

Mailed HPV Tests Help Identify Women at Risk for Cervical Cancer

Pam Harrison

November 13, 2018

Test results from self-collected vaginal swab kits sent to women at home can help identify virtually everyone with high-risk human papillomavirus (HPV) oncogenic types, thus helping bolster cervical cancer screening rates in women overdue for screening, an observational "proof-in-principle" study suggests.

"We found in this sample [that] all of the women who had high-grade lesions had HPV-positive home self-collection results [so] we didn't miss any of those high-grade cases by conducting home self-collection," Jennifer Smith, PhD, MPH, senior author, University of North Carolina (UNC) Lineberger Comprehensive Cancer Center, Chapel Hill, said in a statement by her institution.

"And this is a demonstration that mailing self-collection kits and returning them to test for high-risk HPV infection has big potential to increase screening access among under-screened women, and to do that successfully," she added.

The study was published online November 5 in *Obstetrics & Gynecology*.

Three Samples Compared

The "My Body, My Test" study found that vaginal samples collected by women themselves at home and returned by mail was a feasible approach and was well-accepted by under-screened women in North Carolina.

For this portion of the study, 193 women who had not undergone Pap (smear) testing in the past 4 years and who were uninsured, underinsured, or who had Medicaid insurance were eligible to participate. The median age of the group was 45 years and median time since a previous Pap test was 5 years.

Women were asked to provide three genital samples: a cervicovaginal sample collected by themselves by brush at home and returned by mail (self-home sample); a cervicovaginal sample again collected by themselves but this time at a clinic and handed to a nurse (self-clinic sample); and a cervical sample collected by a clinician during a pelvic examination (clinician sample).

Results showed that the prevalence of high-risk HPV types detected in the self-home samples, at 12.4%, was not different from that detected in self-clinic samples, at 15.5%, nor in clinician samples, at 11.4%, the study authors report.

The investigators also found that the overall prevalence of atypical squamous cells of undetermined significance, or worse, was 7.8% in the study population as a whole, and the prevalence of high-grade squamous intraepithelial lesions (HSIL) was 1.6%. For cervical intraepithelial dysplasia (CIN) grade 2 or worse, the prevalence was 3.2%, again in the overall study group.

"Positivity for high-risk HPV in all sample types increased with increasing grades of cervical abnormality ($P < .001$)," the investigators state.

For example, some 24 samples taken at home by women themselves were high-risk HPV-positive.

Among these samples, the prevalence of abnormal cytology was 37.5%, and the prevalence of HSIL in the same samples was 12.5%.

This compared with only 3.6% and 0%, respectively, in home samples that were negative for high-risk HPV, as the authors observe.

Moreover, "all identified cases of HSIL and CIN grade 2 or worse tested high-risk HPV-positive by self-home samples," the authors observe.

Rates of sensitivity and specificity for both HSIL and CIN 2 or worse on home samples were also very high, and sensitivity and specificity rates were at least as good in samples taken at the clinic by the women themselves or clinicians.

Over 90% of participants also said they did not find it hard to follow the self-collection instructions, and nearly all indicated they would be willing to do the procedure again.

Potential to Reach Underserved Women, Who Are Dying Unnecessarily

"HPV tests are being widely used now in the United States but only through physician collection in clinical practice which requires that women come to a clinic," first author Andrea Des Marais, MPH, project manager with the UNC Gillings School of Global Public Health, Chapel Hill, said in the press statement.

"Offering HPV testing using self-collection by mail has a lot of potential to reach women who are the highest risk of [not] being screened: those who don't [have] access to regular medical care," she emphasized.

Smith noted that women are dying unnecessarily of cervical cancer either because they have not received the HPV vaccine in adolescence or they are not getting screened according to recommended guidelines. The American Cancer Society estimates that more than 4100 women will die from cervical cancer in the United States this year.

Nearly 20% of women in the United States who are eligible for cervical cancer screening report that they haven't been tested for cervical cancer within the recommended time interval, national surveys have shown.

Increasing screening rates among under-screened women is therefore "of paramount importance," Smith emphasized.

She added that there is more work to be done, such as identifying ways to make the self-collection process more efficient and cost-effective, and getting approval by the US Food and Drug Administration for the clinical use of self-collection for cervical cancer screening.

"This is a proof-in-principle study that we used to determine whether home self-collection is highly effective for detecting high-grade disease," she noted.

"We are already working on the next step, which is a clinical trial in which women who aren't up to date on screening get either a referral to a free clinic appointment to receive a screening or receive a self-collection kit in the mail, followed by referral to a free clinic appointment. This will allow us to determine the effect that self-collection has on screening uptake."

Smith has reported receiving research funding and has served as a paid speaker for Arbor Vita, BD Diagnostics, Hologic, Rovers Medical Devices, and Trovogene. Des Marais has reported receiving travel expenses from Hologic.

Obstet Gynecol. Published online November 5, 2018. [Abstract](#)

For more news, join us on [Twitter](#) and [Facebook](#)

Medscape Medical News © 2018

Cite this article: Mailed HPV Tests Help Identify Women at Risk for Cervical Cancer - *Medscape* - Nov 13, 2018.