

Public Health

Rapid HIV testing

Epidemiology

Rapid HIV test kits are now available in Canada.¹ Their use is currently restricted to “point-of-care” sites — testing sites where appropriate HIV counselling is available. The kits are designed to screen for the presence of

HIV-1 and HIV-2 antibodies in a sample of whole blood, using an enzyme immunoassay. Results are produced within 15 minutes, which means that a person can learn of his or her HIV status during a single visit.

All rapid-test kits approved by Health Canada must meet performance standards for sensitivity of at least 99.0% and a specificity of at least 99.5%. These are the same standards set for HIV screening tests used in approved laboratories.

The rapid test provides a reliable negative test result that permits the health care professional to complete HIV testing and counselling during a single visit. False-positive results will occur with rapid HIV tests, particularly among patients from populations with a low rate of HIV infection. In cases of positive or equivocal screening results, a venous blood sample must be sent to an approved laboratory for confirmatory testing (such as the Western blot). The time for results of confirmatory testing varies by laboratory but is between 3 and 14 days.

Clinical management

Typically, capillary blood is collected using a pipette. The blood is incubated in the testing device for a specified period (usually several minutes), after which a precise amount of buffer is added. The mixture is then incubated again for several minutes. If HIV antibodies are present in the patient's blood in sufficient concentrations, a colour reaction occurs along a test strip. Several of these steps are time-sensitive and must be adhered to for accurate results.

As with all HIV testing, the use of rapid HIV test kits requires the specific, informed consent of the person being tested. Given the rapidity of results and the possibility of false-positive outcomes, counselling must be provided for those receiving point-of-care testing. Health Canada has produced a guide for health care professionals that shows how to administer the test and counsel.¹

Pretest counselling must include informing patients of the possibility of false-positive results and should stress the importance of confirmatory testing of all equivocal or positive results and advise patients of the cost of point-of-care testing, such as the purchase price of a test kit. Post-test counselling after a positive or equivocal result should include the provision of support and follow-up during the interval required to complete confirmatory testing.

Prevention

HIV infection is reportable under public health legislation in Canada. Health care professionals are required to report identified cases of HIV infection to the public health system to maintain accurate HIV epidemiologic information and to assist in contact tracing. In the event that a patient does not complete confirmatory testing, the health care professional should seek advice from a public health official on reporting requirements. HIV testing may not be reliable in patients who are in the HIV “window period” during seroconversion. Patients who have engaged in risk activity in the 3 to 6 months before testing should be counselled on the need for appropriate repeat testing.

The faster results and simpler testing technology make it easier to reach high-risk, hard-to-reach populations, such as intravenous drug users who may not use health care services regularly. Despite these benefits, concerns have been raised about the potential for harm.² Ease of testing might lead to people being tested without their voluntary, specific, informed consent. Prospective situations where this might happen include the testing of pregnant women in labour, the testing of patients before medical care is provided and the testing of patients to avoid the necessity of postexposure prophylaxis. — *Erica Weir, CMAJ*

References

1. Point-of-care HIV testing using simple/rapid HIV test kits: guide for health-care professions. CDR 2000;26(07). Available: www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/00vol26/index.html (accessed 2000 May 1).
2. Canadian AIDS Society and the Canadian HIV/AIDS Legal Network. *Rapid Testing for HIV: What are the Issues?* Ottawa: The Society; 1999. Available: www.aidslaw.ca/elements/Testing/rapidtest.html (accessed 2000 May 1).

