cancers. Gardasil also prevents infection with HPV types 6 and 11, which cause 90% of genital warts.<sup>14</sup> Given in three injections over a six-month period, clinical trials have shown the HPV vaccine to be safe and effective.<sup>15</sup>

Upon its approval by the FDA, the vaccine was recommended for girls and young women ages 11 to 26. In October of 2011, in another important advance towards stopping the spread of HPV, a Centers for Disease Control and Prevention (CDC) panel recommended that boys and men between ages 9 and 26 also be vaccinated.<sup>16</sup> The vaccine is 89% effective against genital warts in males and 75% effective against anal cancer in males.<sup>17</sup> While men aren't at risk for cervical cancer, they can play a role in the spread of HPV to women who are.

These vaccines have enormous potential to improve the health and well-being of young people. Because prophylactic HPV vaccines are only effective in individuals not currently infected by the virus, it's crucial for the vaccine to be administered to young people before they become sexually active. However, it is important for men and women over 26 years of age who are at risk for HPV to get the vaccine, as well.

Regrettably, the promise of the vaccine remains largely unfulfilled. A recent national study noted that only one-third of girls in the United States are getting the recommended immunization.<sup>18</sup> A survey from the Center for Disease Control supports this finding. In 2008, only 37% of teens had received the vaccine. The percentage is even lower in Minnesota, with only 33.6% of young women are getting the vaccine.<sup>19</sup> Experts have identified lack of access to health care, cultural beliefs, and limited understanding and awareness as factors that contribute to the low rates of vaccinations.<sup>20</sup>

Widespread vaccination has the potential to reduce cervical cancer deaths around the world by as much as two-thirds. In addition, the vaccines can reduce the emotional toll associated with abnormal Pap tests and the cost of needed biopsies and other invasive procedures to remove abnormal cells.<sup>21</sup>

## PLANNED PARENTHOOD'S PREVENTION APPROACH

Planned Parenthood works throughout Minnesota to help prevent and reduce the incidence of cervical cancer. In the past two years alone, we've offered close to 25,000 routine Pap screenings, which can help detect cellular changes before they become cancerous, and provided more than 2,000 women with advanced gynecological care, including colposcopy and Loop Electrosurgical Excision Procedure (LEEP). PPMNS also provides the Gardasil vaccine, which prevents four of the most common types of HPV including those high-risk types linked to cervical cancer. We reach between two and three thousand people in our region with the HPV vaccine and administer approximately 3000 HPV tests each year.

Planned Parenthood also works to ensure that women, men and teens are educated about HPV and its relationship to cervical cancer. We advocate for comprehensive sexuality education and provide ten intensive age-appropriate, culturally-relevant and evidence-based education programs. Program participants learn about risk-reduction strategies, such as delaying sexual intercourse and using condoms correctly and consistently.

## CONCLUSION AND RECOMMENDATIONS

Preventing HPV and cervical cancer in Minnesota is a public health imperative. The current disparities in access and outcomes for women of color, rural women and women in poverty are unacceptable.

A successful fight to prevent cervical cancer requires a broad and robust response from entire communities, as well as public policy and public health experts. The Affordable Care Act will greatly improve access to the HPV vaccine once it is fully covered by 2014. However, reducing the rates of cervical cancer requires a statewide approach that focuses on prevention, access and education.

*...continued recommendations on page 4.*

## continued...CONCLUSION AND RECOMMENDATIONS

Our community's health care leaders and policymakers must come together to:

- Launch a public information campaign to educate parents, health care providers and educators about the important benefits of the HPV vaccine in preventing cervical cancer. The campaign should underscore the CDC recommendations that adolescent girls and boys should both receive the HPV vaccination well before they become sexually active.
- Increase awareness of the causes, prevention, and early detection of HPV and cervical cancer through culturally-relevant, age-appropriate and evidence-based school and community education programs.
- Advocate for school-based comprehensive sexuality education programming that offers young people the information and means to protect themselves against HPV and other sexually transmitted infections.
- Strengthen public health efforts to minimize health care disparities and ensure that people living in rural areas and people of color have access to cervical cancer screenings and HPV vaccinations.

The promise of the HPV vaccine is profound. Within one generation, we have the potential to provide an unprecedented level of protection from cervical cancer and other cancers associated with HPV. Every effort must be made to ensure brighter, healthier futures for women, men and families in Minnesota.

## ENDNOTES

- <sup>1</sup> National Cancer Institute. (September 2011). Human Papillomaviruses and Cancer. Retrieved from <http://www.cancer.gov/cancer-topics/factsheet/Risk/HPV>
- <sup>2</sup> American Cancer Society. (2011). Minnesota Cancer Facts & Figures 2011. Retrieved from <http://www.health.state.mn.us/divs/hpcd/cdee/mcss/documents/mncancerfactsfigures2011033011.pdf>
- <sup>3</sup> National Cancer Institute. (September 2011). Human Papillomaviruses and Cancer. Retrieved from <http://www.cancer.gov/cancer-topics/factsheet/Risk/HPV>
- <sup>4</sup> Centers for Disease Control and Prevention. (April 2011). Human Papillomavirus Epidemiology and Prevention of Vaccine-Preventable Diseases The Pink Book: Course Textbook - 12th Edition. Retrieved from <http://www.cdc.gov/vaccines/pubs/pinkbook/hpv.html#hpv>
- <sup>5</sup> Centers for Disease Control and Prevention. (November 2011). Genital HPV Infection - Fact Sheet. Retrieved from <http://www.cdc.gov/std/hpv/stdfact-hpv.htm>
- <sup>6</sup> Centers for Disease Control and Prevention. (April 2011). Human Papillomavirus Epidemiology and Prevention of Vaccine-Preventable Diseases The Pink Book: Course Textbook - 12th Edition. Retrieved from <http://www.cdc.gov/vaccines/pubs/pinkbook/hpv.html#hpv>
- <sup>7</sup> American Cancer Society. (January 2011). Cervical Cancer Overview Retrieved from <http://www.cancer.org/Cancer/CervicalCancer/OverviewGuide/cervical-cancer-overview-key-statistics>
- <sup>8</sup> Minnesota Department of Health. (February 2008). Human Papillomavirus Vaccine: Report to the Minnesota Legislature 2008. Retrieved from <http://www.health.state.mn.us/divs/idepc/dtopics/vpds/hpv/hpvreport.pdf>
- <sup>9</sup> Minnesota Department of Health. (February 2008). Human Papillomavirus Vaccine: Report to the Minnesota Legislature 2008. Retrieved from <http://www.health.state.mn.us/divs/idepc/dtopics/vpds/hpv/hpvreport.pdf>
- <sup>10</sup> Minnesota Department of Health. (February 2008). Human Papillomavirus Vaccine: Report to the Minnesota Legislature 2008. Retrieved from <http://www.health.state.mn.us/divs/idepc/dtopics/vpds/hpv/hpvreport.pdf>
- <sup>11</sup> American Cancer Society. (2011). Minnesota Cancer Facts & Figures 2011. Retrieved from <http://www.health.state.mn.us/divs/hpcd/cdee/mcss/documents/mncancerfactsfigures2011033011.pdf>
- <sup>12</sup> Centers for Disease Control and Prevention. (January 2011). Cervical Cancer Rates by Race and Ethnicity. Retrieved from <http://www.cdc.gov/features/dscervicalcancer/>
- <sup>13</sup> American Cancer Society. (2011). Minnesota Cancer Facts & Figures 2011. Retrieved from <http://www.health.state.mn.us/divs/hpcd/cdee/mcss/documents/mncancerfactsfigures2011033011.pdf>
- <sup>14</sup> Koutsky LA, Ault KA, Wheeler CM, et al. (2002). A controlled trial of a human papillomavirus type 16 vaccine. *New England Journal of Medicine*. 347(21), 1645-1641.
- <sup>15</sup> National Cancer Institute. (September 2011). Human Papillomavirus (HPV) Vaccines. Retrieved from <http://www.cancer.gov/cancer-topics/factsheet/prevention/HPV-vaccine>
- <sup>16</sup> Harris, Gardiner. (2011, October 25th). Panel Endorses HPV Vaccine for Boys of 11. *New York Times*. Retrieved from [www.nytimes.com/2011/10/26/health/policy/26vaccine.html](http://www.nytimes.com/2011/10/26/health/policy/26vaccine.html)
- <sup>17</sup> Stobbe, Mike. (2011, October 25th). Panel: Boys should get HPV vaccine given to girls. *Associated Press*. Retrieved from [http://articles.boston.com/2011-10-25/lifestyle/30320956\\_1\\_hpv-vaccine-vaccine-against-cervical-cancer-daughters-vaccinated/2](http://articles.boston.com/2011-10-25/lifestyle/30320956_1_hpv-vaccine-vaccine-against-cervical-cancer-daughters-vaccinated/2)
- <sup>18</sup> Steinbrook R. (2006) The potential of human papillomavirus vaccines. *New England Journal of Medicine*. 354(11), 1109–1112.
- <sup>19</sup> Center for Disease Control and Prevention. (September 2009). National, State, and Local Area Vaccination Coverage Among Adolescents Aged 13--17 Years -United States, 2008. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5836a2.htm>
- <sup>20</sup> Downs, Levi Jr. (2010). Overcoming the barriers to HPV vaccination in high-risk populations in the US. *Gynecologic Oncology* 117(3), 486-490.
- <sup>21</sup> Steinbrook R. (2006) The potential of human papillomavirus vaccines. *New England Journal of Medicine*. 354(11), 1109–1112.