Women can self-test for HPV, easily and accurately

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A team of German researchers has shown that women can accurately test themselves for human papillomavirus (HPV) infection, the most common cause of cervical cancer. The research is published in the October *Journal of Clinical Microbiology*.

The high sensitivity of this self-sampling method guarantees to identify nearly all HPV-infected women," says first author Yvonne Delere, of the Robert Koch Institute of the Ministry of Health, Berlin.

Worldwide, cervical cancer is the second most common cancer in women, with half a million new cases and a quarter million deaths, annually, according to the World Health Organization. Virtually all cases are linked to certain strains HPV.

In the study, the researchers compared self sampling with conventional endocervical brush samples obtained by gynecologists in two groups of women 20-30 years of age, with (55 women) and without (101 women) a recent suspicious cytological smear. The two sampling methods were in accord in the two groups 84 and 91 percent of the time, respectively. Overall, the women rated the self-sampling method easy, at 12 on a scale of 0 (easy) to 100 (difficult).

The Netherlands has already introduced the new technique into cervical cancer screening programs, and Delere hopes to see the method become widespread in developing countries, where women frequently lack easy access to medical personnel and testing.

The researchers note that concordance between the conventional and the self-sampling methods is good despite the fact that the techniques sample different areas. The cervical brush sampling is directed towards the transformation zone, the area on the cervix where abnormal cells most commonly develop, while the lavage includes the whole cervical area.

“The higher prevalence of HPV, hr-HPV, and HPV16 in cervicovaginal lavage samples may be explained by additional infections at extracervical sites,” according to the paper. “Since these infections may be a reservoir for virus infecting the cervical epithelium at the transformational zone, they are probably epidemiologically relevant. Therefore, cervicovaginal lavage sampling may be superior to cervix-directed sampling for future HPV prevalence studies.”

Among teenaged girls, the transformation zone lies on the cervix’s outer surface, where it is more vulnerable to infection than it is in adult women.

The self-sampling device, the Delphi Screener, is a sterile, syringe-like device containing five milliliters of buffered saline. One operates it by plunging the handle, releasing the saline into the vagina, holding it down for five seconds, then releasing the handle, so that the device retrieves the fluid. Next, one plunges the lavage specimens into prelabeled coded tubes, and mails it to the laboratory.

More information: Y. Delere, et al., 2011. Cervicovaginal self-sampling is a reliable method for determination of prevalence of human papillomavirus genotypes in women aged 20 to 30 years. *J. Clin. Microbiol.* 49:3519-3522.