

High Stakes

The sexually transmitted human papillomavirus (HPV) is the leading cause of cervical cancer, as well as a source of some head and neck cancers. In 2003, an approved three-series vaccine was recommended for adolescent girls, and a recent study led by Amanda Dempsey, M.D., assistant professor of pediatrics and communicable diseases, assessed vaccination rates at U-M clinics in southeastern Michigan. Dempsey serves as a consultant to Merck on male HPV vaccination.

Q: Your study found HPV vaccination rates to be low among adolescent girls — about 15 percent — as did a national study in 2007. Why is the rate so low when the stakes are so high?

A: With any new vaccine there's a curve of usage, but the HPV vaccine has some aspects that make people a bit more reluctant. That it's a vaccine against an STD causes some parents concern that they may be sending mixed messages to their children about their beliefs on sexuality and morality. Some parents feel the vaccine isn't necessary for various reasons. And as more vaccines are introduced, the public is seeing fewer diseases because vaccines are so successful, so there's a lack of connection with the continuing importance of high vaccination rates.

Q: What effect could high vaccination rates have on cervical cancer?

A: Time is the only way we'll know for sure, but mathematical models predict that, assuming vaccine uptake among adolescents between 70 and 100 percent, cervical cancer rates would decrease by about 70 percent because we believe that about 70 percent of cervical cancers are caused by the types of HPV the vaccine protects against.

Q: How many types of HPV are there, and how many does the vaccine protect against?

A: There are more than 100 types of HPV. Approximately 25 types are associated with cervical cancer; this vaccine protects against two of the cervical cancer-causing types. There's some evidence of partial cross-connectivity with one or two other types, so at most we're talking about four cancer-associated HPV types. Manufacturers are working on a vaccine against nine types, and future iterations might protect against even more. It's not a panacea, but getting the vaccine is certainly a good way to dramatically reduce your risk of developing cervical and other cancers.

Q: What is the efficacy of the HPV vaccine?

A: That's a big question, and one we can't answer until enough time has gone by. At this point the vaccine has maintained very high efficacy over a period of six-and-one-half years.

Q: How prevalent is HPV?

A: Estimates are that at least 80 percent of sexually active adults acquire at least one HPV infection by age 50.

Q: Universal vaccination is recommended for girls ages 11-12, yet you found that vaccination rates in this age group are significantly lower than with girls 13 and older. Why is that?

A: Parents question the duration of immunity and possible need for repeated vaccination in the future. They see age 11 as too early. We target 11- to 12-year-olds because we want to reach the population before virtually any of them are sexually active. I think parents underestimate the risk because they don't see their 11- to 12-year-old as an adolescent yet, so sex isn't really on the radar.

Q: Will HPV links to head and neck cancer in men and women help the vaccine to catch on more quickly?

A: That, combined with males now being eligible for the vaccine. As more data show the impact HPV infection has on a variety of cancers — not just among women, not just cervical cancer — it provides more compelling evidence that the vaccine is important. My hope is that in the future we can say this is a vaccine against a variety of cancers and it's important for everyone to get.

Interview by Rick Krupinski

[MORE ON THE WEB](#) ✦

