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HPV Self-Collection for Cervical Cancer Screening—There's No Place Like Home

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Despite the existence of effective screening tests, about 11 500 people in the US are diagnosed with cervical cancer each year. More than half of these individuals had never been screened or had only been screened infrequently.[1] These concerning statistics reflect multifactorial barriers to office-based cervical cancer screening. For one, such screening historically has been performed via pelvic examination, which may provoke discomfort or shame, or may be culturally unacceptable for some individuals. The examination may be particularly distressing for those with a history of sexual trauma, who are less likely to be up to date in cervical cancer screening,[2] or for people who identify as transgender or nonbinary. Beyond the pelvic examination, attending an office visit for screening may be difficult for some due to conflicting work or childcare responsibilities, cost of travel, limited access to care, or the lack of sufficient trained clinicians in many parts of the country.

Related article page 1119

In this issue of *JAMA Internal Medicine*, Montealegre and colleagues[3] advance the literature on a promising alternative to office-based screening—home human papillomavirus (HPV) testing—that may address these barriers. The authors found that compared with invitations to in-office visits, mailing self-collection kits more than doubled the rate of cervical cancer screening in participants in an urban safety-net health system who were overdue for screening.

Home-based HPV self-collection for cervical cancer screening is possible because of a recent shift toward primary HPV testing as the optimal method of cervical cancer screening. The American Cancer Society released updated cervical cancer screening guidelines in 2020 that recommend primary HPV screening as the preferred option for adults aged 25 to 65 years, and 2018 guidance from the US Preventive Services Task Force (USPSTF) offered primary HPV screening as an acceptable option for women 30 years and older.[4] Unlike the Papanicolaou smear, HPV testing can be performed as a vaginal swab, obviating the requirement for a speculum pelvic examination with visualization of the cervix by a clinician. What is more, HPV testing need not be conducted by a clinician. Self-collected HPV samples have similar specificity and sensitivity to clinician-collected samples.[5]

To date, self-collected cervical cancer screening research, regulations, and guidelines have focused on self-sampling in the clinical setting, which allows women to collect a sample privately and without an invasive examination. In nearly all of 42 randomized clinical trials reviewed by the USPSTF in the draft cervical cancer screening guidance released in December 2024, offering self-collected vaginal HPV tests increased screening rates relative to usual care.[6] In May 2024, the US Food and Drug Administration expanded the approvals of 2 tests that detect HPV to be used in a health care setting.[7] Self-collection of HPV samples is supported by many clinicians, patient organizations, and policymakers, and is included in the World Health Organization's global strategy to eliminate cervical cancer by 2030. The draft 2024 USPSTF cervical cancer screening guidance now includes self-collection as an option.[6]

However, it is unclear if self-collection needs to be performed in a clinical setting. As Monteleagre et al[3] demonstrate, home-based HPV screening may go even further to break down screening barriers—and disparities in such barriers—by obviating the logistics and resources required for an office visit. Their empirical trial of home self-collection demonstrates that people can adequately obtain usable samples in the privacy of their homes, as only 6% of samples were deemed inadequate for evaluation. More than 90% of the study partici-

pants were from racial and ethnic minoritized populations, and most were covered by the county's publicly funded financial assistance program, speaking to the potential role that home-based testing could play in reducing racial and economic disparities. These disparities are seen in the lower screening rates in Black women,[8] higher cervical cancer incidence in Black and Hispanic women, and higher cervical cancer mortality in Black women than in non-Hispanic White women in the US.[9] Home-based testing may also benefit women in rural or underserved regions, where there may be limited access to clinicians trained to perform pelvic examinations.

Fortunately, options for cervical cancer screening are expanding. On May 9, 2025, the US Food and Drug Administration approved a home HPV self-collection kit, which will become available for clinical use within the next few months. Home-based HPV testing now represents an implementation challenge, to ensure it can be adopted into clinical use in a safe and effective manner. In particular, it is unclear how clinicians and health systems can best deliver timely follow-up testing and treatment of abnormal results. Moreover, addressing implementation barriers in vulnerable populations, including older women and women with disabilities, will be important. Further research should also evaluate whether higher home self-collected HPV screening rates can translate into higher rates of treatment of precancerous lesions and, eventually, into lower rates of cervical cancer. Importantly, improvements in screening rates should be accompanied by continued efforts to optimize HPV vaccination rates. In the meantime, the National Cancer Institute's Last Mile Initiative is supporting efforts to broaden home-based self-collection of HPV through coordinating a nationwide US study, disseminating evidence, and informing regulatory discussions on self-collection.[10] By addressing both psychological and logistical barriers to screening, home self-collection has the potential to meaningfully reduce cervical cancer burden, especially among underserved populations.

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