Vaginal self-swabs for chlamydia and gonorrhea

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Clinical question
What is the most sensitive way to test for chlamydia and gonorrhea?

Bottom line
Self-collected vaginal swabs (SCVS) appear to be more sensitive for diagnosing chlamydia and gonorrhea than health-professional–collected endocervical swabs and first-catch urine (FCU) are. Endocervical swabs and FCU testing might miss up to 10% of sexually transmitted infections in women. When pelvic examination is not required, SCVS is recommended in women.

Evidence
Two studies compared SCVS with endocervical swabs:
• One study followed 3973 women (with and without symptoms) in a sexual health centre who had SCVS followed by a physician-performed endocervical swab1:
  -Sensitivity was statistically significantly increased with SCVS (97% vs 88%), and endocervical swabs missed 1 in 11 cases of chlamydia.
• Endocervical swabs and SCVS had similar sensitivities (96% and 99%, respectively) for gonorrhea.2

Endocervical swabs or FCU were compared with SCVS3-5:
• Symptomatic and asymptomatic women (N=1464) at primary or secondary care clinics had SCVS, physician-collected vaginal swabs, or endocervical swabs and FCU.3
  -Physician swabs and SCVS had similar sensitivities (>95%) for gonorrhea and chlamydia.
  -Compared with FCU, SCVS identified statistically significantly more patients with chlamydia (196 vs 171).3
• Of 318 women (172 with chlamydia), FCU had statistically significantly lower sensitivity (88%) compared with endocervical swabs and SCVS (about 97%).4
• In 1001 women (73 with chlamydia), endocervical swabs were statistically significantly more sensitive (99%) than FCU (85%), and SCVS (95%) was not different from either.5

A systematic review (21 studies) reported no difference in sensitivity in FCU (87%) versus SCVS (92%).5
• A limitation was that they were compared with endocervical specimens, which are not 100% sensitive.6

Context
• There is no criterion standard for chlamydia and gonorrhea detection, which limits evaluation of new tests.7
• Combination swap specificities in the above studies were consistently 99% to 100%.1-3
• Patients find SCVS “easy” to perform (88%) and prefer home completion.8
• Patients randomized to home testing are twice as likely to complete the test (about 50% vs 27%).9
• Guidelines recommend SCVS when a pelvic examination is not otherwise indicated.10

Implementation
The swab kit for endocervical chlamydia and gonorrhea testing should be used to collect specimens. Not all laboratories in Canada have validated SCVS tests; however, many will still process them. Specimens can be stored at room temperature and must be processed within 60 days of collection. There is no standard technique for collecting SCVS.6 Various durations of swab contact and numbers of swab rotations are used. The manufacturer instructions indicate contact with the vaginal wall should be upward of 30 seconds.11 Patient instructions are available online.12

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Competing interests
None declared

The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

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