Racial Differences in Type-Specific Human Papillomavirus Epidemiology in Young Women

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Background
Two licensed vaccines prevent HPV 16 and 18, the types that cause approximately 70% of cervical cancers. Recent reports have suggested that cervical precancers may be less likely to be caused by HPV 16 or 18 in Black vs. White women, raising concern that vaccine effectiveness may differ by race.

Aims
To examine racial and ethnic disparities in HPV16/18 infection among young women.

Methods
Sexually experienced women 13-26 years of age enrolled in 4 studies completed self-administered surveys and underwent HPV testing using a cervicovaginal swab. HPV DNA testing was performed using the Roche Linear Array test, which identifies 37 HPV types. Data from young women who had not received an HPV vaccine (N=841) were pooled for analysis. Descriptive analyses were performed to define overall and type-specific HPV prevalence, and univariable analyses (chi-square and Wilcoxon rank-sum) to examine whether race, ethnicity, and other factors were associated with HPV16/18.

Results
The mean age of participants was 19.3 years, 64.4% were Black, and 8.9% were Hispanic. Among all women, $\geq$ 1 HPV type was detected in 73.0% of Black, 62.5% of White, and 63.0% of other women (p = .007), and in 69.9% of Hispanic and 68.7% of non-Hispanic women (p = .83). HPV16/18 was detected in 22.1% of Black, 18.8% of White, and 21.9% of other women (p=.55), and in 17.8% of Hispanic and 21.1% of non-Hispanic women (p=.51). Among HPV-infected women, HPV16/18 was detected in 30.3% of Black, 30.0% of White, and 34.8% of other women (p=.81), and in 25.5% of Hispanic and 30.7% of non-Hispanic women (p=.44) Among all participants, factors significantly associated with HPV16/18 included number of male sex partners in the past 3 months (p = .01) and condom use in the past 3 months (p = .038).

Conclusion
Although Black women had higher rates of HPV overall, the prevalence of HPV 16/18 did not differ by race or ethnicity among all women and among HPV-infected women, providing reassurance that vaccination efficacy may not differ by race or ethnicity.

Acknowledgements
R01-AI073713-01 (Kahn, PI), R01-AI104709 (Kahn, PI) and Medical Student Summer Research Program Training Grant T35DK060444 (Heubi, PI).