



Position Statement HPV Vaccines, Cervical Cancer and Women's Health¹:

At first glance, the recent approval of the HPV vaccine and the subsequent federal commitment of funding to support part of a vaccination program appears to be the long-awaited panacea to cervical cancer, but closer examination reveals more questions than answers. There is a lack of reliable and transparent information, a potential misplacement of scarce public resources and the possibility of negative impacts on health and on existing reproductive health services.

The recent approval of the HPV vaccine and the federal commitment to funding a vaccination program is premature. We recommend that governments re-examine their plans regarding HPV vaccination and redirect these funds toward addressing existing gaps in care and further research.

WHEREAS:

1. Health Canada approved the HPV vaccination (Gardasil) in 2006, the Canadian National Advisory Committee on Immunization recommended that all Canadian girls aged 9-13 be immunized with Gardasil in January 2007, and the federal government announced in March 2007 that it would contribute \$300 million (paid over 2007-8) to a HPV vaccination program;
2. These announcements have been coupled with a broad and expensive advertising campaign by Gardasil's manufacturer, Merck, which has created unnecessary fears and left the inaccurate impression of a "public health emergency" concerning HPV and cervical cancer which gives the impression that the vaccine prevents cancer, although the "small print" seeks to clarify this. Gardasil prevents infection of only two of the variety of HPV viruses necessary to cause cervical cancers. These two, types 16 and 18 are thought to contribute to 65-70 % of all cervical cancers.
3. The knowledge base in support of HPV vaccination is unstable, in particular, regarding,
 - a. the lack of reliable information regarding the vaccination's long-term effectiveness, including uncertainty about the need for and timing of booster shots [current studies are at approximately the five year mark],
 - b. uncertainty about its efficacy² and its ability to, "in the real world" lead to actual reductions in abnormal cells, cervical cancer in "situ" and the death;
 - c. the lack of long-term research on and uncertain safety outcomes for the key target population (9-15 year old girls)³, as well as a lack of research on boys and men, and
 - d. lack of research on the potential impacts of vaccination on safe sex practices and on rates of access to reproductive services, including regular pap testing. It would surely be paradoxical if a false sense of security were to lead to an "iatrogenic" increase in cervical cancer rates because girls and women stop having regular Pap screening.

Similarly, there are concerns that a false sense of security could lead vaccinated individuals to be less vigilant in using safe(r) sex practices, resulting in an increase in sexually transmitted diseases such as chlamydia and even human immunodeficiency virus (HIV) infections;

4. There has not been a cost benefit analysis done for Canada. A study done in B.C. in 2005 found that introducing *Gardasil* (assuming a cost of \$330 for the vaccine and a booster at \$100) would save \$54 million in treatment costs over 26 years but at a cost of around \$373.6 million⁴.

Recently Pauline Comeau, writing in the journal of the Canadian Medical Association, estimated that the cost of vaccinating 5 million females (per the Canadian National Advisory Committee on Immunization's (NACI) recommendations) would be \$2 billion for the vaccine alone; with this being a recurring cost.⁵

Nor has there been an assessment of possible lost opportunity costs (regarding existing reproductive health services, such as expanded pap screening, or other health priorities), which raises concerns about the efficient and effective use of health care funding;

5. Most healthy Canadian women who acquire a HPV infection, even the types that are seen to be necessary to the development of cervical cancers, never actually develop cervical abnormalities or cancer. Recent research using available molecular detection technologies suggest that clearance occurs within one year for about 70 per cent of those infected, and within two years for 90 per cent. Thus, HPV infection and cervical cancer must not be conflated: most women who acquire even a “high-risk” strain of HPV will not develop cervical cancer.⁶

There has been a dramatic decrease in cervical cancer deaths in Canada. This represents a public health success, a result of improved personal reproductive health practices and the widespread availability of publicly-funded Pap smear testing programs.⁷ Approximately 400 hundred deaths associated with cervical cancer were anticipated last year in Canada. These can be considered as a failure in the adequate support of reproductive health services that would ensure all women get appropriate Pap testing and most importantly, follow-up.

6. We are concerned that needed investments and supports for pap testing - a key element in monitoring, detecting, treating and reducing the prevalence of cervical cancer in Canada - will not go ahead, resulting in:
 - a. further gaps in primary health care for women – particularly women who are living in poverty, with disabilities, in rural and remote communities, or on the street; immigrant and refugee women, women who have experienced sexual trauma/abuse, Aboriginal women and women who are lesbian, bisexual or transsexual, and;
 - b. lost opportunities for health promotion, including smoking cessation and nutritional counselling, STI screening and reproductive health counseling, including pre-conception planning;
7. The federal government has committed to and approved of HPV vaccination despite:
 - a. lack of public consultation,
 - b. non-transparent decision criteria, and
 - c. the failure to manage the impact of direct-to-consumer and direct-to-professional advertising;

THEREFORE

We find the recent approval of the HPV vaccine and the federal commitment to funding a vaccination program to be premature. What is needed instead is:

1. Research to find out more about the long-term real world effectiveness and long term safety of the current and upcoming HPV vaccine;
2. A transparent cost-benefit analysis to ensure that health care dollars are spent to ensure the maximum health impact for Canadian girls and women;
3. For the federal government to strengthen its role in ensuring the safety and effectiveness of drugs by:
 - a) regulating advertising directed at health professionals.
 - b) prohibiting of all direct-to-consumer advertising including vaccines.
 - c) improving the assessment criteria related to the approval process for vaccines and putting in place a more transparent review and a process for public engagement.
 - d) establishing a rigorous publicly managed post market surveillance program for Canadians being given the vaccine. This program must include those who receive for approved uses and non approved, i.e. off label uses by boys and men or women and girls who have had HPV exposures. A mandated registry is a critical first step.

4. Improved reproductive health programs for adolescents, men and women should be supported immediately. This includes:
- a) Population-based outreach Pap-screening services. For example, Pap screening programs for women who are homeless, living in poverty or in rural and remote communities, immigrant and refugee women, Aboriginal women, women living with disabilities, women who have experienced sexual trauma, or lesbian, bisexual and transsexual women. Supplement existing services with mobile clinics.
 - b) a broad based education program which provides the public information about the reality of cervical cancer, HPV infections, and vaccinations to quell anxieties about cervical cancer and HPV, and to emphasize the importance of healthy personal practices including use of barrier methods, good nutrition, smoking cessation, regular Pap and sexually transmitted infection (STI) screening.
 - c) Use of female health care workers to provide screening. These health providers do not necessarily have to be doctors, nurses or midwives, but could be specially trained outreach workers.
 - d) Increase access to free and low cost supplies of male and female condoms.
 - e) Screening programs augmented with newer technologies such as the use of liquid-based Pap testing and HPV genotype testing in women who have abnormal Pap test results.
 - f) Engage public health nurses in following up with women with atypical Pap results
 - g) Establishment of a national pap registry, modeling on the mammography registry in provinces where this is not in place.

¹ This document is a position statement of the Women's Health Clinic, outlining our observations and recommendations. It is not intended to provide a detailed review of HPV-related research findings nor does it allow space to provide a detailed rationale for all items discussed within. We refer interested readers to the extensive policy paper prepared by the Canadian Women's Health Network and other documents on the reading list and an information sheet which can be found in the Appendix. **Approved: May 1, 2007 in principle by Advocacy and Policy Committee and the WHC Board of Directors.**

² For example, a recent editorial in the *New England Journal of Medicine* commenting on the FUTURE I and II randomized, placebo-controlled trials of the HPV vaccine calculated that in the larger, FUTURE II trials, where the majority (93 per cent) of participants were not "virgins," "rates of grade 2 or 3 cervical intraepithelial neoplasia (CIN) or adenocarcinoma in situ were 1.3 in vaccinated and 1.5 in unvaccinated women, an efficacy of 17%." The editorial highlights, too, how efficacy was significant only for grade 2 CIN; and not for grade 3 CIN or adenocarcinoma. (Sawaya G, and Smith-McCune K. HPV Vaccination- More Answers, More Questions. *The New England Journal of Medicine*. 2007; 356: 1991-1993).

³ Relatively few young girls were enrolled in the clinical trials of *Gardasil*; only 1,200 nine- to 15- year-olds were included, of whom a mere 100 were nine years of age, the youngest being followed for only 18 months. Yet, based on the assumption they will not have been exposed to HPV viruses yet, this age group represents the priority "target" population for mass vaccination. (Rabin, Roni. "A new vaccine for girls: but should it be compulsory?" *New York Times*, July 18th, 2007).

⁴ Krueger, H. A Population Based HPV Immunization Program in British Columbia: Background Paper. BC Cancer Agency. <http://www.krueger.bc.ca/> Accessed April 15, 2007.

⁵ Pauline Comeau, Debate begins over public funding for HPV vaccine. *Canadian Medical Association Journal*. March 27, 2007; 176(7).

⁶ Public Health Agency of Canada. What everyone should know about Human Papillomavirus (HPV): Questions and Answers.

⁷ James PD, Wilkins R., Detsky AS. et al. Avoidable mortality by neighbourhood income in Canada: 25 years after the establishment of universal health insurance. (*J Epidemiol Community Health*. 2007; 61: 287-296.)

For more information, please read the following:

The HPV Vaccine One Year Later from the Canadian Women's Health Network Summer 2008. <http://www.rcsf.ca/network-reseau/10-2/10-2pg4.html>

"HPV, Vaccines, and Gender: Policy Considerations," Canadian Women's Health Network, June 25, 2007 <http://www.cwhn.ca/resources/cwhn/hpv-brief.html> (available in French)

"Human papillomavirus, vaccines and women's health: Questions and cautions," by Abby Lippman et al., *Canadian Medical Association Journal*, August 28, 2007 <http://www.cmaj.ca/cgi/content/full/177/5/484>

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Appendix to WHC Position Statement

To access detailed and supporting information, please review the following sources:

- Canadian Women's Health Network. (2007) – HPV, Vaccines and Gender: Policy Considerations. www.cwhn.ca.
- Flogging Gardasil. (2007). Editorial *Nature Biotechnology*, 25(3). p.261
- FDA. Gardasil HPV Quadrivalent Vaccine: VRBPAC Background Document (May 18, 2006 VRBPAC Meeting) accessed at <http://www.fda.gov/ohrms/dockets/ac/06/briefing/2006-4222B3.pdf>.
- Wheeler, C.M. (2007). Advances in primary and secondary interventions for cervical cancer: Human Papillomavirus prophylactic vaccines and testing. *Nature Clinical Practice* 4(4). 224-235.

Gardasil: HPV Vaccine Not The Only Option For Addressing Cervical Cancer Prevention

Women are more likely to develop cervical cancer if they have multiple sexual partners or become sexually active at an early age. Women who get the HPV vaccine need to be cautioned about developing a false sense of security about their sexual activity.

An HPV vaccine does not eliminate the need for protected sex or prudence about one's choice and frequency of sexual partners. Barrier methods of protection (such as condoms) are still necessary to prevent HIV/AIDS and other types of infection not prevented by the HPV vaccine.

The HPV vaccine is most effective if it is first administered before any exposure to the HPV virus; that is, before a woman's or girl's first experience of sexual activity (with skin-to-skin contact). As a result, the US Advisory Committee on Immunization Practice recommends routine vaccination of 11-12 year old girls. In Canada, the vaccine has been approved for girls and women aged 9-26. However, research on safety and effectiveness conducted to date includes relatively few girls in the younger age category, so current safety data may not be applicable to them.

Some pharmaceutical companies and public health agencies are promoting the use of an HPV vaccine by all women, and by all girls beginning at age nine, as a way to eradicate cervical cancer. However, since Gardasil, the only approved vaccine, protects against the two types of HPV that are responsible for 70% of cervical cancers and not against types of the virus responsible for the other 30% of cervical cancers, "reduction" rather than "eradication" is a more accurate goal. Given this fact, proposals to make the vaccine mandatory may not reflect the best use of public health funds at this time.

Pap screening and HPV tests remain important tools in cervical cancer prevention and these tools still do not reach all the girls and women that they should. The HPV vaccine may also prove to be a useful tool, but we do not yet have the full story on its long-term efficacy and safety, especially in young girls.

Until we know more about long-term safety and duration of effectiveness of the Gardasil HPV vaccine, as well as about how effective it actually is in reducing cervical cancer rates, health care dollars may be better spent in enhancing Pap screening programs (including Pap registries), and reaching the most marginalized populations (poor women, new immigrants, Aboriginal, rural and remote women) with Pap screening.

By Women and Health Protection and the Canadian Women's Health Network, with assistance from Judy Norsigian, Robin Barnett, Alicia Priest. January 2007. www.cwhn.ca and www.whp-apsf.ca