The HPV Vaccination Campaign: A Project of Moral Regulation in an Era of Biopolitics

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Abstract. This article examines the Canadian human papillomavirus (HPV) vaccination campaign to analyze the ways in which HPV and the threat of cervical cancer are framed as well as the individual risk management strategies that are made available to mothers and their daughters. The authors argue that the HPV campaign is illustrative of the moralization of health, a convergence of the regulatory discourses of moralization and medicalization in an era of biopolitics. Significantly, these discourses are put into play by a complex professional alliance that is mobilized by the extensive resources of the pharmaceutical industry. The convergence of both medical and market interests thrusts responsibility on parents, specifically mothers, as well as schools, resulting in a vaccination program that verges on mandatory. These HPV and cervical cancer prevention discourses constitute a moral regulation project directed at the regulation of the bodies of young women.
Key Words: human papillomavirus (HPV), vaccination campaign, biopolitics, moral regulation, health panic, young women

Résumé. Le présent article examine la campagne de vaccination contre le virus du papillome humain (VPH) afin d'analyser comment le VPH et la menace d'un cancer du col de l'utérus sont liés et d'examiner les diverses stratégies de gestion des risques individuelles offertes aux mères et à leurs filles. Selon les auteurs, la campagne contre le VPH est un indicatif de la moralisation de la santé, une convergence des discours réglementaires de la moralisation et de la médicalisation dans une ère de la biopolitique. Ces discours sont sensiblement mis en jeu par une alliance professionnelle complexe mobilisée par les ressources élaborées de l'industrie pharmaceutique. La convergence des intérêts sur les plans médical et commercial responsabilise les parents, plus particulièrement les mères, ainsi que les écoles, donnant lieu à un programme de vaccination qui frôle la réglementation. À ce titre, les discours sur la prévention du VPH et du cancer du col de l'utérus constituent un projet de réglementation moral axé sur la réglementation du corps des jeunes femmes.
Mots clés: virus du papillome humain (VPH); campagne de vaccination; biopolitique; réglementation moral; panique de santé; jeunes femmes

Introduction

Sexually transmitted diseases have long prompted various moral, legal, and medical interventions. Important regulatory campaigns such as those against syphilis during World War I and HIV/AIDS in the 1980s have recently been joined by a new intervention against the Human Papillomavirus (HPV) — a vaccine which aims to prevent genital warts and, more significantly, cervical cancer. We suggest that this intervention has a number of distinct and troubling features that deserve closer attention. The project of vaccinating large numbers of teenage females has been taken up with enthusiasm and alacrity by many governmental and public health authorities, despite the absence of an epidemic of cervical cancer, questions about the immunologic protection of the vaccine, and a context where current measures effectively detect and treat the disease. This paper considers HPV vaccination promotion in Canada, the ways in which HPV and the threat of cervical cancer are framed, and the individual risk management strategies that are made available to mothers and their daughters.[1] We describe how HPV vaccination promotion has generated a health panic rather than a moral panic. Indeed, we argue that the HPV campaign is illustrative of the moralization of health, a convergence of the regulatory discourses of moralization and medicalization in an era of biopolitics. Significantly, the campaign illustrates the mobilization of the extensive resources of the pharmaceutical industry and its capacity to influence health, educational, and governmental apparatuses. The convergence of both medical and market interests thrusts responsibility onto parents, specifically mothers, as well as schools, resulting in a vaccination program that verges on mandatory. These HPV and cervical cancer prevention discourses are a moral regulation project directed at the bodies of young women.

HPV Vaccination as Moral Regulation in an Era of Biopolitics

The HPV vaccine is a moral regulation project targeted at the supervision and management of women's sexual and reproductive health. The cumulative interaction of medical, public health, and governmental authorities has generated a powerful discursive legitimacy to the project

1. While the ways in which these discourses are understood, negotiated, and resisted by parents and young people are indeed important, such a consideration would require separate study. We direct readers to recent studies that aim to explore parental acceptance of the HPV vaccine in the UK (Marlow et al. 2007; de Viser and McDonnell 2008) and the US (Olshen et al. 2005; Dempsey et al. 2006; Brewer and Fazekas 2007; Constantine and Jeman 2007).

of mass vaccination. For this reason, we argue that the HPV vaccination project can best be understood as a moral regulation project aimed at both the self and others.

The linkage between the government of others and self-governance is at the heart of Foucault's concept of governmentality. In much of his early work Foucault's attention was focused on the role of big institutions, distinct from the state but operating in close proximity to it, such as prisons, workhouses, asylums, and hospitals whose mode of operation could be understood as practices of discipline which acted on individuals through training and repetition to yield what he called "docile bodies" (Foucault 1977). Foucault subsequently identified an important historical shift that occurred during the 18th century that he characterized as "biopolitics" in which the practices of governing were less focused on individuals than on "populations," that is, on aggregates of people. As Foucault defined biopolitics it was

> focused on the species body, the body imbued with the mechanics of life and serving as the basis of the biological processes: propagation, births and mortality, the level of health, life expectancy and longevity, with all the conditions that can cause these to vary. Their supervision having been effected through an entire series of interventions and *regulatory controls: a bio-politics of the population*. (Foucault 1978:139; emphasis in original)

It is worth observing that the typical form of biopolitical projects involves regulatory rather than legislative or disciplinary procedures. The great public health projects of the mid 19th century were not directed at the conduct of individuals, but rather at conditions that affected the general conditions of life and the health of populations. The introduction of urban sewage improved individual health and that of whole communities; similarly mass distribution of prophylactics to soldiers during World War I reduced the incidence of STIs in the army and protected the civilian population. These projects have a large element of individual health protection, but can also be regarded as biopolitical in so far as they aim to address the health of specific populations. The HPV vaccination project is an exemplar of the width and breadth of public health interventions and the aim to control HPV within the female population. The project also reveals a certain governmental rationality as it is illustrative of the ways in which the state plays a supportive and financial role, yet gains from "doing something."

Significantly, biopolitical projects characteristically harness expert knowledge and its associated discourses; since the 19th century medical expertise has played a crucial role. In association with the rise of liberal forms of government there has been a shift in which authoritative ex-

pert discourses have come to stimulate a powerful current towards the discourses of self-regulation; in the case in hand, that women ought to protect themselves and that mothers should protect their daughters. This combination of expert discourses and self-regulation is a classic instance of the combination of the government of others with self-governance; it has become an important feature of liberal government to encourage individuals to become self-regulating individuals (Rabinow 1984; Dean 1994; Lupton 1995).

It is a distinctive feature of contemporary forms of biopolitical projects that, while in the 19th century expertise took the form of medical experts functioning under the authorization of the state, today a complex set of alliances and competitions of expertise links the medical profession with the pharmaceutical companies and the multiple arms of the public health system. Today, pharmaceutics link medical expertise with therapeutic advice, and, in particular, self-help resources with practices of individual consumption, as components of identity formation through life-style choices that form the ways in which consumers engage in "life politics" (Giddens 1991; Rose 2007). This can be seen in the exponential rise in the consumption of vitamin and other food supplements addressed to specific social aggregates (middle-aged men, pregnant women, etc.) which link the active consumers directly to pharmaceutical producers (Illouz 2008). The important implication is that medical biopolitics has become increasingly associated with consumerism.

One of the most important, but least recognized, implications of Foucault's discussion of biopolitics is the radical claim that the desire to ground truth in rational forms of knowledge (law, medicine, social science, etc.) extends the normative power of knowledge so that each step towards advancing the health of populations also empowers and expands institutional mechanisms of control. One consequence is that the humanitarian reformism that inspires the HPV project also manifests itself as anonymous and coercive strategies that penetrate, as Foucault describes it "down to the finest grain of the social body" (Foucault 1977:80). The humanitarian motive to mount the campaign against HPV results *inter alia* in the radically interventionist vaccination of young girls who, significantly, are not able to choose for themselves; they become the objects of a biopolitical project that links drug companies, worthy health activists, and the parents of the target population.

A significant feature of these expert discourses is that they take the form of moral regulation discourses.

> Moral regulation … takes the following general form that employs discourses which have a common structure. Moral discourses link a moralized subject with some moralized object or practice in such a way as

> to impute some wider socially harmful consequences unless both subject and practices are subjected to appropriate regulation. Moral regulation involves 'moralization' rather than 'morality', and this is relational (whether to others or to the self) in asserting some generalized sense of the wrongness of some conduct, habit or disposition (Hunt 1999a:280).

Moral regulation encourages its targets to practice self-governance or self-formation (Corrigan and Sayer 1985; Valverde 1991; Bland 1995). Very commonly, moral regulation invokes concern with health and with sexuality. At the same time, these moralizing discourses are increasingly linked to a closely related set of discourses which bring together themes of risk and responsibility. The increasing prominence of risk analysis (see Castel 1991; Beck 1992; Lupton 1995; Dean 1999) has generated an expansion and intensification of the moralization of everyday life. In turn this moralization leads to a proliferation of bureaucratic regulation in the everyday world and an expansion of the responsibilities which affect citizens, reinforcing and even multiplying the regulatory impact of projects to stimulate an obligatory self-responsible attitude. The outcome of this interconnection between moral discourse and risk discourse constitutes an instance of hybridity, the combination of two types of discourse that merges their characteristics into a distinctive new form (Hunt 2003). This produces a powerful new force, that of medico-moralization, which is at the very heart of the promotion of the HPV vaccination project. In the name of health protection, as a "politics of prevention" (Ewald 1993), the pressure to vaccinate is reinforced by the injunction of the moral imperative that it is "the right thing to do." It is significant that the "evil" that the HPV project is directed against is a cancer, today's most dreaded disease. This provides a powerful motive for compliance even though the risks lie far into the future; as a risk management strategy, the HPV vaccine is a technology that aims to control the future (Ewald 1991; Giddens 1998). Moreover, and as this paper will later discuss, cervical cancer is one of the less common cancers and there is no evidence of a significant change in its incidence. However, cervical cancer is symbolically significant in the same way that breast cancer is — it strikes at the heart of the sense of female identity.

What has been identified here is a process of hybridity which brings a variety of elements into close proximity. Discourses of health, morals, risk, and responsibility form a dense web to which is added the further dimension of sex. Although much of the excitement around the HPV vaccine concerns its function as a cancer vaccine, we also argue that at the heart of the HPV vaccination project are discourses that focus on sexuality. These features are heightened by the fact that their immediate targets are females, the gender so often addressed or interpellated in

issues of health and sex. We will also show that one of the most significant features of the HPV vaccination promotion is its expanded role as a prophylaxis against sexually transmitted diseases. This lays the basis for a wider intervention in the sexuality of young females that not only emphasizes risk reduction but, intentionally or otherwise, promotes sexual abstinence. It is important in this context to take note of a feature of Foucault's account of the history of sexuality that has received less attention than it merits. Throughout *The History of Sexuality* he refers to "the deployment of sexuality" that manifests itself

> in proliferating, innovating, annexing, creating, and penetrating bodies in an increasingly detailed way, and in controlling populations in an increasingly comprehensive way (Foucault 1978:107).

The point that Foucault makes is that aspects of sex and sexuality are brought into play in a wide variety of ways in which sex is not necessarily the most prominent feature. The issues raised in their specific contexts have aspects of sex as constituents of the immediate object of inquiry. This draws attention to the variety of different ways in which sex is implicated in the HPV vaccine project. The vaccination project is not simply about health and prevention; it is about the frightening sexually transmitted disease of cervical cancer, it is about the risk of sexually transmitted diseases in general, and it is about whether or not teenage girls become sexually active. It is significant that the targets of vaccine promotion are at one and the same time mothers and daughters: mothers have always been held responsible for both the health and the sexuality of their daughters; teenage girls have long been a target of solicitous regulatory interventions by virtue of the discursive construction of their youth, innocence, and vulnerability. It is simultaneously about a biopolitical medical procedure, the vexed question of sex for daughters and their mothers, and the wider societal preoccupation with teenage sexuality. As a gendered pharmaceutical technology (Casper and Carpenter 2008), the HPV vaccine deploys a sexuality that is, paradoxically, underlined by the limited role of men, of the boys with whom teenage girls may or may not have sex, and of their fathers who remain an absent presence in the sexuality of their daughters.[2]

About HPV

The human papillomavirus (HPV) comprises a group of related viruses that are sexually transmitted. There are at least 100 known varieties of HPV (National Advisory Committee on Immunization [NACI] 2007:1).

2. Currently a vaccine designed to prevent genital warts is under test for males (*New Scientist* December 2008).

Most of these clear spontaneously: most women will clear the infection without it progressing to cervical cancer (NACI 2007:3). Some forms of HPV, types 6 and 11, account for 90% of genital warts that are estimated to affect one in ten individuals during their lives; these either disappear of their own accord or are amenable to noninvasive treatment (NACI 2007:1). However, two types of HPV (16 and 18), are linked to approximately 70% of cases of cervical cancers (NACI 2007:2).

This link to cervical cancer is at the centre of HPV vaccination campaigns,although it should be noted there is no epidemic of cervical cancer.[3] Cervical cancer is actually relatively rare: in Canada, about 7 in 100,000 women acquire cervical cancer; it is the thirteenth most common cancer diagnosis and the thirteenth most common cancer-related cause of death in Canadian women (Canadian Cancer Society and National Cancer Institute of Canada 2008:18–20). Compared to breast cancer (22,400), lung cancer (11,300) and colorectal cancer (9,700) there were an estimated 1,300 new cases of cervical cancer in 2008 (Canadian Cancer Society and National Cancer Institute of Canada 2008:18). Cervical cancer is estimated to take the lives of 380 women each year, compared to lung cancer (9,200), breast cancer (5,300) and colorectal cancer (4,100) (Canadian Cancer Society and National Cancer Institute of Canada 2008:20). There has been no significant increase in the incidence of cervical cancer; in fact, for over half a century, a very reliable method of detecting cervical diseases has been available in the form of the "pap test" or "pap smear," which has resulted in an 80% reduction in deaths from cervical cancer. The question is whether there are sufficient grounds to launch a major vaccination program; the pap test is a routine part of precautionary medicine for large numbers of women and remains an effective method for early detection of precancer and cervical cancer. Since the project acts on a perception of imminent threat of cervical cancer, the implied need for a vaccine exemplifies an enhanced experience of social risk in circumstances in which no objective measure of the incidence of specific risk supports the experiential reaction (Hunt 1999b:514).[4] Significantly, clinical guidelines for the HPV

3. Our observation that there is an absence of an "epidemic" of cervical cancer does not imply that there are objective levels of incidence and risk with concomitant objective levels of intervention. Rather, we aim to assert that the risk of cervical cancer is a kind of risk for which appropriate measures (e.g., pap screening) are currently in place.

4. The framing of cervical cancer as an imminent threat is a new twist on an old theme. For example, premarital chastity was promoted throughout the first half of the 20th century as a way to avoid the scourge of wartime gonorrhea and syphilis — diseases that were rife among military personnel and, it was feared, would spread to the civilian population. The cervical cancer threat is also reminiscent of the earlier, and as yet unrealized, HIV/AIDS message that we are "all" at risk for HIV, that HIV would spread to the general population resulting in an epidemic of sizable proportion (Fitzpatrick and

vaccine indicate that vaccinated girls and young women will *continue* to require regular pap smears. This challenges both the cost efficiency of the vaccination program and the level of invasiveness of cervical cancer screening and prevention.

In recent years rapid strides have been made in developing a vaccine to combat those forms of HPV linked to cervical cancer. Gardasil, developed and manufactured by Merck-Frosst, has been approved and adopted in North America.[5] The vaccine comes with a strong recommendation that it be administered to girls from the age of 9 and before they become sexually active; the recommended upper age limit is set at 26. The implication is that decisions to vaccinate will, in the majority of cases, not be made the individual who receives the vaccine, but by parents; it is probably significant that much of the promotional material is directed at the mother-daughter connection.

Shortly after the HPV vaccine became available an impressive array of governmental, educational, and health authorities energetically promoted the HPV vaccine, launching heavily subsidized mass vaccination programs. Authorities in North America and Europe have been quick to endorse HPV vaccines and initiate vaccination programs. We suggest there is a set of concerns which undermine the contention of an urgent need for a national vaccination program. We describe the mechanics of the promotion of the HPV in Canada. While there are differences in the pattern of the promotion of HPV in the United States and in Europe we suggest that the Canadian model is a useful grounding for a general consideration of this project.

Problematizing the HPV Vaccination Campaign

Since there seems to be reasonable grounds for questioning the mass vaccination project, it is pertinent to ask why governmental and health

Milligan 1987; Fitzpatrick 2001). Instead, men who have sex with men still account for most new infections in Canada (45% in 2005) (Public Health Agency of Canada 2007:10) which supports the idea of focusing on young, gay, or bisexual males; the risk of reinforcing stigma and homophobia is likely why the strategy of generalizable risk was employed in the first place (Connell 2001). The Joint United Nations Program on HIV/AIDS (UNAIDS) has recently come under fire for overestimating the number of worldwide HIV infections: estimates in 2006 were 39.5 million worldwide infections, modified to 33.2 million worldwide infections in 2007. As a biopolitical project, cervical cancer, like HIV/AIDS, justifies intervention and regulation based on counting incidence of infection and disease. Significantly, cervical cancer, like HIV/AIDS, medicalizes sex and continues to push "sex" into the realm of "health," encouraging a continued preoccupation with risk, danger, morality, and disease.

5. A second HPV vaccine, Cervarix, has been developed by GlaxoSmithKline. It has been approved in Europe and Australia and is currently undergoing regulatory review in the USA and Canada. Cervarix is used by the UK government for its mass vaccination program for teenage girls.

institutions have been so enthusiastic to launch this campaign. The speed at which this program was initiated was exceptional. In July 2006 Health Canada approved the vaccine Gardasil, in January 2007 the National Advisory Committee on Immunization recommended immunization of all girls between the ages of 9 and 13, the federal budget passed on March 20, 2007 included $300 million of funding for a national HPV vaccination program. This program is supported by the Federation of Medical Women of Canada (CBC News 2007), Canadian Cancer Society (2007), Society of Obstetricians and Gynecologists of Canada (2007a), and the Canadian Pediatric Association (Canadian Pediatric Society 2007). To maximize impact, the provinces of Newfoundland and Labrador, Prince Edward Island, Nova Scotia, and Ontario have all begun school-based vaccination programs. Currently, vaccine uptake across Canada varies from 53% in Ontario to around 80% in Atlantic Canada (Singh et al. 2008). These programs add the participation of schools, which play a major part in the organization and the delivery of the vaccine; in most instances the primary target population is Grade 8 girls. Vaccination with Gardasil is an expensive undertaking; the three shots required cost over $400 for each individual, though the arrival of competitor vaccinations, such as Cervarix, may bring down prices. Merck-Frosst stands to make a significant profit from the vaccine: Gardasil's annual sales could reach $2 billion (US) or more by the year 2010.

The speedy adoption of the HPV vaccination project is testimony to the symbiotic relationship between the pharmaceutical industry, the medical establishment, and central government. The inclusion of significant funds in the federal budget for a national vaccination program suggests that the government has calculated it stands to secure a political benefit from being seen to act with respect to an emotive cancer risk — always a legitimate goal of the alliance of government, medicine, and the pharmaceutical industry. For these reasons, the widely adopted vaccination program has received little critical attention.

It is an interesting feature of the HPV vaccination project that it has gained acceptance in a period in which the most common forms of biopolitical health interventions are those of screening procedures (pap smears, mammograms, etc.) while vaccination, a major biopolitical project in late 19th century and for much of 20th century, has more recently become controversial with resistance to the measles, mumps, rubella vaccine (MMR). There seems to be no similar resistance to the HPV vaccine. The only overt opposition has come from fundamentalist religious sources — particularly in the United States — who have castigated the HPV vaccine on the grounds that it may encourage sexual promiscuity by making teen sex appear to be safer.

A recent commentary in the *Canadian Medical Association Journal*, based on analysis conducted by the Canadian Women's Health Network (2007), has raised a number of questions and cautions regarding the HPV vaccine and the rush to vaccinate (Lippman et al. 2007). The authors note that there is no epidemic of cervical cancer in Canada to warrant the sense of urgency for a vaccination program, that cervical cancer develops slowly and can be halted at several stages, and that most HPV infections clear spontaneously. Lippman et al. argue that cervical cancer has been, and can continue to be, effectively detected at an early stage through regular pap screening; what is required is greater access to screening procedures for women who are typically underserved by the health care system, including immigrants, Aboriginal women, and women who live in poverty. They also question the available data on the efficacy and length of immunologic protection.

Responses to such reservations have generally relied on the *Statement on human papillomavirus vaccine* issued by the National Advisory Committee on Immunization (NACI 2007). This found that no serious complications have occurred in the vaccine trials, the HPV vaccine shows excellent response at five years postimmunization, and that the vaccine is intended to complement cervical cancer screening and not to be a replacement (Singh et al. 2008). This does not address the issue of whether there is a strong case for an immediate program of extensive vaccination of all young females. It does not explain why, given the proven effectiveness of pap screening in early detection of cervical cancer and effective treatment, there is any significant merit in the vaccination program. Nor does it address the specific utility of the vaccination program when vaccinated girls and women will continue to require regular pap smears. The Society of Obstetricians and Gynecologists of Canada (SOGC) also issued a response in which they stand behind the "careful work" and "science" of the NACI as opposed to the "fear" and "skepticism" generated by Lippman et al. (SOGC 2007b). In another response, Franco et al. (2007; two of the authors of this letter had received "unconditional research grants from Merck-Frosst") relied heavily on an essentially moral appeal that stresses the "unbearable pain, loss of function and form" associated with advanced cervical cancer, but again failed to provide any substantial evidence as to the urgency of the mass vaccination program.

The intervention currently being promoted is to vaccinate nonadult females. It is significant that the decision to be vaccinated will be made, not by the recipients of the vaccine, but by their parents, unlike the current context in which adults increasingly consider themselves informed patients empowered to make their own health decisions. This invokes the

message that the "responsible" parent will wish his/her nonadult daughter to be vaccinated. The decision will be made in the seclusion of the family milieu, where a carefully considered judgment of the pros and cons of vaccination is unlikely.

It is noteworthy that the HPV campaign is almost exclusively directed at females. There is a limited involvement of males even though the infection is transmitted equally by males and females. This, we suggest, runs the risk of reviving a much older discourse that portrays females as the agents of sexual renunciation. The discourses surrounding the project carry a generalized assertion that sexual activity is inherently risky, with an increasingly prominent message of abstinence as the only "safe" practice which plays a central role in contemporary Canadian sex education discourses (Connell 2005; Connell 2008).

Promoting the HPV Vaccination

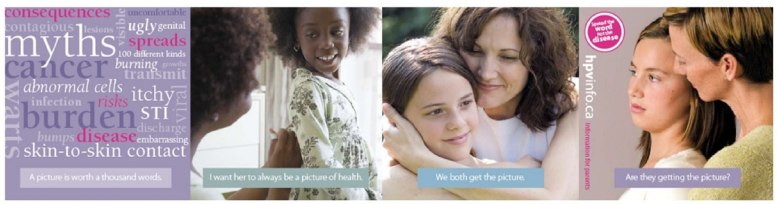
The promotion of HPV vaccination reveals something of the *de facto* alliance between the pharmaceutical industry, the medical establishment, and the government. There was much excitement about the discovery of the first vaccination to provide an effective safeguard against contracting one of the more unpleasant forms of cancer. Aside from the significance of the HPV vaccine itself, it has boosted the quest for other cancer preventing vaccines. Merck-Frosst launched an aggressive marketing campaign to promote Gardasil; in a Merck-Frosst advertisement a woman says, "I chose Gardasil because I'm smart and I look after my health." By overstating a problem and then presenting a solution, Merck extends its economic interests into the realm of public morality. Merck has successfully promoted its vaccine as a medical necessity — the company even lobbied state lawmakers in the USA with the proposal that Gardasil vaccination be made mandatory — a view that seems to be echoed by many in both the sexual health and the cancer prevention fields. The influence of pharmaceutical interests on both public policy and public interest is considerable and effective.

In Canada, the major promoter of the HPV vaccine has been the Society of Obstetricians and Gynecologists of Canada. The SOGC is a professional organization comprising over 3,000 gynecologists, obstetricians, family physicians, nurses, midwives, and allied health professionals. A leading authority on reproductive health care, the SOGC produces national clinical guidelines for both public and medical education on important women's health issues. Following the success of their award-winning web site (sexualityandu.ca/masexualite.ca) providing sexual and reproductive health information and education to youth, adults, parents,

teachers, and health professionals, the SOGC launched a national public awareness campaign on HPV in the summer of 2006. Upon receiving a $1.5 million grant from Merck-Frosst to educate the public about HPV and the HPV vaccine (*Ottawa Citizen* 2007), the SOGC proceeded to develop and promote a website (hpvinfo.ca/infovph.ca); develop and distribute 243,000 magnetic bookmarks, 135,000 brochures, and bathroom posters for over 90 college campuses across Canada; develop and disseminate public service announcements (TV PSAs were disseminated to 80 broadcasters across Canada and a radio PSA was distributed to 500 radio outlets); and develop and distribute teacher educational kits (SOGC 2007c), an analysis of which follows. This funding arrangement allows Merck-Frosst to pursue legitimate profit by sidestepping regulations that prohibit direct-to-consumer advertising while invoking the authority and expertise of a professional organization that will undoubtedly motivate consumers to act.

Of particular interest is the way in which the efforts of the SOGC target not only young women, but their mothers as well. Indeed, these materials abound with images of mothers (see Figure 1) who are embracing their daughters with the message:

Figure 1. Cover of HPVInfo.ca Brochure for Parents



> In each stage of your child's life, you must tackle new issues, decide what is best, and set new limits. Parents do all of this to keep their children safe. Having your child vaccinated against the Human Papillomavirus (HPV) is one of those decisions which can help keep your daughter safe and healthy. (SOGC 2008b)

Mothers are encouraged to "get the big picture" regarding the "long term effects [of HPV] like cancer" (SOGC 2008a). In addition to considering the HPV vaccination, and telling their daughters to have regular pap tests, mothers are advised to:

> talk about the facts of life. Teach your children about abstinence and safer sex. Make sure they know the facts so they can make good choices. (SOGC 2008e)

> [inform their daughters that] using a condom is a good way to protect from

> many kinds of Sexually Transmitted Infections (STIs). But with HPV, a condom does not provide full protection. HPV can still be contracted from skin not covered by the condom. (SOGC 2008b)

The on-line Q&A on HPV for mothers presents the case for vaccination in the following terms:

> Having your daughter vaccinated against HPV is a decision that you can make to keep her safe and healthy. HPV spreads easily from person-to-person, and often there are no signs or symptoms. It's the kind of infection that could be passed onto your child, and she won't even know it. There is no blood test for HPV. Unless your daughter has an abnormal Pap test, she may never know she has the virus. An undiagnosed infection could develop into cancer. (SOGC 2007d)

> Consider having your daughter vaccinated when she is young.… The sooner the vaccination, the better. (SOGC 2007d)

These persistent themes invoke the long-standing historical responsibility of mothers for discussing sexual matters with their children; mothers have long been the primary sex educators of their children (Reinisch and Beasley 1990; Miller et al. 1998) and are more likely to accompany their daughters to gynecological appointments (Hillard 2000). Most significantly, this discourse works through a mix of medical and moral themes. On the one hand, there is the valorization of abstinence as the best choice for young people and the risks inherent with all other methods of contraception. It emphasizes the ease with which HPV can be spread thereby injecting fear along with a sense of urgency, framing the vaccination program as an inherent part of responsible parenting.

The promotional material includes information about the prevention of genital warts. Genital warts are indeed miserable, but there is an interesting mix in the message: the consequences of HPV can include cancer/death (extreme) as well as "ugly" and "embarrassing" genital warts (minor) that play on adolescent everyday anxieties. The brochure for youth notes that the "distinguishing features" of warts are "ugly," looking like "small cauliflower," the "emotional profile" is "itching, burning, embarrassing" and their "growth potential" could "escalate into cancer" (SOGC 2008c). Youth are further cautioned:

> It could happen to you. But it doesn't have to. The highest rates of HPV infection are in young people aged 15 to 24. If you are in this age group, you are more likely to get the virus. It could be you will never get HPV, or that you'll get it and your body will fight it off. But why take a chance when it comes to genital warts and cancer? (SOGC 2008c)

In addition, TV PSAs emphasize the pervasiveness of HPV. One TV PSA features a young woman taking a shower:

> If you're sexually active, even with just one partner, you may still get HPV and not see any signs. In their lifetime, up to 75% of Canadians will have HPV. Some kinds even lead to cervical cancer. Spread the word, not the disease. (SOGC 2007e)

Another PSA features a young man taking a shower:

> Even if you use a condom, you may already have HPV and just not know it. HPV spreads through intimate contact. It can cause warts, lesions, and even cancer. Find out more at hpvinfo.ca. (SOGC 2007e)

The key themes of television and radio PSAs combine the following: they stress that HPV is common and that it is easy to get, even if you only have just one sexual partner; the consequences can be serious (warts, lesions), even catastrophic (cervical cancer). The rationale of these strategies is to make it the responsibility of individuals to find out more and to educate others.

Significantly, the television PSAs include the introduction of the male subject. Although girls and young women (and their mothers) are the main target audiences there is some targeting of young men. To this end, "Hear My Story — Jay" is a short video clip featured on the main page of hpvinfo.ca. Sporting jeans and t-shirt, the twenty-something year old Jay makes an earnest appeal to other young men to increase their awareness of the genital warts caused by HPV:

> A few months back I had this problem. There's really no delicate way to put it. I had genital warts. Itchy, nasty warts on my package. I got the warts from HPV. You've heard of that, right? I thought that only girls got it. But guys get HPV, too. Guys like me, apparently. It makes sense, I guess. Guys get it from girls and girls get it from guys. That's how it gets around. So the more people you sleep with, the bigger the chances of getting it. But you can also get it your first time. It's out there. And you can't necessarily tell who's got it just by looking. It's not like they're wearing a t-shirt that says: "I've got HPV." And you can get it even if you use protection. Condoms cut the risk but all it takes is skin-to-skin contact below the belt. You don't even have to have sex. Not that I am right now. Genital warts do nothing good for your love life. Until I got treated, I didn't even want to think about sex. I couldn't let anybody see me like that. No way would anybody touch that. I didn't even want to touch it. So if you need a reason to be safe or even just to think twice before getting into bed with someone, I'm here to tell you, genital warts are as good a reason as there is. (SOGC 2007f)

This message is couched in colloquial terms to which many young people may relate. Young people with HPV would also likely share many of the sentiments that Jay expresses about not feeling sexual or not wanting to have sex again, and a bewilderment at contracting it. It also employs the use of euphemisms: "my package," "skin-to-skin contact below the belt," "that," and "it." Although abstinence is not mentioned, the underlying implication is that condoms do not always work and that you can get HPV "the first time." The risk is invisible so you can't tell who might have HPV.

Indeed, while abstinence is mentioned in the material for parents as previously discussed, the discourses promoting the HPV vaccination project do not explicitly endorse abstinence. Our point is that the messages carried by the vaccination project are congruent with the generalized promotion of sexual abstinence which has come to form a key feature of school-based sexual education. The threat of cervical cancer facilitates a medical model of abstinence, which involves the use of medical truths in order to support abstinence as a wise choice for teens. For example, in the largest urban centre in Canada, Toronto Public Health promotes the following message in their "What's the Rush?" campaign:

> Vaginal intercourse for females before the age of 20 years is a risk factor for cervical cancer. During adolescence, the process of maturation of cervical cells is most active and young women are more vulnerable to infection because of the cervical immaturity. Infection with some human papillomavirus (HPV) types is associated with cervical cancer. (Toronto Public Health nd:3)

Similarly, in the book *Sex? A Healthy Sexuality Resource* which is distributed to every Grade 7 student in the province of Nova Scotia, students are encouraged to consider whether having sex will be a sound and comfortable choice; however, even this exploration of sexual readiness concludes with:

> Caution! There is no "right age" for having sex. But one important thing to consider when making your decision is that having vaginal sex at a young age is risky for a girl. This is because the cells of the cervix are still developing and are more easily damaged. This puts girls at a higher risk for cervical cancer. (Healthy Sexuality Working Group 2006:22)

Under the guise of medical truth, such practices of sex education serve as a nonmoral form of moral regulation that discourages premarital sex and promotes abstinence. Abstinence is illustrative of the link between one's physical condition and moral character; it is a site where health and morals meet.

Conclusion

The HPV vaccination project is an exemplar of the moralization of health in an era of biopolitics. Framing cervical cancer as an imminent risk for girls and young women has generated a health panic. We do not deny the suffering of women who acquire cervical cancer; however, we question the generalizability of this risk and the urgent need for a national vaccination program. The messages promoting vaccination draw, in part, on the traditional authority of the medical profession. The new element is the authority mobilized by the extensive resources of the pharmaceutical industry. Most significant is the capacity of the pharmaceutical industry to influence (and sometimes even fund) the multiple institutions of the public health, educational, and governmental apparatuses. We argue that this combination of resources has provided a widespread legitimacy to the vaccination project. The resulting convergence of both medical and market interests thrusts responsibility on parents, specifically mothers, and schools to accept the vaccine as an appropriate response to generalized anxieties about the health and safety of young women, resulting in a vaccination program that verges on mandatory. HPV and cervical cancer prevention discourses constitute a moral regulation project directed at the regulation of the bodies of young women.

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