

# Human papillomavirus types do not replace others after large-scale vaccination

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Vaccines against human papillomavirus (HPV) are now recommended by the Centers for Disease Control and Prevention for both teenage boys and girls. The vaccine protects against the two most common types of the virus that cause cervical cancer: HPV 16 and 18. Is there a chance that the increased number of people vaccinated might result in an increase of other types of HPV that cause cancer?

A UNC-led international team of scientists studied this question in a group of 2228 Kenyan men as a "nested" trial in a larger trial. Their first paper in the [Journal of Infectious Diseases](#) showed that little evidence exists for potential [HPV](#) type competition in a cross-sectional study. Viral type competition occurs when different types of a particular virus compete for dominance.

Their new work is reported in the June 18, 2012 early online issue of the *Journal of Infectious Diseases*. Using prospective data, their study presents the first epidemiological data in men on the type-specific associations between prevalent [HPV infections](#) and future acquisition of other HPV types.

Jennifer Smith, PhD, MPH, study senior author explains, "We found no evidence for competition between different HPV types over time in high-risk men from Kenya. While these data are based only on non-vaccinated men, our findings are of potential importance because they suggest that HPV types are generally acting independently from one another, and thus it is unlikely that HPV type-replacement will occur

following large scale vaccination programs of young male adolescents."

Dr. Smith is an associate professor of epidemiology in the UNC Gillings School of Global Public Health and a member of UNC Lineberger Comprehensive Cancer Center.

With the recent approval of prophylactic HPV vaccination of young men, data are needed to understand if patterns of HPV acquisition differ among men with specific HPV type infections as compared to [men](#) without these HPV infections. The effect of current vaccine-relevant HPV infections on the subsequent acquisition of different HPV types could impact the long-term potential for HPV type replacement following population-based HPV vaccination.

Provided by University of North Carolina Health Care

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