HPV Vaccine Implementation in STD Clinics—STD Surveillance Network

Elissa Meites, MD, MPH, Eloisa Llata, MD,* Susan Hariri, PhD,* Jonathan Zenilman, MD,† Lisa Longfellow, MPH,‡ Jane Schwebke, MD,§ Irina Tabidze, MD, MPH,¶ Christie Mettenbrink, MSPH,‖ Heidi Jenkins, BS,** Sarah Guerry, MD,†† Preeti Pathela, DrPH,‡‡ Lenore Asbel, MD,§§ Jeffrey A. Stover, MPH,¶¶‖‖ Kyle Bernstein, PhD, ScM,*** Roxanne P. Kerani, PhD,††† Eileen F. Dunne, MD, MPH,* and Lauri E. Markowitz, MD**

Abstract: We surveyed selected public sexually transmitted disease clinics in the United States regarding human papillomavirus vaccine availability, target populations, funding sources, and barriers. Although nearly all had experience offering other vaccines, only 7 of 42 clinics (17%) offered human papillomavirus vaccine. Vaccine cost, staff time, and follow-up issues were commonly reported barriers.

Human papillomavirus (HPV), the most common sexually transmitted infection in the United States, can cause warts and certain types of cancers.[1,2] Approximately, 340,000 people every year learn they have genital warts,[3] a common diagnosis in sexually transmitted disease (STD) clinics.[4] In addition, about 12,000 women are diagnosed with cervical cancer,[5] and >4000 men and women learn they have anal cancer every year.[6] Since 2006, when vaccines against HPV were first licensed in this country, a large proportion of these HPV-related diseases have been considered preventable.[7]

A quadrivalent vaccine is effective against HPV types 6, 11, 16, and 18, whereas a bivalent vaccine is effective against HPV types 16 and 18.[7] Both vaccines are given as a 3-dose series. Although both vaccines are licensed for use in females for the prevention of cervical cancer, only the quadrivalent vaccine has been licensed for use in males, and its labeled indications also include prevention of anal cancer and genital warts.[8] In June 2006, the Advisory Committee on Immunization Practices (ACIP) made a routine recommendation for either HPV vaccine for females who are 11 or 12 years of age (or as young as 9 years of age), with catch-up vaccination through age 26 years.[7] In October 2009, ACIP provided additional guidance stating that quadrivalent HPV vaccine can be given to males in the same age range to prevent genital warts.[8] As of 2010, in the United States, overall coverage rates with 1 dose or 3 doses of HPV vaccine were 49% and 32%, respectively, among adolescent females aged 13 through 17 years; corresponding coverage rates among males were <2%.[9] To date, HPV vaccine distribution has occurred mainly through primary care providers.[10]

Although HPV vaccine is known to be most effective when administered before sexual debut, administration in STD clinics may improve vaccine uptake and disease prevention, especially among young people who may be at increased risk of HPV-related disease due to sexual exposures. Many STD clinics already offer vaccines such as hepatitis B vaccine, based on a specific recommendation from the Centers for Disease Control and Prevention (CDC) to do so.[11,12] However, there is currently no national guidance around HPV vaccination in STD clinic settings, due to the lack of published data on the programmatic requirements, effectiveness, and cost-effectiveness of administering HPV vaccine in STD clinic settings.[12] Our objective was to assess current HPV vaccine practices and barriers to implementation among STD clinics in the United States.

We conducted a survey at all 42 STD clinics participating in the CDC STD Surveillance Network (SSuN). Established by CDC in 2005, SSuN is a sentinel surveillance system comprising local, enhanced STD surveillance systems that follow common protocols. Its purpose is to improve the capacity of national, state, and local STD programs to detect, monitor, and respond rapidly to trends in STDs through enhanced collection, reporting, analysis, visualization, and interpretation of clinical, behavioral, and geographic information obtained from individuals diagnosed with STDs.[13] The 42 clinics are all publicly funded urban STD clinics located in 11 geographically diverse states.

A survey was distributed electronically to SSuN collaborators during January 2011. Survey questions assessed HPV vaccine availability, target populations, funding sources, and barriers. Responses were tabulated and descriptive frequencies were calculated at CDC.

From the *Division of STD Prevention, CDC, Atlanta, GA; †Johns Hopkins University School of Medicine, Baltimore, MD; ‡Louisiana Department of Health and Hospitals, Baton Rouge, LA; §University of Alabama at Birmingham, Birmingham, AL; ¶Chicago Department of Public Health, Chicago, IL; ‖Denver Public Health Department, Denver, CO; **Connecticut Department of Public Health, Hartford, CT; ††Los Angeles County Department of Public Health, Los Angeles, CA; ‡‡New York City Department of Health and Mental Hygiene, New York, NY; §§Philadelphia Department of Public Health, Philadelphia, PA; ¶¶Virginia Department of Health, Richmond, VA; ‖‖Virginia Commonwealth University, Richmond, VA; ***San Francisco Department of Public Health, San Francisco, CA; and †††Public Health, Seattle and King County, Seattle, WA

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Correspondence: Elissa Meites, MD, MPH, Division of STD Prevention, CDC, 1600 Clifton Road NE, MS E-02, Atlanta, GA 30333. E-mail: emeites@cdc.gov.

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We received completed surveys from representatives at 42 STD clinics, with a response rate of 100%. The median reported number of annual visits at each clinic was 6111 (range, 862–27,205), and the median reported number of unique patients per clinic was 3816 (range, 642–21,186) in the past year. Overall, 40 clinics (95%) offered any vaccine, most commonly hepatitis B vaccine at 40 clinics (95%), hepatitis A vaccine at 37 clinics (88%), and influenza vaccine at 8 clinics (19%). Also, 2 clinics offered pneumococcal vaccine and 1 offered all recommended vaccines for children and adolescents.

Regarding HPV vaccine availability, a total of 7 clinics (17%) were currently offering HPV vaccine, at a median of 201 doses (range, 10–1614 doses) per clinic per year. All 7 clinics offered the quadrivalent vaccine. Among the 35 STD clinics that did not offer HPV vaccine, staff at 22 clinics (63%) routinely referred elsewhere for HPV vaccination and at 13 clinics (37%) did not refer. All clinics offering HPV vaccine also offered at least one other type of vaccine.

As for target populations, 6 clinics offered HPV vaccine to both females and males, whereas 1 provided vaccine only to females. The earliest that HPV vaccine was offered to females was April 2007, whereas for males the earliest was January 2010. In addition, 2 clinics specifically offered HPV vaccine to men who have sex with men. In response to questions of consent, the routine at 6 clinics was to vaccinate only patients over the legal age of consent (which varied according to clinic location), whereas the policy at the other clinic was to obtain parental consent for patients <18 years of age. One clinic representative reported that HPV vaccine was never offered to patients aged <18 years because of consent requirements, whereas another clinic representative reported that HPV vaccine was never offered to patients aged >18 years because of funding limitations. No clinics offered HPV vaccine to adults >26 years of age. However, all 7 clinics did provide HPV vaccine to any person eligible for vaccine that could be paid for by a federal program.

The main source of funding for HPV vaccine was reportedly at least one type of federal grant (e.g., funding from the Vaccines for Children program, Section 317 vaccine purchase funding) at 6 clinics, and the remaining clinic representative was unsure. In addition, 1 clinic had received a donation of vaccine from the manufacturer. All 7 clinics offered HPV vaccine at no cost to patients.

Clinic representatives reported all applicable barriers to offering HPV vaccine. The most common barrier to offering HPV vaccine was vaccine cost, reported at 23 clinics (55%) overall. Among the 35 clinics not currently offering vaccine, barriers to offering any HPV vaccine included cost for 20 clinics (57%), staff time for 18 clinics (51%), and follow-up issues (difficulty coordinating additional visits at appropriate time intervals in order to deliver the full 3-dose series) for 15 clinics (43%). Less common barriers included vaccine supply and consent issues, each reported at 3 clinics. Lack of interest was not reported as a barrier among these clinics (Fig. 1). Similarly, among the 7 clinics currently offering vaccine, common barriers to offering more HPV vaccine included follow-up issues for 4 clinics, and cost for 3 clinics. Less common barriers were staff time and lack of interest, each reported at 1 clinic.

Of clinics offering HPV vaccine, 4 clinics used a paper-based reminder system to notify patients that they should receive their second or third doses of HPV vaccine, even if they missed an appointment, whereas 3 clinics had no such reminder system.

In summary, nearly all STD clinics in this survey had experience offering vaccines, yet HPV vaccine was being offered at relatively few STD clinics. Federal grants were the most common source of funding to support offering HPV vaccine at no cost to patients at these clinics, who are considered at high risk for sexually transmitted infections. Vaccine cost was seen as a major barrier to expanding HPV vaccine programs, but lack of interest was not. The dates of first HPV vaccine introduction for both female and male patients followed national recommendations.

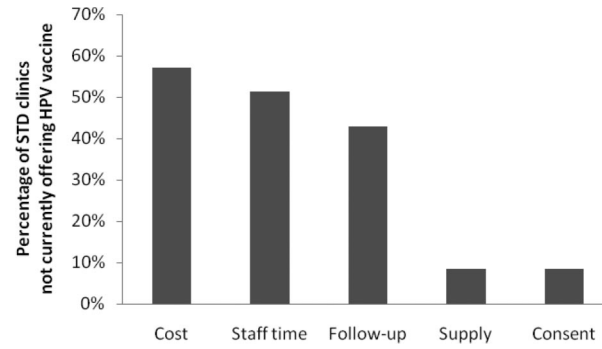

Figure 1. Reported barriers to offering HPV vaccine, among 35 STD clinics not currently offering HPV vaccine—STD Surveillance Network, 2010. Percentages total more than 100% because of multiple responses.

As with many other STD prevention activities, barriers to effective HPV vaccine delivery, such as cost, staff time, and follow-up, are challenging issues. Other prevention programs in STD clinics, such as those involving hepatitis B vaccine, have successfully addressed similar issues after implementation in order to increase vaccine coverage over time.[14] Various federal programs do exist to alleviate the cost burden of the HPV vaccine at the clinic level, and some programs, such as the Vaccines for Children program, may be underused.[15] Of note, at least one study has suggested that a savings in staff time at STD clinics would result if HPV vaccine were more widely administered, due to a decrease in patients visiting for HPV-related concerns such as genital warts.[4]

This analysis was subject to at least 2 important limitations. First, each clinic survey was completed by a single representative and could have contained inaccuracies. Also, STD clinics participating in SSuN are a convenience sample that might not be representative of all clinics where STD treatment is offered, and thus could overestimate or underestimate HPV vaccine availability at such clinics in general.

While various studies have measured HPV infections among patients visiting STD clinics, future research assessing current and past HPV exposure by using both HPV DNA and serologic test results could provide more useful information on the potential benefit of HPV vaccine for this population. In addition, evaluations of feasibility of administering HPV vaccine (including cost, staff time, and follow-up requirements) are needed in this setting. Based on evidence of benefits and feasibility, national guidance could be helpful to provide direction about HPV vaccination in the STD clinic setting.

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