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Original article

Parents'/guardians' willingness to vaccinate their children against genital herpes

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Abstract

Purpose: To describe parents' acceptance of a hypothetical herpes simplex virus type 2 (HSV-2) vaccine, attitudes toward vaccine legislation, beliefs regarding appropriate timing of vaccination and correlates of vaccine acceptance.

Methods: A telephone survey of 315 parents/guardians in the Southeast United States. Descriptive statistics describe the sample's overall attitudes toward HSV-2 vaccination, vaccine legislation, and age preferences. A logistic regression model tested the correlates of intention to vaccinate their children against HSV-2.

Results: A majority of parents (69%) said they would have their children vaccinated. Nearly one-third (29.3%) thought genital herpes vaccination should take place between the ages of 11 and 13 years. Logistic regression revealed that females, single parents, parents whose children had influenza shots, those with more favorable attitudes to vaccination in general, and those who believed sexually transmitted disease (STD) vaccines would be beneficial were more likely to state they would vaccinate their children.

Conclusions: Overall, a large proportion of parents indicated they would accept HSV-2 vaccination for their children. These results help identify those parents who may or may not be open to vaccinating their children against HSV-2 and inform future interventions to encourage HSV-2 vaccination. This research highlights the need for interventions that differentially target those who would and would not be likely to support vaccination of their children. Results also indicate that many parents believe vaccination should be given after an age when many adolescents have initiated sexual activity. Interventions to promote STD vaccines should not only encourage vaccination, but should also seek to change parental attitudes about optimal timing of the vaccination.

Keywords: STD vaccines; HSV-2; Parents

Herpes simplex virus type 2 (HSV-2) is the most frequent cause of genital herpes [1] and has significantly increased in prevalence over the last 25 years [2]. Genital herpes carries an array of negative health consequences, including increased risk for acquiring and transmitting human immunodeficiency virus (HIV) [3,4], psychosocial morbidity [5,6], and neonatal infections [7,8], resulting in a high mortality rate and incidence of neurological sequalae among survivors [9]. This study describes acceptance of a hypothetical HSV-2 vaccine, currently under development and anticipated to one day affect disease transmission.

Because public control of HSV-2 is hindered by the high

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rate of undiagnosed infection and asymptomatic shedding, an efficacious prophylactic vaccine may be a more effective prevention strategy than anti-viral therapy or behavior modification, including condom use. Recent prophylactic HSV-2 vaccine efficacy trials show protection among young, unexposed women [10–13], and mathematical models suggest that widespread and universal implementation of an effective vaccine could significantly affect the HSV epidemic and ultimately reduce health care costs [14]. Even imperfect vaccines would have both significant population and individual level impact [15], and widespread uptake of a vaccine could prevent up to 90% of neonatal herpes cases [11].

Ideally, HSV-2 vaccination efforts would target populations before the onset of exposure, when risk of contraction is high, making adolescents and preadolescents prime candidates for vaccination programs [11,16–19]. Recent studies show high HSV-2 seroprevalence rates among adolescents [2,20] as well as attack rates comparable to those of high-risk adult women [21]. Because sexually active adolescent females are at increased risk of both pregnancy and an HSV-2 episode, they may be at greater risk for neonatal herpes. Administering HSV-2 vaccination to adolescents after sexual initiation and exposure may be too late.

Additionally, because the principal vaccine being tested appears efficacious only for HSV-1 seronegative individuals [11], vaccination efforts need to target individuals without HSV-1 infections to be maximally effective. Many HSV-1 infections are acquired early in adolescence [21].

Strategies for vaccination of these age groups should involve attention to the beliefs and actions of parents, who strongly influence adolescent beliefs about health care and are primary decision-makers for their children's vaccinations. Little research has assessed parental views of and intentions relating to sexually transmitted disease (STD) vaccines. Mays et al [16] found that most parents believe decisions about STD vaccination fall within their role as a parent. Even if STD vaccination is seen as an adolescent's choice, studies show that young people are more likely to accept hepatitis B vaccination if they perceive it as important to their parents [22], and to accept a hypothetical HSV-2 vaccination if they thought their parents would encourage it [18].

Several studies suggest that parents of adolescents generally find STD vaccines, including HSV-2 vaccines, acceptable [13,16–18,23]. These have shown vaccine acceptance relates to concepts identified in behavioral psychosocial theories, such as perceived risk and severity of an STD, as well as other vaccine factors such as cost, efficacy, and schedule. One study showed that parents were more likely to accept vaccine for a disease for which there was no behavioral intervention [23]. However, these findings primarily result from studies of parents accompanying adolescents to medical appointments and, although useful, don't inform research about a general parent population, including those less active in their children's health care.

This study reports findings from a sample of parents or guardians of children under the age of 18 years who participated in a random-digit-dialed telephone survey of households in the Southeastern United States. The first goal is to describe overall acceptance of a hypothetical HSV-2 vaccination, and attitudes toward legislation and appropriate timing. The second goal is to identify correlates of accepting an HSV-2 vaccination by parents, from their reports of demographic variables, STD history, attitudes to vaccinations in general, children's vaccination history, and expected consequences of the availability of STD vaccines.

Methods

The protocol for this study was approved by the Institutional Review Board of the University of Alabama at Birmingham.

Participants

Trained interviewers contacted a sample of households in five Southern states (Alabama, Georgia, Florida, Louisiana, and Mississippi) by telephone during the summer of 1998, using a random-digit-dialing (RDD) method. Randomly selected adults were interviewed about health topics, including general physical and mental health, health-related behaviors like cigarette and alcohol use, nutrition, and attitudes toward hypothetical HSV-2 vaccination for their children. Calls were made on weekday evenings and weekends from a telephone survey research center on the University of Alabama at Birmingham (UAB) campus, a public, urban university. The research protocol and informed consent were reviewed and approved by the institutional review board at UAB.

Interviewers identified the health survey as funded by the university's School of Medicine. Selected phone numbers were dialed no more than three times per work shift and during at least four different shifts to increase possibility of contact. If no contact was made or if confirmation of a nonresidential or nonworking number was not established after 12 total attempts, the phone number was considered a "no contact." Within the households contacted, individuals over the age of 18 who lived there full time were selected randomly for interview, using the Last Birthday Method. Sampled individuals not immediately available for interview were scheduled for a return call. Individuals who initially refused were contacted once more by a survey center supervisor and asked again to participate.

Overall, 2409 telephone numbers were dialed. Of these, 789 were known to be ineligible (businesses or disconnected lines), and the eligibility of another 150 was unknown ("no contact"). Of the 1470 eligible households, 476 (32%) individuals refused or started the survey and broke it off quickly, and 124 (8%) could not be conducted because