Uncovering HIV by looking for indicator conditions

In Canada and some other high-income countries, researchers estimate that a large proportion of HIV-positive people are not aware of their infection status. The Public Health Agency of Canada estimates this figure at 25%. Researchers from the Netherlands have made a similar estimate for their country.

This lack of awareness of one’s HIV status poses at least two issues, as follows:

- People may not take steps to prevent the spread of HIV.
- The immune system degrades without treatment. This can result in the development of serious illness, including AIDS-related infections and cancers that can greatly weaken a person and in some cases lead to death.

Research with people who have been diagnosed late in the course of HIV disease has revealed that for several years prior to their HIV diagnosis there were opportunities for HIV testing that were missed. For instance, these people had visited doctors in family practice units, community clinics or the emergency department of hospitals. During such visits HIV testing was not discussed or offered.

If progress is to be made by uncovering undiagnosed HIV infection, opportunities for HIV testing need to be made more available.

Indicator conditions

In high-income countries, people generally seek care for non-life-threatening conditions from doctors and nurses who specialize in primary care or family medicine. During the early years of undiagnosed HIV infection people can develop conditions that are generally not life threatening but have become highly associated with underlying HIV infection. These conditions—infections and complications—are called indicator diseases or indicator conditions (a list of these appears later in this report).

In Amsterdam

Researchers in Amsterdam have been studying people whose HIV infection was once undiagnosed. This means that once this population tests positive, some researchers in that city have access to medical records and databases that have collected health-related information over several years. By doing so, researchers are able to examine the medical histories of people before they became aware that they had HIV. By looking at a person’s medical history, researchers found that people who were diagnosed late in the course of HIV were much more likely to have an indicator condition than people who remained HIV negative in the same community over the same period.

The Dutch research has revealed that there are likely opportunities in primary care clinics where family doctors and nurses can help uncover HIV with the offer of HIV testing and counselling.

Study details

Researchers in Amsterdam extracted health-related information from medical databases in that city. They focused on adults and used data from 102 HIV-positive and 299 HIV-negative people (the latter group acted as a control or comparison group).

Indicator conditions sought by the researchers from medical records included the following:

General sexually transmitted infections

- Chlamydia
- gonorrhea
• syphilis
• hepatitis B
• genital herpes
• LGV (lymphogranuloma venereum)
• genital warts
• trichomoniasis (caused by a parasite)

Other infections or complications

• acute hepatitis A or C viral infection
• shingles
• severe or unusual forms of psoriasis
• seborrheic dermatitis
• abnormal growths on the cervix
• community-acquired pneumonia
• oral yeast infections
• nerve injury that can cause weakness, intermittent sensation, numbness, tingling
• symptoms of a mononucleosis-like illness (suggestive of a viral infection) that included at least two of the following symptoms—rash, fever, swollen lymph nodes; with or without muscle pain, sore throat and feeling unwell
• fever
• unintentional weight loss
• persistently swollen lymph nodes

Blood tests

• persistently decreased levels of white blood cells
• less-than-normal levels of platelets
• chronic kidney dysfunction or injury

Results—Visits to a family doctor

In the year prior to testing positive for HIV, the majority of people (62%) visited a family doctor an average of three times. Among people who tested HIV negative, 39% visited their family doctor on three occasions during the same period.

Furthermore, at such visits people who subsequently tested HIV positive were more likely to have lab tests done on their blood (39%) compared to HIV-negative people (19%).

Indicator conditions prior to an HIV diagnosis

Five years prior to an HIV diagnosis, researchers found that nearly 60% of people had been diagnosed with one or more indicator condition compared to only 7% of people who remained HIV negative.

During the five-year period, common indicator conditions that occurred in people included the following:

• syphilis
• Chlamydia
• pneumonia
• mononucleosis-like illness
• shingles

During the same period, common HIV-related symptoms that doctors recorded were as follows:

• unintentional weight loss
• persistently swollen lymph nodes

Taking many factors into account, the indicator conditions most strongly associated with a subsequent diagnosis of
HIV were as follows:

- unintentional weight loss
- persistently swollen lymph nodes
- syphilis
- gonorrhea
- nerve injury

**Key findings**

One year prior to their HIV diagnosis, most patients with HIV in this study had seen a doctor. However, HIV testing was not discussed during that appointment.

Five years prior to their HIV diagnosis, more than half of the patients in this study had a condition suggestive of either underlying HIV infection or a high risk for HIV infection.

**Bear in mind**

Several years ago, Danish researchers conducted a much larger study with 2,000 people subsequently diagnosed with HIV and 35,000 people who did not have this infection. The Danish researchers made similar findings to the Dutch study. Furthermore, the Danes flagged the use of opioids and/or the diagnosis of addiction as conditions that should prompt doctors and nurses to offer HIV testing.

The results of both studies underscore the importance of making an offer of an HIV test to patients who are seeking care and who have indicator conditions.

—Sean R. Hosein

**REFERENCES:**


Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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