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From Desire to Disease: Human Papillomavirus (HPV) and the Medicalization of Nascent Female Sexuality

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This article critically examines the proliferation of information on the human papillomavirus (HPV) vaccination as integral to contemporary processes of medicalization that take the young female body and her nascent sexuality as its primary object and target. We suggest that the recent introduction of voluntary HPV vaccination for girls, in North America and elsewhere, constitutes a form of neomedicalization (Batt & Lippman, 2010) that links risks for future disease (cervical cancer) with the transmission of a common, sexually transmitted infection (HPV). Informed by findings from a critical discourse analysis of Canadian English newspapers, magazines, and public information about HPV vaccination, our interest is on how the emergence of sexual relationships becomes constructed as a time fraught with risks to future health, and that must be managed through biotechnological intervention (vaccination). We suggest that this configuration of medicalization, rather than demarcate a new category of abnormality that can be treated with pharmaceutical or medical intervention, positions the emergence of sexuality itself as the basis of risk and pathologization. The article concludes by considering the implications of this form of medicalization for constructions of female sexuality and sexual health education.

Vaccination against human papillomavirus (HPV), often described as the world's most common sexually transmitted infection (STI), has swiftly emerged as a public health priority in North America and elsewhere. In Canada, voluntary, school-based immunization programs are free of charge for all girls aged 9 to 13, and have been implemented in each of Canada's provinces and territories. The rationale for initiating the three-dose vaccine within this age range is based on evidence suggesting that efficacy is greatest prior to onset of sexual relations (National Advisory Committee on Immunization [NACI], 2007). Gardasil®, the first HPV vaccine approved by Health Canada in July 2006, protects against four types of HPV, two of which are associated with the development of approximately 70% of cases of cervical cancer (Types 16 & 18) and two of which are associated with the development of approximately 90% of cases of genital warts (Types 6 & 11; NACI, 2007).

Accompanying this institutionalization of the HPV vaccination for girls, the recent proliferation of broadly available information about HPV is nothing short of staggering. Whereas as recently as five years ago the term *HPV* would have been recognized only by medical researchers and practitioners in the field of sexual health, today this term has gained a lively presence in popular culture and the public's imagination. This spread of awareness about HPV is due in large part to the aggressive marketing of HPV vaccines Gardasil and the more recently approved Cervarix® by pharmaceutical giants Merck & Co., Inc. and GlaxoSmithKline, respectively. As well, both before and following the Health Canada approval of Gardasil, many news and magazine articles reported on the vaccine, with many hailing it as a medical breakthrough (e.g., CanWest News Service, 2006) and milestone in public and women's health (e.g., Richwine & Heavey, 2006), and some raising concerns about the vaccine (e.g., Gulli, George, & Intini, 2007; Picard, 2007). In addition to news and magazine articles, a number of organizations actively promote the uptake of vaccination against HPV on their Web sites and in print brochures. These include national and provincial health authorities (e.g., Ontario's Ministry of Health and Long-Term Care [MOHLTC]), cancer agencies (e.g., the Canadian Cancer Society [CCS]), and local public health authorities, which implement the school-based vaccination programs. The Society of Obstetricians and Gynecologists

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of Canada (SOGC; 2007) has been a major player in promoting the uptake of the HPV vaccination through its "Spread the Word, Not the Disease" campaign (www.hpvinfo.ca), and has been financially supported in these efforts by educational grants from Merck & Co., Inc., which produces Gardasil (Merck, 2009; Page, 2007). To date, the majority of these education/marketing efforts have been targeted at parents, girls, and young women, following the initial Health Canada approval for females aged 9 to 26 years and the subsequent implementation of school-based vaccination programs.

Although there are over 100 types of HPV, popular representations tend to speak about the virus as a singular entity and conflate HPV *infection* with cervical cancer *disease*. Such conflations obscure evidence that HPV is carried by *both* males and females and is easily transmitted between sexual partners, that most cases of HPV are transient and spontaneously cleared, and that cervical cancer results when infection with HPV is undetected, untreated, and persistent (Lippman, Melnychuk, Shimmin, & Boscoe, 2007; NACI, 2007). Despite this, HPV vaccines have been marketed to girls and young women primarily as a means to prevent cervical cancer, rather than to control the spread of STIs (Mamo, Nelson, & Clark, 2010; Polzer & Knabe, 2009). This prioritization of cervical cancer was initially constructed through Merck & Co., Inc.'s "disease awareness efforts" (Herskovits, 2007), which purposefully cultivated public awareness of the linkage between HPV and cervical cancer prior to the U.S. licensing of Gardasil through its "Make the Connection" and "Tell Someone" campaigns (Wolfe, 2009, p. 60). The popular media have also played a role in perpetuating this conflation, as evidenced by numerous headlines and references to Gardasil as the world's first "cervical cancer vaccine" (e.g., Calloway, Jorensen, Saraiya, & Tsui, 2006; Habel, Liddon, & Stryker, 2009; Talaga, 2004; Urquhart, 2006).

The introduction of a mass HPV vaccination as a cancer control strategy in Canada is interesting, given the success of cervical cancer screening. In Canada, cervical cancer incidence and mortality were drastically reduced when access to screening became universally available under Canada's national health insurance program in the early 1970s, with the largest reductions observed among women in the lowest income groups (Ng, Wilkins, Fung, & Berthelot, 2004). According to Canadian cancer statistics, 1,300 new cases of cervical cancer were diagnosed in 2010, making cervical cancer the 13th most commonly diagnosed cancer among women. Cervical cancer ranked as the 20th deadliest cancer, accounting for 370 out of 76,200 total cancer deaths. Among all cancer deaths among women ($N = 36{,}200$), lung and breast cancer account for 25.8% and 14.8%, respectively, whereas cervical cancer accounts for 1% (CCS, 2010).

Background and Conceptual Framework

The rapid implementation of HPV vaccination programs as a public health strategy to prevent cervical cancer, and the proliferation of awareness about HPV and HPV vaccines, are symptomatic of the ways in which women's bodies and lives have been subjected to and transformed by processes of medicalization (Ehrenreich & English, 1990; Morgan, 1998; Riessman, 2003). Traditionally, medicalization describes the process, or processes, through which nonmedical problems, usually conceived as social problems (e.g., alcoholism) or natural processes (e.g., aging and childbirth), become defined and understood in medical terms, usually in terms of illnesses, disorders, or disease, which are then managed or "treated" using medical technologies or expertise (Conrad, 1992). Whereas many early accounts of medicalization focused on the power of the medical profession to name and frame things in biomedical terms and, thus, to bring them under medical control and surveillance (Zola, 1972), more recent feminist accounts emphasize how medicalization operates through dynamic processes and networks that involve various groups with different stakes in the support or refusal of such naming and framing. For example, Hartley and Tiefer (2003) showed how the classification, diagnosis, and treatment of female sexual dysfunction (FSD) involves experts (urologists), pharmaceutical companies, government agencies, research funders, university researchers, continuing medical education organizers, as well as the mass media, which, in providing press coverage of key events, "increase the arc through which the biomedical language and perspective are disseminated" (p. 45). This more complex picture of medicalization includes patient groups and women themselves, who participate in and stand to benefit from processes of medicalization (Riessman, 2003) and who actively negotiate health-related risks and decisions in specific contexts of medicalization (e.g., Gunson, 2010; Mancuso & Polzer, 2010; Robertson, 2000).

More recently, the term *biomedicalization* has been proposed to describe a major transformation of American medicine in the context of an increasingly technologized landscape of health and health care (Clarke, Mamo, Fosket, Fishman, & Shim, 2010). This transformation is, in part, characterized by an emphasis on the optimization and enhancement of health through the identification and surveillance of risk in individuals and populations. Similar to this biomedicalization theory (Clarke et al., 2010), but more specific in its critique of the effects of neoliberalism on public health policy and women's health, Batt and Lippman (2010) use the term *neomedicalization* to consider how corporate-driven efforts (usually by pharmaceutical companies) transform risks for future disease into opportunities to develop and market new drugs and technologies that purport to help women manage these risks. Neomedicalization poses particular threats to

women's health because the feminist health principles of empowerment and autonomy are easily co-opted by the increased "choices" that these new drugs and technologies claim to offer. Processes of neomedicalization, Batt and Lippman argue, are symptomatic of neoliberal policies that aim to stimulate the biotechnology sector and transform health from a public good into a commodity and resource for economic growth. This concept is particularly relevant in the Canadian context to understand how neoliberal policies effect shifts in public health priorities such that increasing emphasis is placed on individual citizens who are expected to minimize their exposure to risks for disease through increased medical and self-surveillance and the purchase of particular drugs and devices. This linking of risk, consumption, and individual responsibility for health is a key feature of neomedicalization, which

> emphasizes an individual's supposed risk of developing a problem and the use of some drug or device to manage this risk. In its most expansive form, neomedicalization makes being "at-risk" a disease state and frames the individual as responsible for ensuring that the risk does not become reality. (Batt & Lippman, 2010, p. 50)

Like other forms of medicalization, processes of neomedicalization depoliticize the causes of ill health as they narrowly focus on individual and biological traits, thus obscuring the social determinants and processes that produce inequitable distributions of disease and suffering.

The concept of neomedicalization is helpful to situate HPV vaccination discourse within the broader sociopolitical matrix and to consider its effects on contemporary expressions of the medicalization of female sexuality. Indeed, the established epidemiological link between some forms of HPV and cervical cancer makes HPV vaccination a unique and interesting case study through which the politics of risks to health merge with the medicalization of female sexuality. In one sense, acquiring HPV is normal: HPV is easily transmitted, typically does not result in cervical cancer, and spontaneously clears in most cases. However, and as we go on to suggest, the possibility that HPV may lead to cervical cancer, and the possibility of foreclosing this risk through vaccination, has the effect of pathologizing nascent female sexuality. As we argue, this pathologization occurs not through the designation or classification of a sexual abnormality or dysfunction, but rather through a pathologization of the normal—that is, by linking the emergence of a typical life experience (sexual relations) with the possibility of acquiring HPV and, thus, the possibility of developing future cancer.

In this article, we take a feminist, interdisciplinary perspective to illuminate how HPV vaccination discourse conveys particular notions of nascent female sexuality and parental responsibilities for sexual health. We locate this work within feminist scholarship that has examined the various ways in which women's bodies are pathologized by reductionist, biomedical approaches to health and constructed as objects that require medical monitoring, self-surveillance, treatment, or improvement through pharmaceutical, surgical, and technological intervention (e.g., Crossly, 2007; Hartley & Tiefer, 2003; Morgan, 1998; Moynihan & Mintzes, 2010). Drawing on Batt and Lippman's (2010) notion of neomedicalization, we are particularly interested in how HPV vaccination extends processes of medicalization into the lives and bodies of girls and young women through the concept of "risk." Current emphasis on risk identification, assessment, and management in health promotion and public health expands the scope of medicalization by linking everyday life events and behaviors (e.g., eating and sexual activity) with the potential for negative health outcomes in the future. Even when well-intended, these risk-based approaches multiply opportunities for surveillance and preemptive intervention, and are, thus, implicated in the regulation of healthy populations (Lupton, 1995; Petersen & Lupton, 1996). As a primary vehicle for the dissemination of ideas about health and sexuality, the mass media constitute a rich site to examine current cultural constructions of women's health risks and medicalization. For example, Roy (2007) used discourse analysis methods to illustrate how English–Canadian women's magazines reinforce a prevailing ideology of "healthism" (Crawford, 1980)—a view that sees health as a moral responsibility and goal that is achieved through individual effort and enterprise. In particular, Roy identified how cautionary tales and inspirational stories are used within this genre as rhetorical strategies to reinforce the prevailing cultural attitude that women, specifically, are morally obligated to take responsibility for their health and the health of their children, or suffer the consequences.

Such textual analysis methods are useful to show how popular media, scientific, and other modes of representation construct and convey particular ideas about gender, health, and sexuality (e.g., J. Clarke, 2009; Gupta, 2011) and privilege particular ways of being, or subjectivities (e.g., Laliberte-Rudman, Huot, & Dennhardt, 2009). For example, Mamo et al. (2010) used discourse analysis to illustrate how the advertising campaign for Gardasil in the United States, and its associated non-branded awareness campaigns of the HPV–cervical cancer link, displace concerns about HPV as an STI and universally construct all girls as inevitably "at risk" for cervical cancer as a result of their being on the cusp of "passing through a normal life stage from childhood to adulthood" (p. 123). Such approaches to textual analysis of health representations go beyond a description of the media content (e.g., Calloway et al., 2006; Habel et al., 2009) to examine how media messages are structured to frame health issues in particular ways,

and the discursive effects of such framings. For example, by explicating the links that are made among girlhood, risk for future disease, and vaccination, Mamo et al. question how advertising and awareness campaigns render girls' bodies as inevitably risky and HPV vaccination as the "right tool" for cervical cancer prevention. Focusing on the Canadian context, we use a similar approach to identify the constructions of female sexuality that are privileged by popular media representations of HPV vaccination around the time that Gardasil was approved in Canada, and the ways in which such constructions function to incite particular expectations and responsibilities regarding sexual health. This extends our previous work, which commented on the ways in which industry advertising sets up sexually active young women as having to make decisions about HPV vaccination in the absence of comprehensive and easily accessible information (Polzer & Knabe, 2009).

Method

In this article, we present findings from a critical discourse analysis (CDA) of Canadian magazine and newspaper articles and selected brochures about HPV vaccination published in the English language. Our sample includes 180 newspaper articles and 48 magazine articles. Newspapers and magazines were selected on the basis of readership levels. Magazines were selected for diversity and included gender-neutral magazines (e.g., *Maclean's*) and gender-specific magazines (e.g., *Chatelaine* and *Cosmopolitan*). All news and magazine articles were identified using the search term *HPV*. This term first appeared in our sample of newspapers in 1986 and in magazines in 1996, although the majority of the articles in both text domains were published during 2006 (when the vaccine was approved) and 2007 (when the first provincial vaccination programs were implemented). As well, we collected a number of brochures that promote the uptake of vaccination. In this article, we focus on brochures produced by Ontario's MOHLTC (www.hpvontario.ca) and the SOGC's "Spread the Word, Not the Disease" HPV awareness campaigns (www.hpvinfo.ca).

From our critical perspective, discourse analysis goes beyond a description of specific issues reported in the media to focus on how issues are framed, and the potential effects of such framings. Thus, discourses are not mere reflections of reality (i.e., what is), but are ways of thinking and speaking about a phenomenon that place boundaries on what comes to be viewed and accepted as legitimate knowledge (i.e., truth or facts; Cheek, 2004). Discourses are both enabling and constraining "in that they allow for certain ways of thinking about reality while excluding others" (p. 1142). In this sense, they have framing effects, as they construct problems in ways that naturalize some responses, making them appear reasonable and justifiable while alternative responses are rendered illogical and less legitimate.

Consistent with CDA, we analyzed our texts using multiple close readings to elucidate the meanings and framing effects they convey through the use of metaphors, images, and other rhetorical devices and linguistic strategies (Cheek, 2004; Laliberte-Rudman et al., 2009; Lupton, 1992). To facilitate this interpretive process, we developed a coding template based on our independent review of a subset of the magazine and newspaper articles, which was then refined by applying the template to new sets of data. Through this iterative process, we identified two broad themes that characterized our media sample. The first theme focuses on a construction of pathologized nascent female sexuality that is privileged by HPV vaccination discourse. The second theme describes the parental responsibilities that are evoked in relation to this construction. Brochures were also reviewed to see how these themes were reflected in HPV awareness campaigns.

Results

Pathologizing Nascent Female Sexuality

The view of nascent female sexuality that emerges in our sample of media representations is produced through a productive tension in which the risk posed by HPV infection is simultaneously de-stigmatized and amplified. The de-stigmatization of HPV acquisition and transmission is effected through repeated descriptions of the virus itself as ubiquitous and easily spread. In the newspaper and magazine articles, de-stigmatization is accomplished through various rhetorical strategies, including the use of globalizing statements ("HPV is the most common sexually transmitted infection in the world" [Cherry, 2007, p. J04]), comparisons of HPV with mundane conditions that are not sexually transmitted (e.g., allergies and the common cold), and through the use of statistics:

> Studies suggest 10% to 29% of women in Canada are infected with HPV, making it the most common sexually transmitted infection in the country. (Kirkey, 2007b, p. A1)

> 1 in 3 Americans is now living with an incurable STD [sexually transmitted disease] like herpes or human papillomavirus (HPV), which can cause both genital warts and dangerous cervical lesions. . . . That makes viral STDs more common than allergies. (Califano, 1999, p. 241)

HPV is further de-stigmatized through repeated statements that it is easily transmitted through all forms of sexual contact. For example, in print and online brochures used in the "Spread the Word, Not the Disease" campaign, HPV is described as a "highly contagious"

virus that can "infect anyone who has ever had a sexual encounter even without penetration" (SOGC, 2007). Spreading HPV through non-penetrative sexual contact also features in newspaper accounts ("HPV is contracted not just through sexual intercourse, but also through skin-to-skin contact" [Kirkey, 2007a, p. A8]). This emphasis on the ease of HPV transmission and acquisition is significant because behaviors that may have once been regarded as sexual exploration and innocent messing around become reframed as risky activities associated with the possibility of acquiring HPV and, thus, future cancer.

While HPV is de-stigmatized through its ubiquity and ease of transmission, its potentially deadly consequences are simultaneously emphasized. In the news media, it is through its epidemiological association with cervical cancer that HPV has been framed as a serious STI worthy of public attention. This is accomplished by comparing HPV with other STIs, which are described as more widely recognized and consequential:

> The virus, despite its deadly potential, has never had the big-time profile afforded to other STDs. Chlamydia and herpes have had their names in lights, but HPV—often misunderstood as merely warts and grouped with crab lice and other low-impact STDs—lurks in the shadows. (Hutsul, 2003, p. D04)

The potential deadliness of HPV is also emphasized in our media sample through the consistent and selective presentation of statistics that reinforce the link between HPV and cervical cancer, and frame cervical cancer as a fatal disease. In news articles, provincial and national incidence and mortality statistics are reiterated (e.g., "Annually, close to 1,400 women are diagnosed with it in Canada and about 400 die of it" [Bridges, 2006, p. A02]). Rarely do these articles mention that cervical cancer incidence and mortality have been declining, and that cervical cancer is the 13th most commonly diagnosed cancer among Canadian women (CCS, 2010). Worldwide, cervical cancer statistics also frequently appear in the news media with infrequent attempts to distinguish these from Canadian statistics (which are much lower) or to discuss the reasons underlying these differences.

Thus, HPV vaccination discourse, as represented in our media sample, is characterized by a tension in which HPV is simultaneously constructed as potentially deadly, yet ubiquitous and easily spread through all forms of sexual contact. Furthermore, the risk of acquiring HPV is amplified by repeated warnings that condoms provide insufficient protection against HPV. The following quote highlights this insufficiency by juxtaposing it with national and global cervical cancer mortality statistics:

> HPV causes almost all cervical cancers, killing about 290,000 women worldwide, including about 400 in Canada each year. Condoms provide some, but not absolute, protection. (Kirkey, 2007b, p. A1)

The ease of transmission is often cited in the magazine and newspaper articles as a reason why condoms are unable to provide full protection against HPV:

> [W]e have learned at least one frightening thing about the disease: HPV is spread through skin-to-skin contact of genitals and their surrounding areas, so condoms don't always protect against it. ...[T]here is no such thing as safe sex. (Morse, 2002, p. 41)

In both magazines and newspapers, teens are depicted as particularly vulnerable to the health risks that accompany their nascent sexual activity. These depictions are supported by drawing on studies that describe teens as lacking the knowledge and ability to appropriately judge their vulnerability to such risks:

> Canadian teens know little about sexually transmitted infections and are participating in risky behavior that could be hazardous to their health, an online survey of 14- to 17-year-olds has found. (Talaga, 2006, p. A16)

As well, teens are described as failing to exercise proper safe sex and preventive health practices:

> At Planned Parenthood ... we also knew that our young patients were notoriously immortal. Young women were unreliable about getting their Paps, just as they were about using condoms. (Downton, 2007, p. 21)

In summary, the construction of HPV as common but potentially deadly has the paradoxical effect of de-stigmatizing this STI just as it pathologizes the onset of sexual relations. Moreover, by constructing young women and teens as particularly vulnerable to STIs, and as likely to be unreliable risk managers, a picture is painted of a population that cannot be trusted to protect themselves against HPV and, thus, cervical cancer. In the following section, we consider how their parents are called on to respond to and manage this risky nascent sexuality through biotechnological intervention (vaccination).

Communicating Responsibility

The second theme refers to the parental responsibilities that are communicated in relation to the pathologized construction of nascent female sexuality described earlier. Because any form of sexual contact is deemed likely to expose girls to HPV, vaccination is presented to parents as the reasonable and responsible decision to "protect" their daughters from cervical cancer. This duty to protect through vaccination is directly stated in some newspaper accounts (e.g., "Every nine- to 13-year-old girl in the country should be vaccinated

against the sexually transmitted virus that causes cervical cancer" [Kirkey, 2007b, p. A1]) and is also communicated through the use of personal stories and testimonials, which present parental decisions to vaccinate as straightforward, given the established link between HPV and cervical cancer:

> When the family doctor recommended to Anna Janes that her 16-year-old daughter be vaccinated against human papillomavirus, which can cause cervical cancer, she did not hesitate for an instant. ... This vaccine prevents cancer. I couldn't imagine who wouldn't want their daughter protected. (Picard, 2007, p. A11)

The parental responsibility to vaccinate is also communicated in news reporting about the controversies surrounding Ontario's decision to implement vaccination programs for girls in eighth grade. In this excerpt, the voice of Ontario's premier, Dalton McGuinty, who is situated as both political leader and father, is particularly persuasive as he describes vaccination in moral terms as the "right" decision, both for the government of Ontario and for parents:

> Premier Dalton McGuinty said it's up to parents and their daughters to decide whether to get the optional vaccinations. But, as a father, he recommends it because the sexually transmitted virus causes genital warts and cervical cancer. ... "Every year in Ontario about 550 women are diagnosed with cervical cancer and 150 die. We are ... offering this to our girls in Grade 8 because it saves lives. It's a simple reason. It's the right thing to do." (Ferguson, 2007, p. A4)

This duty to protect is reflected in print brochures disseminated as part of Ontario's eighth-grade vaccination program. The 2007 MOHLTC brochure that accompanied Ontario's first rollout of the HPV vaccination presented the headline, "*This I do for* MY DAUGHTER," followed by, "ONTARIO'S GRADE 8 HPV VACCINATIONS TO HELP YOU PROTECT YOUR DAUGHTER FROM CERVICAL CANCER." Below this is a close-up image of a mother holding her daughter close to her chest, both smiling and looking out to meet the gaze of the viewer. On the inside of the brochure, the vaccine is further described as a special investment that parents—mothers, in particular, as suggested by the visual imagery—can make in their daughters' futures ("This protection is truly something special you can do for your daughter's future health"). Similar representations of parental obligation to protect are evident in the 2009 MOHLTC brochure, which again features on its cover the image of a mother holding her daughter, accompanied by the phrase, "Love alone won't protect your grade 8 daughter." On the inside flap, the following excerpt reminds parents of the potentially deadly consequences of HPV, and that active steps (vaccination) can preempt risk for cervical cancer and preserve their daughters' future health:

> Cervical cancer is the 2nd most deadly cancer in women. Its main cause is the Human Papillomavirus (HPV). Now, with Ontario's Grade 8 vaccination program you can help protect your daughter from this deadly disease. (MOHLTC, 2009)

This rhetorical framing of the HPV vaccination demonstrates how parental love and desire to protect daughters from harm are mobilized to present vaccination as an obligation to ensure a child's health and life. The framing of cervical cancer as highly lethal ("the 2nd most deadly cancer") acts as a cautionary tale, which functions to warn parents what might happen if they choose not to vaccinate (Roy, 2007).

In the newspaper articles, personal testimonials from patients and doctors similarly function as cautionary tales, particularly in the way that they juxtapose their experiences having and treating cervical cancer with the decision to vaccinate. Consider the following story of Jenny Blake, "physician and mother," in an article that appeared on the eve of the provincial decision to cover vaccination for eighth-grade girls:

> She didn't mind spending a total of nearly $400 for three injections for her daughter Allie, 16. "For the money, compared to just the grief and distress women have with one abnormal Pap smear, it's an easy equation .... " Blake, chief of obstetrics at Sunnybrook Health Sciences Centre, said cervical cancer is the second most common cancer for women aged 20 to 44. "This is when we see women at the peak of their careers, with families and mothers, and they do die from this disease." (Talaga, 2007, p. A18)

Similarly, this cervical cancer survivor warned readers about the costs of not vaccinating:

> "I would never, ever want anyone to go through what I did because of a stupid little virus. We should do whatever we can to protect people, including vaccination" she said. "If anybody is against this, I'll take them for a visit to the cancer ward." (Picard, 2007, p. A11)

In addition to encouraging parents to vaccinate their daughters, these media messages encourage parents to become actively involved in the process of communicating to their daughters risks that are framed as inevitable accompaniments to their sexual development. One "Letter to the Editor," by Verna Mai (2007), Director of Screening of Cancer Care Ontario, for example, finished with, "We encourage parents to get the facts and discuss the HPV vaccine with their children" (p. AA07). The HPV vaccine is also presented as an opportunity for parents to initiate discussions about sex with daughters, and to overcome any discomfort they may

have instigating these conversations. However, by suggesting HPV vaccination as a convenient entry point into discussions about sex, sex necessarily becomes framed as "risky" and as in need of management to ensure future health. As the following passage suggests, talking "openly" about sex is driven by considerations of risk management:

> Another benefit, says Davis [President of the SOGC], is that the HPV shot will give parents, teachers, and youth a chance to talk openly about sex and its consequences. "It certainly isn't carte blanche to participate in any kind of activity that they want," says Davis. "But it is an opportunity to discuss options and give them the information that they need to continue with a safe and healthy sex life in the future." (Gulli, 2006, p. 52)

What we draw attention to here is the way in which HPV vaccination discourse encourages parents to take part in the proliferation of discourse about HPV and HPV vaccination and, ultimately, in the process of pathologizing nascent female sexuality. In this sense, this form of medicalization operates through familial relations. These relationships are specified by the discourse as important vehicles through which messages about HPV, its links to cervical cancer, and the benefits of vaccination can be communicated and deployed. Similarly, appeals to "open" communication between friends are made in the "Spread the Word, Not the Disease" campaign (SOGC, 2007). Such appeals reflect industry strategies that intentionally capitalize on existing female relations (with family and friends), and their "natural inclinations as talkers and sharers" (Herskovits, 2007, para. 37), to create awareness of HPV and its link with cervical cancer (Wolfe, 2009).

Discussion

In conclusion, we suggest that HPV vaccination discourse privileges a particular view of nascent female sexuality as risky, and specifies parental responsibilities to manage this risk both through vaccination and communication of health risk information. Drawing on the notion of neomedicalization, our analysis extends previous descriptive media analyses of the HPV vaccination to consider the symbiotic relationship between constructions of HPV (as easily spread, usually harmless, but potentially deadly), constructions of female sexuality (as pathologized through its inevitable association with HPV and, thus, cervical cancer), and constructions of responsibilities (both to vaccinate and communicate risks associated with HPV). We suggest that HPV vaccination discourse constitutes a particular form of medicalization that takes the young female body and her nascent sexuality as its primary object and target. This configuration of medicalization does not demarcate a new category of sexual abnormality that can be treated with pharmaceutical or medical intervention, as is the case with FSD. Rather, discourses on HPV vaccination position the emergence of sexuality as the basis of pathologization by designating the onset of sexual relations as a time when sexuality must be considered and negotiated in terms of future disease.

Our interpretations are supported by those of Mamo et al. (2010), who found similar trends in industry-sponsored advertising for Gardasil and HPV awareness campaigns in the United States. In addition, our analysis considers how constructions of nascent female sexuality as risky and in need of protection are perpetuated in mass media and public health information in the Canadian context. We do not claim to provide a comprehensive account of the specific issues addressed in our media sample. Our analysis is limited to the time period of our sampling frame, which primarily focuses on the time around the approval of Gardasil for girls and young women and the development of the HPV vaccination programs in 2006 and 2007. Further research should examine how the approval of the vaccine for boys, young men, and older women alters reporting on HPV and shapes media constructions of sexuality and responsibility for sexual health.

We are not contesting the clearly established epidemiological link between certain types of HPV infection and risk for cervical cancer. However, we question the ways in which the marketing of products, such as HPV vaccines, that purport to help girls and women manage their health-related risks rely on and perpetuate longstanding pathologized representations of female bodies and sexuality (Morgan, 1998). Such representations not only justify the need for such technologies, but also invoke particular responsibilities to manage these "risky" bodies. More specifically, we question how the framing of nascent female sexuality as risky legitimizes some actions (vaccinating) over others (not vaccinating). This has implications not only for individual vaccination decisions, but also for establishing new requirements and standards for responsible parenting and citizenship.

Furthermore, the imperative expressed by media messages for parents to participate in the proliferation of awareness about HPV and HPV vaccination raises important questions about the insidious ways in which responsibilities for sexual health and cancer prevention are shaped in relation to economically driven, biotechnological solutions to sexually transmitted health risks. Our concern is not that parents are encouraged to discuss matters of sexual health with their children. The topic of HPV vaccination may be helpful to some parents who use it as a convenient entry point into broader discussions with their children about sexual health. However, the idea that HPVvaccination will have the effect of "opening" parent–child communication by making the topic of sex more palatable is an assumption that requires empirical investigation. The linking of

sexual health to cancer prevention undoubtedly alters the very nature of such discussions, and may narrow the range of issues addressed.

Our analysis challenges the ways in which HPV vaccination marks the time of one's entry into sexual relations as a medically mediated event. Vaccination may prove beneficial for some individuals and populations when implemented as part of comprehensive sexual health programs that include, among other things, well-established screening procedures, such as Pap smears. Nevertheless, pharmaceutical companies stand to gain from media representations, which tend to conflate the risk of HPV infection (which is spontaneously cleared in most cases) with the risk for cervical cancer. By linking the onset of sexual relations to risk for future cervical cancer, this form of neomedicalization is difficult to resist, not only for parents who might be judged as being irresponsible for not getting their children vaccinated, but also for researchers and activists who, in raising questions about HPV vaccination, may be charged with being anti-women's health.

We hope that our analysis will contribute to ongoing feminist efforts that aim to de-medicalize female sexuality and women's sexual health. As well, we hope to promote critical reflection among practitioners and researchers who have a vested interest in contributing to and complicating discourses on sexuality, sexual health, and sexually transmitted health risks. Our theoretical orientation and expertise do not lend themselves to offering concrete and prescriptive recommendations. However, we offer the following questions on the basis of our analysis to foster critical reflection and interdisciplinary dialogue. Although by no means an exhaustive list, we feel that such questions are important given the power of the pharmaceutical industry and the media to frame sexual health concerns and the very nature of female sexuality:

- How is the scope and character of sexual health and sexual health education shaped by pharmaceutical interests that expand their niche markets through the concept of risk?
- How will young women's first sexual experiences, and their imaginings of these experiences, come to be shaped by these pharmaceutical interventions that mark their sexuality as risky and frame sexual onset as a risk to their future health?
- What are the consequences of using new technologies, such as HPV vaccines, as opportunities to discuss sexual health? To what extent does framing communication about sexual health in terms of HPV vaccination and risk prevention truly "open" communication between parents and their children? How can the ubiquity of HPV provide a starting point for parents and practitioners to initiate broader discussions about sexual health that unsettle powerful discourses that tend to pathologize female sexuality?
- To the extent that processes of neomedicalization co-opt feminist critiques by appealing to notions of self-empowerment and choice, what does this mean for how young women develop autonomy in relation to health decision making and sexual expression?
- To what extent does framing cervical cancer prevention in terms of HPV vaccination obscure public awareness of the inequalities in cervical cancer morbidity and mortality and the need for policy responses to redress such inequalities? Will the benefits of HPV vaccines also be distributed differentially, along lines of class, race, gender, and so forth?
- To what extent have the political, economic, social, and cultural influences on prevailing understandings of sexual health been rendered invisible by processes of neomedicalization? What might we do to help make these forces once again visible and, thus, contestable?

These questions have implications that extend beyond the case of HPV vaccination. Such discussions are necessary to promote healthy skepticism and remain vigilant in our considerations of how to benefit from medical and technological advances without allowing powerful economic interests to dominate public discussions and representations of sexual health and sexuality. What is at stake is not only the commodification of women's health, but also the commodification of their intimacy: friends, family, and nascent sexuality and desire.

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