



Beliefs, behaviors and HPV vaccine: Correcting the myths and the misinformation[☆]

Gregory D. Zimet^{a,*}, Zeev Rosberger^{b,c}, William A. Fisher^d, Samara Perez^{b,c}, Nathan W. Stupiansky^a

^a Section of Adolescent Medicine, Department of Pediatrics, Indiana University School of Medicine, 410W. 10th St., HS1001, Indianapolis, IN 46260, USA

^b Louise Granofsky-Psychosocial Oncology Program and Lady Davis Institute for Medical Research, Jewish General Hospital, 4333 Cote Ste-Catherine Rd., Montréal, Québec, H3T1E4, Canada

^c Department of Psychology, McGill University, 1205 Dr. Penfield Avenue., Montreal, Quebec, H3A 1B1, Canada

^d Department of Psychology and Department of Obstetrics and Gynaecology, University of Western Ontario, Social Sciences Centre 7428, London, Ontario N6A 5C2, Canada

ARTICLE INFO

Available online 31 May 2013

Keywords:

Human papillomavirus vaccines

Attitude to health

Sexual behavior

Health communication

ABSTRACT

Objective: Human papillomavirus (HPV) vaccine uptake in many countries has been sub-optimal. We examine several issues associated with non-vaccination that have received particular attention, including fears about sexual risk compensation, concerns about vaccine safety, inadequate vaccination recommendations by health care providers (HCPs), and distrust due to the perceived “newness” of HPV vaccines.

Methods: Selective review of behavioral and social science literature on HPV vaccine attitudes and uptake.

Results: There is no evidence of post-vaccination sexual risk compensation, HPV vaccines are quite safe, and they can no longer be considered “new”. Nonetheless, research findings point to these issues and, most importantly, to the failure of HCPs to adequately recommend HPV vaccine as major drivers of non-vaccination.

Conclusion: Most fears related to HPV vaccine are more related to myth than reality. In the absence of major health policy initiatives, such as those implemented in Canada, the U.K., and Australia, a multi-level, multi-faceted approach will be required to achieve high rates of HPV vaccination. It will be essential to focus on the education of HCPs regarding indications for HPV vaccination and approaches to communicating most effectively with parents and patients about the safety and benefits of vaccination and the risks associated with non-vaccination.

© 2013 The Authors. Published by Elsevier Inc. All rights reserved.



Introduction

Human papillomavirus (HPV), a highly prevalent sexually transmitted infection (Dunne et al., 2007; Smith et al., 2011; Winer et al., 2008), has potentially serious health consequences in males and females, including anogenital and oropharyngeal cancers and genital warts (Chaturvedi, 2010; Giuliano et al., 2010; Parkin and Bray, 2006). HPV vaccination can be a very effective way to prevent infection; however vaccine uptake has been variable and suboptimal in most countries, with low levels of both initiation and completion of the three-dose series (Etter et al., 2012). A considerable amount of research has focused on identification of factors that influence HPV vaccine uptake (see recent reviews by: Etter et al., 2012; Fisher, 2012; Stupiansky et al., 2012). Some of the many factors associated with non-vaccination are information deficits and include lack of knowledge about HPV infection and vaccination and frank misinformation that is antagonistic to vaccine uptake (e.g., that HPV vaccine will provoke sexual disinhibition or that vaccines are unsafe, ineffective, and insufficiently studied). Other barriers to vaccination involve motivational obstacles,

such as negative attitudes about HPV vaccination (based on negative beliefs about the outcomes of vaccination, which are often the result of dissemination of inaccurate information from anti-vaccine groups) and lack of social support from significant others for vaccination (e.g., lack of health care provider (HCP) recommendation). Finally, logistical obstacles to HPV vaccination include the complexities of access to service, vaccine cost, and the requirement for multiple vaccine doses.

The intent of this paper is not to provide a comprehensive review of behavioral science research about HPV vaccination (for recent reviews of this literature, see, for example, Etter et al., 2012; Fisher, 2012; Stupiansky et al., 2012). Rather, it is to provide a targeted commentary that addresses a specific set of topics that we consider timely and important. We therefore critically examine several of the issues and misconceptions associated with HPV vaccine refusal/non-acceptance that have received particular attention in the research literature and popular media, including fears about risk compensation, concerns about vaccine safety, inadequate vaccination recommendations by HCPs, and distrust due to the perceived “newness”, as well as the perceived “stigma” of HPV vaccines.

Risk compensation

One of the presumed concerns about HPV vaccine is the fear that adolescents will respond to vaccination with sexual risk compensation (also referred to as sexual disinhibition), initiating sexual activity at a younger age and/or reducing self-protective sexual behaviors.

[☆] This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike License, which permits non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.

* Corresponding author. Fax: +1 317 274 0133.

E-mail address: gzimet@iu.edu (G.D. Zimet).

This issue has received considerable coverage in the U.S. and U.K. media (Abdelmutti and Hoffman-Goetz, 2010; Forster et al., 2010) and parental concern about disinhibition has been found to be associated with lower HPV vaccine acceptability (Zimet et al., 2008). However, post-licensure research has generally shown that fear about sexual disinhibition is not frequently endorsed by parents as a major reason for non-vaccination (Ogilvie et al., 2010; Schuler et al., 2011). In addition, several research studies have now been published that strongly suggest that risk compensation is not a post-vaccination problem (Bednarczyk et al., 2012; Cummings et al., 2012; Forster et al., 2012; Kahn et al., 2012; Liddon et al., 2012b; Mullins et al., 2012). One U.S. national cross-sectional study of 15–24 year old females found no evidence of sexual disinhibition in vaccinated compared to unvaccinated females (Liddon et al., 2012b). Another cross-sectional study of 13–21 year old females who had just received their first dose of vaccine found that a large majority of participants recognized the need for ongoing safer sexual behaviors post-vaccination (Mullins et al., 2012). Similar findings were reported in a study of 16–23 year old HIV-infected young women (Kahn et al., 2012). A longitudinal study in the U.K. surveyed 16–17 year old girls before and after HPV vaccine was offered (Forster et al., 2012). After adjusting for baseline characteristics, participants who received vaccine were not more likely to have initiated sexual intercourse at the time of the follow-up survey. Furthermore, among those who were sexually active, vaccination status was not predictive of frequency of condom use. Moreover, in a study of 14–17 year old girls that involved a comparison of 75 who were recruited after HPV vaccine licensure to 150 who were recruited prior to licensure, no difference was found in the rates of gonorrhea, chlamydia, and trichomonas infections (Cummings et al., 2012). The only difference in self-reported sexual behaviors was that the pre-licensure group had more instances of unprotected sexual intercourse than the post-licensure group, the opposite of what would have been predicted by risk-compensation theory. Finally, a very recent analysis of a large managed care data base found that vaccinated girls did not have higher subsequent scores on a sexual-risk composite measure that included rates of pregnancy, pregnancy testing, sexually transmitted infection testing or diagnosis, and contraceptive counseling (Bednarczyk et al., 2012). The findings presented above may reassure parents and providers who are reluctant to vaccinate due to concerns about risk compensation. However, as noted by Stupiansky and Zimet (2013), “... it is important to remember that risk compensation (real or imagined) is not a rationale for withholding vaccine. Instead, it is a rationale for ensuring adequate education both pre- and post-vaccination” (p. 262).

Safety issues

Underlying some parental HPV vaccine concerns (e.g., feeling that HPV vaccine is too new) are questions about vaccine safety (Fisher, 2012; Krawczyk et al., unpublished results). Fear-inducing news stories may have contributed to these concerns as they sometimes have misreported Vaccine Adverse Event Reporting System data, incorrectly suggesting that HPV vaccination has often led to severe adverse health effects, including death (see, for example the August, 2007 edition of Maclean's magazine in Canada; Gulli, 2007). Numerous large-scale studies on HPV vaccine safety have been published and show little or no evidence of severe side-effects associated with vaccination (Agorastos et al., 2009; Chao et al., 2012; Gee et al., 2011; Klein et al., 2012; Lu et al., 2011). The most frequently reported side-effects are similar to those reported with other vaccines and are transient events, such as mild pain and bruising at the injection site, faintness, and syncope (Naleway et al., 2012). It is important to highlight that a reported adverse event after vaccination does not automatically mean that it was caused by the vaccine. A major challenge, however, is how to effectively communicate to parents the evidence that HPV vaccine is quite safe. As noted following, an

additional challenge involves communicating the very substantial risks of non-vaccination, in the context of generalized, relatively early, sexual debut, delayed marriage, serial monogamy, and the accumulation of risk of HPV infection over time.

Communication of safety data

Development of effective strategies for clearly and accurately communicating information about risk of vaccines has been an enduring focus of vaccine researchers (Ball et al., 1998; Betsch and Sachse, 2013; Davis et al., 2001; Offit and Coffin, 2003). Best practices in this regard may rest on the nature of the vaccine (routine versus elective), the controversies that may surround the vaccine (e.g., MMR and autism, HPV and risk compensation), and, importantly, whether parents or patients harbor ongoing concerns about HPV vaccine safety, actively ask about vaccine safety, or have no concerns in this area. Suggestions for communication about HPV vaccine safety include asking patients whether they have any questions about the vaccine and providing accurate information (including credible websites) that can address concerns about safety. Further, in discussions of vaccine safety, a useful approach may be to reframe non-vaccination as an active decision, comparable to vaccination, introducing the notion that there is risk associated with *not* receiving HPV vaccine. When presented side by side, the minimal risks associated with the decision to vaccinate may be completely over-shadowed by the health risks associated with the decision to not vaccinate, potentially aiding parents and young adults in making decisions about HPV vaccination. Communication concerning the high prevalence of HPV and the high likelihood of acquisition of the virus shortly after sexual debut also may be instrumental in conveying the risk of inaction as a counterpoint to discussion of risk of vaccination. As a note of caution, however, acknowledging the known minor risks associated with HPV vaccination (e.g., pain at the injection site, syncope, dizziness, mild fever) is very important. Recent research suggests that communicating that vaccination entails no risk may, paradoxically, lead patients to view vaccines as more risky (Betsch and Sachse, 2013).

HCPs' influence on HPV vaccine uptake

Particularly in the U.S., where HPV vaccination typically occurs in medical settings, the recommendation from a HCP plays a central role in the decision to receive HPV vaccine (Brewer et al., 2011; Guerry et al., 2011). A recent study of Canadian undergraduates showed similar results (Krawczyk et al., 2012). Conversely, among those who have not received HPV vaccine, the lack of HCP recommendation has been identified as a major reason for non-vaccination (Liddon et al., 2012a; Zimet et al., 2010). While HCPs generally embrace their important role in recommending the HPV vaccine, these recommendations may nevertheless be unevenly carried out due to such issues as time constraints, patient age, availability of insurance or other coverage, safety and/or efficacy concerns, and discussion of sexuality and information needs (Vadaparampil et al., 2011). Vaccine risk communication, in general, is a challenge to HCPs (Evans and Bostrom, 2002). Some providers feel that extensive discussion of risks and benefits of vaccines (including sexuality issues related to HPV transmission in particular) might alarm rather than reassure and may take up too much time. Many HCPs report feeling uncomfortable engaging in discussions regarding sexuality with their adolescent patients (Esposito et al., 2007; Schnatz et al., 2010), while others feel more comfortable discussing sexuality primarily with older adolescents or with males over females (Kahn et al., 2005; Ko et al., 2010).

One potential strategy for overcoming the problems associated with reliance on HCP recommendations would be to establish alternate venues for vaccination, such as schools or pharmacies. The success of school-based HPV vaccination policies, for example, is

Download English Version:

<https://daneshyari.com/en/article/6047425>

Download Persian Version:

<https://daneshyari.com/article/6047425>

[Daneshyari.com](https://daneshyari.com)