

Education, Marital Status, and Insurance: Influences on HPV Testing Rates in the National Health

Interview Survey

College of Human Medicine
MICHIGAN STATE UNIVERSITY

Lanah Almatroud M3; Tylar Dickson M2; Sabrina Ford PhD

Introduction

- With recent changes to cervical cancer screening guidelines integrating HPV and Pap tests, our study explored the influence of socioeconomic factors—education, marital status, and insurance status—on self-reported HPV testing rates
- Cervical Cancer is a highly preventable disease primarily due to early detection through consistent screening which is critical to cervical cancer prevention.
- USPSTF Guidelines: Recommendations now integrate HPV testing with or without Pap testing, emphasizing HPV as a primary screening tool.
- Rates for cervical cancer screening (CCS), including Pap and HPV tests, have been **declining** over the past five years in the U.S., particularly in underserved populations.

METHODS

Data Source

- *National Health Interview Survey* (NHIS), a nationally representative survey of health-related outcomes
- Includes self-reported data on health behaviors, medical conditions, and demographic information

We used **IPUMS** clearinghouse to access NHIS data from 2019-2023

Selected Socioeconomic Variables

- **Education Level:** Categorized into five groups: Less than high school, High school/GED, Some college, College graduate, Post-graduate
- **Insurance Status:** Two categories: Insured and Uninsured
- **Marital status:** married, separated/divorced, never married

Outcome Variables

- Have you **ever** had a test to check for cervical cancer?
- When did you have your **MOST RECENT** test to check for cervical cancer?
- At your **MOST RECENT** cervical cancer screening, did a doctor or other health professional tell you which type of test or tests you received?

RESULTS

In 2019, college-aged women had the highest HPV testing rate at 48.1% ($p < 0.001$), followed by post-graduate (46.9%), some college (45.5%), high school/GED (40.2%), and less than high school (38.6%). By 2021, post-graduate women had the highest rate of HPV testing ($p < 0.001$), with rates across other education levels remaining the same: less than high school (38.6%), high school/GED (40.2%), some college (45.5%), and post-graduate (46.9%). In both 2019 and 2021, “never married” women had the highest rate at 54.3% ($p < 0.001$). Additionally, uninsured women had lower HPV testing rates compared to insured women in both years. Full analyses will be discussed.

Conclusion

Our findings highlight the need for customized education and communication strategies targeting both patients and providers, particularly individuals with lower education levels and lower health literacy, to ensure clear and effective messaging regarding recommendations and guidelines for Pap and HPV testing.

REFERENCES

1. Kessler TA. Cervical cancer: prevention and early detection. *Seminars in Oncology Nursing*. 2017;33(2):172-183. doi:10.1016/j.soncn.2017.02.005
2. Lynn A. Blewett, Julia A. Rivera Drew, Miriam L. King, Kari C.W. Williams, Daniel Backman, Annie Chen, and Stephanie Richards. IPUMS Health Surveys: National Health Interview Survey, Version 7.4 [dataset]. Minneapolis, MN: IPUMS, 2024. <https://doi.org/10.18128/D070.V7.4>
3. Bentz, J. S. (2005). Liquid-based cytology for cervical cancer screening. *Expert Review of Molecular Diagnostics*, 5(6), 857–871. <https://doi.org/10.1586/14737159.5.6.857>

