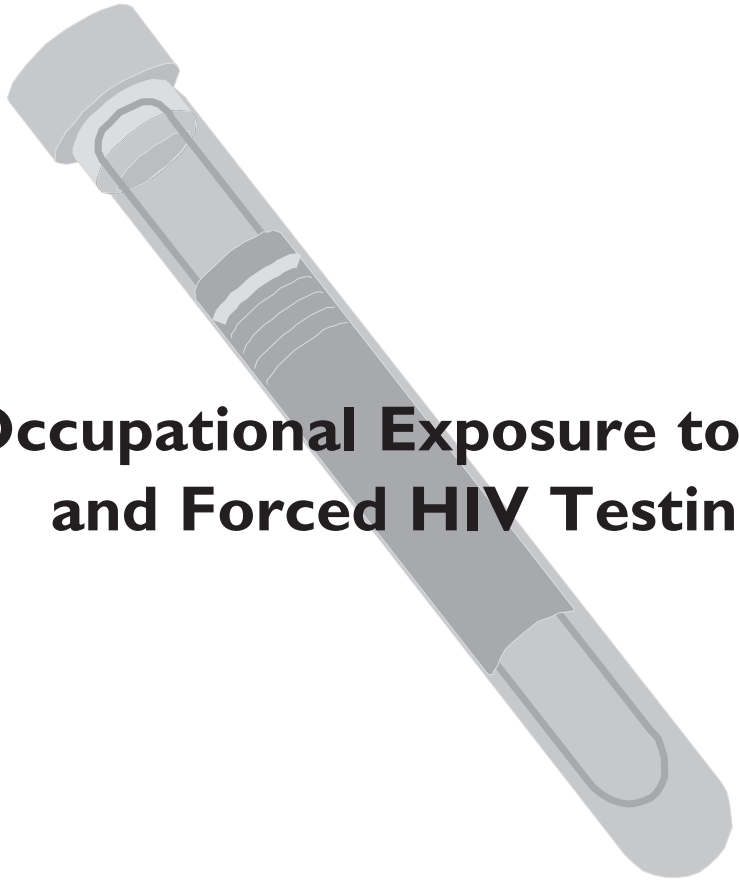

Occupational Exposure to HIV and Forced HIV Testing:

Questions and Answers

Canadian Strategy on HIV/AIDS

CANADIAN HIV•AIDS LEGAL NETWORK | RÉSEAU JURIDIQUE CANADIEN VIH•SIDA

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The opinions expressed in this document are those of its author and do not necessarily reflect the views or policies of the Minister of Health or the Canadian HIV/AIDS Legal Network.

Ce document est également disponsible en français.

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Questions and Answers

Introduction

When a health-care worker, firefighter, or police officer has been exposed to a person's body fluids while helping that person, it may be necessary to ask the source person to agree to be tested for HIV and to release the results of the test to the exposed worker.

In most cases the source person agrees to be tested, but sometimes the source person refuses. Recently there have been calls for laws that would force the source person to be tested. One province, Ontario, has passed legislation (Bill 105) that authorizes a Medical Officer of Health to order a source person to be tested for communicable diseases in the event of an occupational exposure.

Those who support forced testing of source persons argue that the exposed worker has a right to know whether the source person is infected with a communicable disease. They believe that this information will help the exposed worker deal with anxiety and stress after an exposure, and that it will save the exposed worker from unnecessary treatment, precautions, and inconvenience.

But testing the source person – whether forced or voluntary – cannot always provide the information an exposed worker might like to have. And forcing a person to be tested is a major violation of important constitutional rights and rules of professional ethics.

These questions and answers explain how forced HIV testing is a serious violation of constitutional rights and rules of professional ethics. They also provide information about occupational exposure to HIV, about how information about the source person can – ***and cannot*** – help the exposed worker, and about better ways to respond to occupational exposure to HIV.

Further information

For a more complete overview of occupational exposure and blood testing, see *Testing of Persons Believed to Be the Source of an Occupational Exposure to HBV, HCV, or HIV: A Backgrounder*. Montréal: Canadian HIV/AIDS Legal Network, 2001. The Backgrounder and a series of info sheets on the same subject can be retrieved at the website of the Canadian HIV/AIDS Legal Network at www.aidslaw.ca/Maincontent/issues/testing.htm, or ordered through the Canadian HIV/AIDS Clearinghouse at tel 613 725-3434, fax 613 725-1205, email aidssida@cpha.ca. The info sheet on "Readings and Resources" provides references to further information on managing occupational exposure, HIV testing, the positions of professional associations on forced blood testing, and selected scientific literature.

For a complete review of the management of occupational exposures and the relevant scientific and medical literature, see US Department of Health and Human Services. Updated US Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis. *Morbidity and Mortality Weekly Report* 2001; 50(RR-11). The Guidelines are available online (www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm).

Questions and Answers

Forced HIV Testing and the Rights of Canadians

Does forced HIV testing violate the rights of Canadians?

Yes. Forced HIV testing would violate their right to bodily integrity (by inserting a needle and extracting their blood without their consent) and their right to privacy (by analyzing their blood and distributing the results without their consent).

How important is the right to bodily integrity?

The right to bodily integrity is one of the most cherished values in Canada. It is protected by section 7 of the *Canadian Charter of Rights and Freedoms*, criminal and civil law, and rules of professional ethics governing health-care providers. Forced HIV testing would constitute assault under the *Criminal Code*, battery in civil law, and a breach of professional ethics.

The Supreme Court of Canada has consistently interpreted section 7 of the Charter, which guarantees the right to "security of person," to protect a person's body from the state. According to the Court, "a violation of the sanctity of a person's body is much more serious than that of his office or even of his home" (*R* v *Stillman*).[1]

Are there circumstances in which violation of bodily integrity is permitted under Canadian law?

In order to justify violating a person's bodily integrity by taking bodily samples without their consent, there has to be a compelling objective and evidence that forced testing is necessary to achieve that objective. This is why Canadian law only allows forced testing in circumstances where there are reasonable grounds to believe that the person to be tested has committed criminal activity, such as blood testing of persons suspected of drunk driving and DNA testing of persons suspected of certain very serious criminal offences.

How is accidental occupational exposure different from circumstances in which forced testing may be permitted?

It is not a crime for a person to need the services of a health-care provider, firefighter, police officer, or some other emergency worker. It is not a crime if, while someone is receiving assistance and care, the professional attending them is accidentally exposed to their body fluids.

The health-care professions recognize that even though they may be accidentally exposed to body fluids when caring for someone, this does not entitle them to force the person to be tested and disclose personal medical information.

How important is the right to privacy?

According to the Supreme Court of Canada, privacy lies at the heart of liberty in the modern state (*R* v *Dyment*).[2] Privacy is protected by sections 7 and 8 of the *Canadian Charter of Rights and Freedoms*, by federal and provincial privacy statutes, by civil law, and by rules of professional ethics.

The Privacy Commissioner of Canada has stated that "compulsory blood testing, and compulsory disclosure of the results of blood testing, is a massive violation of privacy and the personal autonomy that flows from privacy."[3]

Are limits on the right to privacy permitted under Canadian law?

Yes, but in an important case (*R* v *Oakes*) the Supreme Court has ruled that measures limiting a Charter right (such as the right to privacy) must meet four tests:[4]

First, there must be some important objective in limiting a person's right to privacy. It must address a concern so serious that it could warrant overriding the right to privacy, a right so highly valued in a free and democratic society that it is in our constitution.

Second, limiting a person's right to privacy must somehow help achieve that important objective.

Third, there must be no alternative way of achieving the important objective that is less invasive of a person's privacy.

Finally, the greater the harm to a person's privacy, the more important the objective must be if the limit on constitutional rights is to be justified.

Does forced HIV testing after an occupational exposure meet the four tests required of measures limiting our right to privacy?

No. According to the Privacy Commissioner of Canada, forced HIV testing after an occupational exposure does not meet these tests.[5]

It is not ***necessary***. The risk of HIV transmission from an occupational exposure is very low, and most people agree to be tested when asked after an occupational exposure.

It is not ***effective***. If there is a risk of HIV infection based on the nature of the exposure, the worker should take preventive treatment within one or two hours. It could take days or weeks for the process of forced testing to be completed.

It is not ***proportional***. Forced HIV testing after an accident is a massive invasion of privacy, whereas the average risk of transmission of HIV from an occupational exposure to

body fluids is very low. (On average, the risk of contracting HIV after an exposure to HIV-infected blood through a needle stick or cut is estimated to be 0.3 percent or 1 in 300. In other words, 99.7 percent of such exposures to HIV-infected blood would not result in infection. In other circumstances, the risk of infection is estimated to be even lower.)

There are ***available alternatives***. According to Canadian Medical Association and the Canadian Nurses Association – professions that have the greatest rates of occupational exposure to body fluids – procedures to prevent exposures, voluntary HIV testing with appropriate counselling and consent, and procedures to respond quickly and effectively to exposures are the best way to deal with accidental exposures to body fluids.[6]

But forced HIV testing is only a matter of taking some blood and testing it for infection. What harm could come of that?

First, the process by which people would be forced to be tested is not a private, confidential process. It could involve court hearings that are open to the public, and their identity could be made known to the public. Information and testimony about them and any possible risk factors (such as drug use or sexual practices) that would justify forced HIV testing would become public. Even if they are not tested, or if the results of the forced test are negative, people may assume that they have an infectious disease, and they could still face discrimination because they have used drugs or because of their sexual practices.

Second, when people are forced to be tested and the results of the test are provided to an exposed worker, they lose control over personal medical information. There is no effective way to prevent the exposed worker from telling other people about the results of the blood test. It would be reasonable to assume that the exposed worker would want to tell their family and some co-workers about the results. Once the information is released, it is very difficult to control who may learn about the results, especially through the "grapevine."

Third, the fact that a person has been tested for an infectious disease – even if they do not have any disease – can cause harm. Insurance companies have denied people insurance based on the fact that they have been tested for HIV – even though the results of the test were negative.

Why is privacy and confidentiality of medical information so important for people with HIV?

People with HIV often experience discrimination when their HIV status becomes public knowledge. A major HIV legal clinic in Canada gets several calls a month from people who have lost their jobs, been evicted from their apartments, or are forced to move to a different city or town because their HIV status has become known. People with HIV in other parts of Canada report similar experiences.

An ongoing study of discrimination against people with HIV in the United States has found that many people (almost half of those surveyed) still have inaccurate beliefs about the risk of HIV transmission through casual social contact with people with HIV (there is no risk, but people believe there is). Many people (almost a third of those surveyed) also continue to feel discomfort about being around people with HIV or have negative feelings toward them.[7]

Do all the affected occupations support forced HIV testing?

No. The Canadian Medical Association, the Canadian Nurses Association, the Canadian Association of Nurses in AIDS Care, the Canadian Public Health Association, and the Canadian Union of Public Employees (whose members include people in health-care or health-related occupations) do not support forced HIV testing.[8] According to them, forced HIV testing is unethical, unjustified, and ineffective.

It is ***unethical*** because it breaches the ethical rule of obtaining a person's informed consent for any medical procedure that happens to them.

It is ***unjustified*** because the average risk of HIV transmission from an occupational exposure to body fluids is very low.

It is ***ineffective*** because current technology for HIV testing cannot determine with absolute certainty that a source person is not infected with HIV.

What guidance do codes of ethics governing health-care providers give with regard to forced blood testing?

Health-care providers are governed by codes of ethics that guide them in caring for patients and working with other providers. Forced blood testing would conflict with these codes of ethics. For example, the *Code of Ethics for Registered Nurses* is built on values that conflict with forced blood testing: helping clients to achieve health and well-being; respecting and promoting the autonomy of clients; advocating the dignity and self-respect of human beings; safeguarding the trust of clients with regard to the confidentiality of information about them; and assisting clients to receive unbiased treatment.[9]

According to these codes of ethics, patients retain their right to bodily integrity in all circumstances and must be asked to consent to all procedures, except in extraordinary situations when they are unable to make a decision (for example, if they are unconscious and need emergency medical care). And even in those extraordinary situations, procedures performed without their consent can only be done for their benefit (not someone else's benefit).

This important principle of requiring a person's informed consent before performing medical procedures is also recognized in the law, because of the importance we place on people's right to control what happens to their own bodies.

Rather than focusg on finding out whether a person receiving care may have an infectious disease, safety guidelines for health-care providers and other personnel stress the importance of using routine precautions and other measures (including regular education in using routine precautions) to prevent accidental exposure to body fluids.

Is there a potential that legislation permitting forced HIV testing could result in wrongful discrimination?

Yes. The British Columbia Civil Liberties Association has noted that the federal legislation that had been proposed to permit forced blood testing implicitly discriminated against certain groups of people affected by the infectious diseases specified in the legislation.[10] Diseases such as HIV, which are most prevalent among minorities such as gay men or people of African origin, were specified. Other infectious diseases, found throughout the Canadian population, were not specified. This could have resulted in wrongful discrimination on the basis of sexual orientation or race, which is prohibited by Canadian laws.

It is well known that injection drug use and unprotected sex are risk factors for HIV as well as other sexual diseases. It is very likely that legislation permitting forced blood testing would be used primarily in cases of exposures involving injection drug users or prostitutes.

Questions and Answers

Occupational Exposure to Body Fluids and Risk of HIV Infection

Does every kind of occupational exposure to body fluids pose a risk of HIV infection?

No. Some exposures do not pose a risk of infection. For example, there is no risk of infection if body fluid infected with HIV comes into contact with clothing. This is why health-care providers, emergency workers, and police use routine precautions (such as latex gloves, protective eyewear, or protective clothing) in circumstances that could involve exposure to body fluids.

What kinds of occupational exposure pose a risk of HIV infection?

There is only a risk of infection when a type of body fluid ***capable of transmitting HIV*** comes into contact with:[11]

- tissue under the skin (eg, through a needle stick or a cut);
- mucous membranes (eg, through a splash to the eyes, nose, or mouth);
- non-intact skin (eg, when the skin is chapped, scraped, or afflicted with dermatitis).

Such exposures are called "significant exposures," but even then the risk of transmission is still very low.

Contact with intact skin does not pose a risk of infection, but the larger the area of skin exposed and the longer the time of contact, the more important it is to verify that all the affected skin is intact.

Do all body fluids transmit HIV?

No. ***Only some body fluids are capable of transmitting HIV***. They include:[12]

- blood, serum, plasma, and all biologic fluids visibly contaminated with blood;
- laboratory specimens, samples, or cultures that contain concentrated HIV;
- organ and tissue transplants;
- pleural, amniotic, pericardial, peritoneal, synovial, and cerebrospinal fluids;
- uterine/vaginal secretions or semen; and
- saliva ***only if it is visibly contaminated with blood***.

HIV is not transmitted by feces, nasal secretions, sputum, tears, urine, and vomit unless they are visibly contaminated by blood.

What is the risk of infection from an occupational exposure to body fluid capable of transmitting HIV?

The risk of infection is very low.[13]

The average risk of HIV transmission after an exposure of HIV-infected blood to tissue under the skin (eg, through a needle stick or cut) has been estimated to be approximately 0.3 percent. In other words, 99.7 percent of such exposures to HIV-infected blood would not result in infection.

The average risk of HIV transmission after an exposure of HIV-infected blood to mucous membranes (eg., through a splash to the mouth, nose, or eyes) has been estimated to be approximately 0.1 percent. In other words, 99.9 percent of such exposures to HIV-infected blood do not result in infection.

The risk of HIV transmission after an exposure to non-intact skin is not known, but is estimated to be lower than the risk of HIV transmission after a splash to the mucous membranes.

It is important to note that these estimates apply to exposures to blood that is ***known*** to be infected with HIV. The estimates are lower when the exposure is to body fluids other than blood, or to body fluids from people whose HIV status is unknown.

Can the risk vary with the circumstances of the exposure?

Yes. For example, an exposure that involves more blood (such as when an emergency worker receives a deep cut involving blood from a source person, or when a health-care provider is using a hollow-bore needle to draw blood from a vein) carries a greater risk than an exposure that involves less blood. Similarly, an exposure to blood from a person who has a risk of HIV infection (such as anyone who has had unprotected sex with several people) is greater than an exposure to blood from a person who has no risk of HIV infection (such as someone who has not had sex or not had unprotected sex).

How many people in Canada have been infected with HIV as a result of an occupational exposure?

There has been only one definite case of occupational transmission, and two probable cases.[14]

The definite case was reported in 1995. A health-care worker, who was not wearing gloves, sustained a shallow puncture wound from a small-gauge needle. The worker believed

the injury to be minor and did not seek preventive treatment. The source person was in the late stage of AIDS, when body fluids have higher concentrations of HIV, presenting a higher risk of occupational transmission.

The two probable cases involved laboratory workers handling laboratory samples. The first case was that of a biochemist in Ontario who was diagnosed with AIDS in 1990 and whose only risk factor for HIV was work in the early 1980s with blood that was probably contaminated with HIV. The second case was that of a laboratory technician in Québec diagnosed with HIV infection in the early 1990s and whose only known risk factor was possible exposure to cultured virus during research activities. Although in both cases there were numerous instances where transmission could have occurred, in neither case was a specific incident identified.

There have been no documented cases of occupational transmission of HIV among firefighters, police, emergency workers, or people who have volunteered their help in an emergency (sometimes called "good Samaritans").

What to Do after Exposure

What should a worker who has been exposed to blood do?

The worker should immediately receive first aid:

- remove contaminated clothing;
- in the case of a needle stick or cut, encourage bleeding at the site of the injury, wash the injury with soap and water, and apply an antiseptic agent (if available) but do not apply corrosive agents such as concentrated bleach;
- flush splashes to the eyes, nose, or mouth with large amounts of water;
- in the case of splashes to the skin, wash the area well with soap and water (but not with corrosive agents such as concentrated bleach).

The worker should also immediately report the exposure and follow established procedures to assess the exposure and determine an appropriate course of action.[15] In the case of HIV, this begins with an expert medical assessment to determine if there was a risk of exposure to HIV and how great the risk was.

If there was no risk of infection, the worker should receive information, reassurance, and support, but no further medical treatment. The worker may be offered HIV testing if this will help reassure them that they have not been infected.

If there was a risk of infection, the worker should receive information and counselling about the degree of risk and about appropriate medical treatment. The worker should also receive information and counselling about being tested for HIV and about precautions to take until there is a definite negative test result. (It is very important that the worker be tested for HIV at the time of the exposure, six weeks after the exposure, three months after the exposure, and six months after the exposure. Many workers who have had an exposure do not in fact follow through with these tests.) And the worker should receive support in dealing with

the anxiety and stress of the exposure. If desired, this support should extend to the worker's family or intimates. (This is also very important, since exposed workers often report considerable anxiety and stress after an exposure, which extends to their family and intimates.)

Is treatment available to prevent HIV infection after an occupational exposure?

There is treatment to prevent HIV infection after an occupational exposure. This is often called "post-exposure prophylaxis"(or "PEP").

(There is also treatment to prevent infection with hepatitis B after an occupational exposure. At this time, there is no treatment to prevent infection with hepatitis C after an exposure.**)**

Should a worker who has been exposed to blood always receive drugs to prevent HIV infection?

No. The drugs used to prevent HIV infection after an exposure have many side effects. They should only be prescribed if the circumstances of the exposure warrant it.

If a worker is worried about HIV infection and would like to take the drugs even though there has been no risk of infection with HIV, should the drugs be prescribed?

No. There is no medical reason to take the drugs if there has been no risk of infection. The worker should be counselled and reassured about the fact that there has been no risk or that the risk is so small as to be negligible.

How effective are the drugs used to prevent HIV infection after an exposure?

It is not possible to conduct a research study to determine conclusively how effective HIV drugs are in preventing HIV infection after an occupational exposure. Because infection is so infrequent after an occupational exposure to HIV-infected blood, several thousands of exposed workers would have to be enrolled in the study to demonstrate the efficacy of the drugs to prevent infection.

However, indirect evidence suggests that treatment with HIV drugs can reduce the risk of infection by as much as 80 percent.[16]

How soon should the worker start taking the drugs if there has been an exposure of sufficient risk?

As soon as possible, preferably within one or two hours.

How long will the worker need to take the drugs?

For four weeks, provided the worker can tolerate the drugs.

How serious are the side effects associated with the drugs used to prevent HIV infection after an exposure?

Most workers who take drugs to prevent HIV infection report side effects. The most commonly reported symptoms are nausea, malaise or fatigue, headache, vomiting, and diarrhea.[17] These symptoms can often be managed with anti-nausea or anti-diarrhea medications, or by modifying the type or dose of HIV drugs. Most of the symptoms disappear after the worker stops taking the drugs, but they can cause a lot of discomfort while they last.

In a small number of cases workers who take drugs to prevent HIV infection have had serious, life-threatening side effects.[18] This is one of the reasons that these drug should not be prescribed unless there has been an exposure of sufficient risk.

If the risk of infection in an occupational exposure to HIV is so low, why is it necessary to take these drugs, to be tested for possible infection, and to take precautions when having sex?

Even though the risk is low, it is still possible to reduce the risk even further. Since there is no cure for HIV infection, it is worthwhile to take these steps to prevent infection.

Questions and Answers

HIV Tests: How Can They Help the Exposed Worker?

How can information from the source person help the exposed worker?

Information about the infectious status, risk factors, and medical history of the source person can relieve uncertainty as to whether there was in fact an exposure to an infectious agent, and can contribute to decisions about treatment, testing, and precautions for the exposed worker.[19]

How many source persons agree to be tested after a worker has been exposed to their body fluids?

Most source persons agree to be tested and permit relevant information to be provided to the exposed worker, when they are approached in a sensitive manner and the importance of the information is explained.[20]

A survey of selected hospitals across the country found that the number of times that patients refuse to be tested is very small, estimated to range from 0.2 to 0.5 percent.[21]

There are no data on the percentage of people who refuse in other settings. However, one of the few studies of occupational exposure among police officers, conducted in Denver, found that of 34 identified source persons, 32 (or 94 percent) agreed to be tested for HIV.[22]

What is the standard testing procedure for HIV?

The standard testing procedure for HIV consists of both a screening test and a confirmatory test for antibodies to the virus.[23]

If the result of the screening test is ***negative***, a confirmatory test is not required, but the person may have to be tested again later because of the "window period." (All viral infections begin with a "window period" in which the virus is present in the body but antibodies to the virus are not present in blood or cannot be detected with confidence by current technology.)

If the result of the screening test is ***positive***, a confirmatory test is required because some positive screening test results turn out to be false (the test result is positive but in fact the person is not infected).

Are there rapid screening tests for HIV?

Yes. These tests can produce results very quickly, from a few minutes to a few hours. In March 2000 Health Canada licensed the Fast-Check HIV 1/2 (serum) rapid test kit and the Fast-Check HIV 1/2 (whole blood) rapid test kit produced by BioChem ImmunoSystems for use in laboratories and by health-care providers. However, in April 2002 preliminary results of a study in British Columbia found that these tests produce false negative results. BioChem ImmunoSystems has stopped all sales of the test kits, and Health Canada has issued an advisory to Canadians.[24]

Public laboratories can speed up analysis of HIV tests in the event of an occupational exposure. It is important that procedures are in place to ensure that such faster analysis is provided where possible.

Should an exposed worker conclude that there has been no risk of infection if the source person has tested negative for HIV?

Not necessarily.

If the test results of the source person are negative ***and*** the source person does not have a history that includes risks for HIV infection, the exposed worker may be reasonably certain that there was no risk of infection.

If the test results of the source person are negative ***but*** the source person has a history that includes risks for HIV infection, the exposed worker cannot be certain that the source person was not infected. The source person may have been in the "window period." (All viral infections begin with a "window period" in which the virus is present in the body but antibodies to the virus are not present in blood or cannot be detected with confidence by current technology.)

Should an exposed worker conclude that they are HIV-positive if the source person is HIV-positive?

No. The vast majority of exposures to HIV-infected blood do not result in transmission of HIV infection. The only way a worker can know whether they have been infected is to be tested for HIV.

If there has been a significant exposure, the exposed worker should be tested for HIV at the time of the exposure, six weeks after the exposure, three months after the exposure, and six months after the exposure. In almost all cases, when a person has been infected with HIV, there is a definite diagnosis by six months. Usually there is a definite diagnosis sooner.

Why does it take so long to get a definite diagnosis?

Because of the "window period" it can take weeks or months for antibodies to the virus to appear in blood at levels that can be detected with confidence using current technology.

Are there tests that can detect HIV earlier than the standard screening tests?

Yes, but these tests cannot provide a definite diagnosis.

There are tests that detect the presence of particles of HIV in the blood (p24 antigen tests) and tests that detect the presence of genetic material (RNA or DNA) of HIV in the blood (nucleic acid tests).

HIV RNA can be detected as early as 11 days after infection, and HIV p24 antigen can be detected as early as 22 days after infection.[25] However, these tests cannot be relied upon for a definite diagnosis of HIV infection. There can be false negative results with HIV p24 antigen tests (the test result is negative but the person is in fact infected). And there can be false positive results with HIV RNA tests (the test result is positive but the person is in fact not infected).[26] Also, these tests are more expensive and are not always available everywhere in Canada.

Should an exposed worker wait to get the test results from the source person before beginning post-exposure treatment?

No. If the circumstances of the exposure are sufficient to warrant post-exposure treatment, the exposed worker should begin treatment as soon as possible, preferably within one or two hours.

If it turns out that the source person tests negative and has no risk factors, the exposed worker could decide to stop taking the drugs.

If the source person is HIV-positive, is there other information that can help the exposed worker?

Yes. If the source person agrees to provide it, information about the stage of their infection, the amount of virus in their blood, the HIV drugs they have been taking, and any resistance they have developed to these drugs can help the exposed worker and their physician in making decisions about treatment to prevent infection.[27]

What Should Be Done for Workers?

What can be done to protect workers from exposure to body fluids?

Employers must ensure that workers have the necessary equipment and training to protect themselves from exposure to body fluids. These include:[28]

- engineering controls (such as needles with safety features, containers for the disposal of sharp implements, gloves lined with kevlar for police searches, etc); and
- work-practice controls (such as immunization, routine precautions, techniques for disposing of needles, hands-free techniques in the operating room, techniques for police searches, etc).

It is very important that workers get regular and ongoing training and support in implementing these engineering and work-practice controls.

It is also important that employers address other workplace factors that increase the risk of exposures, such as fatigue due to long shifts.

Is there room for improvement in the use of routine precautions?

Yes. The Canadian Needle Stick Surveillance Network found that, of the 1436 exposures that were reported from 12 hospitals across Canada between April 2000 and March 2001, 45 percent of injuries to tissue under the skin may have been prevented by proper handling and disposal of used needles, and two-thirds of splashes to the mucous membranes may have been prevented by the use of protective eyewear or face shields.[29]

Will routine precautions prevent every possible exposure to body fluids?

No. Unfortunately, even with the best available equipment and training, there will be times when exposures still occur. In addition, in some circumstances, such as when health-care providers are dealing with a violent patient or when police are arresting a suspect, it may be difficult or impossible to use routine precautions.

What can be done for workers after an exposure to body fluids?

Employers and health authorities must ensure that systems are in place and that personnel are trained to respond quickly to an exposure. These include:

- an up-to-date protocol for responding to an exposure;
- well-informed and trained personnel designated to assess the exposure and liaise with medical specialists, public health officials, and other relevant service providers;
- quick access for the exposed worker to an infectious-disease specialist;
- expedited analysis for blood tests obtained from the source person and the exposed worker;
- emotional support and counselling for the exposed worker and, if desired, their family or intimates;
- workplace education about infectious diseases (means of transmission, risks of transmission, etc); and
- workplace programs to address stigma associated with occupational exposure and infectious diseases.

Is there room for improvement in post-exposure responses?

Yes. A recent study of British Columbia's post-exposure HIV treatment program found that 54 percent of people who received drugs to prevent transmission of HIV should not have received them if current guidelines had been followed.[30] This suggests that people are not receiving appropriate and expert information and counselling after exposures. As a result, they may suffer needless anxiety about the exposure, as well as needless side effects from the drugs.

How important is emotional support and counselling for the exposed worker?

It is very important. The Canadian Police Association has stated that most employees are reluctant to talk about the effects of an exposure – anxiety about possible infection, side effects of post-exposure drugs, strain on intimate relations – for themselves and their immediate family.[31] The same may be true in other settings as well.

Employers must create a workplace environment that is supportive of workers as they deal with the stresses associated with an exposure.

How important is workplace education about infectious diseases and stigma related to infectious diseases, especially HIV?

This is very important. Surveys of the general population show that many people have inaccurate beliefs about transmission of HIV and negative feelings toward people with HIV.[32] It is reasonable to assume that workers may also have such views. In this environment, an exposed worker has to deal not only with the risks associated with the exposure (which are very low), but also mistaken beliefs and negative feelings among co-workers, family, and friends (which, based on the results of surveys and the experience of people with HIV, are relatively widespread).

Why are these types of efforts more important than forced HIV testing?

Forced HIV testing does not address factors in the work environment that increase the risk of exposure, increases the stress associated with an exposure, and results in inadequate or inappropriate responses to an exposure. It does not address the need, demonstrated by numerous studies,[33] for improved education and practice for workers in using routine precautions and responding to exposures.

Forced HIV testing may also create a false sense of assurance that could increase the risk of transmission. For example, one of the circumstances in which police have been exposed is when they are jabbed by a syringe while searching a suspect. The presence of a syringe suggests that the source person could have a history of risk factors (such as sharing needles to inject drugs) associated with infection with hepatitis C and HIV. Even if the source person tests negative for HIV, the presence of risk factors means that the test could have been taken during the "window period." The exposed worker should not assume that a negative test result in this instance is in fact a true result.

Questions and Answers

References

[1] *R* v *Stillman* [1997] 1 SCR 607 at para 42, citing *R* v *Pohertsky* [1987] 1 SCR 945 at 949.

[2] *R* v *Dyment* [1988] 2 SCR 417 (QL) (SCC) at para 17.

[3] Privacy Commissioner of Canada. Opening statement, appearance before the House of Commons Standing Committee on Justice and Human Rights regarding Bill C-217 (*Blood Samples* Act) (available via www.privcom.gc.ca by clicking on "Speeches").

[4] *R* v *Oakes* [1986] 1 SCR 103, 24 CCC (3d) 321.

[5] Privacy Commissioner of Canada, supra, note 3.

[6] Canadian Medical Association. CMA Policy: HIV Infection in the Workplace (Update 2000), 11 December 2000 (available via www.cma.ca by clicking on "Where We Stand"). Canadian Nurses Association. Position Statement on Blood-Borne Pathogens. November 2000 (available at www.cna-nurses.ca by clicking on "Policy Statements").

[7] GM Herek at al. HIV-related stigma and knowledge in the United States: prevalence and trends, 1991-1999. *American Journal of Public Health* 2002; 92(3): 371-377.

[8] T de Bruyn. *Testing of Persons Believed to Be the Source of an Occupational Exposure to HBV, HCV, or HIV: A Backgrounder*. Montréal: Canadian HIV/AIDS Legal Network, 2001, at 25-29 (available at www.aidslaw.ca/Maincontent/issues/testing/e-compulsorytesting/toc.htm).

[9] Canadian Nurses Association. *Code of Ethics for Registered Nurses*. Ottawa: Canadian Nurses Association, 1997 (available at www.cna-nurses.ca/pages/ethics/ethicsframe.htm). See also Canadian Medical Association. *Code of Ethics*. Ottawa: Canadian Medical Association, 1996 (available at www.cma.ca by clicking on "Site Map").

[10] British Columbia Civil Liberties Association. Bill C-217 "The Blood Samples Act": Submission before the Standing Committee on Justice and Human Rights, 26 February 2002.

[11] Health Canada. An integrated protocol to manage health care workers exposed to bloodborne pathogens. *Canada Communicable Disease Report* 1997; 23 (Suppl 23S2): 1-14 at 3.

[12] Ibid at 2.

[13] US Department of Health and Human Services. Updated US Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis. *Morbidity and Mortality Weekly Report* 2001; 50(RR-11) at 7 (available at www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm).

[14] British Columbia Centre for Excellence in HIV/AIDS. Protocols help protect against getting HIV – but you have to use them. *Canada Communicable Diseases Report* 1996; 22(7): 54-59.

[15] Health Canada. An integrated protocol, supra, note 11; British Columbia Centre for Excellence in HIV/AIDS. *Therapeutic Guidelines for the Treatment of HIV/AIDS and Related Conditions*, Section 7: Management of Accidental Exposure to HIV, revised December 2001; Saskatchewan Technical Subcommittee on HIV/AIDS. *Guidelines for the Prevention of Hepatitis B, Hepatitis C, HIV and Other Bloodborne Pathogens in Work-Related Exposures*. September 1997; Manitoba Health. *Integrated Post-Exposure Protocol: Guidelines for Managing Exposures to Blood/Body Fluids*. October 2000; Ministère de la Santé et des Services Sociaux. *Recommendations visant la prise en charge des travailleurs exposés au sang et aux autres liquides biologiques*. Québec: Ministère de la Santé et des Services Sociaux – Direction des communications, 1999.

[16] DM Cardo et al. A case-control study of HIV seroconversion in health care workers after percutaneous exposure. *New England Journal of Medicine* 1997; 337(21): 1485-1490; see also US Department of Health and Human Services.

[17] US Department of Health and Human Services, supra, note 13 at 12.

[18] Ibid at 14.

[19] Ibid at 20.

[20] BW Moloughney. Transmission and postexposure management of bloodborne virus infections in the health care setting: Where are we now? *Canadian Medical Association Journal* 2001; 165(4): 445-51 at 448.

[21] Ibid.

[22] RE Hoffman et al. Occupational exposure to human immunodeficiency virus (HIV)-infected blood in Denver, Colorado, police officers. *American Journal of Epidemiology* 1994; 139(9): 910-17at 912.

[23] T de Bruyn, supra, note 8 at 15-17.

[24] Health Canada. Health Canada advises Canadians about potential false results with certain rapid HIV tests. 29 April 2002. Advisory (posted at www.hc-sc.gc.ca/english/protection/warnings).

[25] MP Busch, SH Kleinman. Nucleic acid amplification testing and disease transmission. In: Nucleic acid amplification testing of blood donors for transfusion-transmitted infectious diseases. Report of the Interorganizational Task Force on Nucleic Acid Amplification Testing of Blood Donors. *Transfusion* 2000; 40(2): 143-159 at 143-146.

[26] ES Daar et al. Diagnosis of primary HIV-1 infection. *Annals of Internal Medicine* 2001; 134(1): 25-29.

[27] US Department of Health and Human Services, supra, note 13 at 20.

[28] Health Canada. Preventing the transmission of bloodborne pathogens in health care and public service settings. *Canada Communicable Disease Report* 1997; 23 (Suppl 23S3).

[29] M Nguyen et al. Update – Surveillance of healthcare workers exposed to blood/body fluids and bloodborne pathogens: 1 April, 2000 to 31 March, 2001. *Canada Communicable Disease Report* 2001; 27(24): 201-212 at 208-209.

[30] P Braitstein et al. Another reality check: The direct costs of providing post-exposure prophylaxis in a population-based programme. *AIDS* 2001; 15(17): 2345-2347.

[31] Canadian Police Association. Brief to the Standing Committee on Justice and Human Rights Regarding Bill C-217. 19 February 2002.

[32] GM Herek at al. HIV-related stigma and knowledge in the United States: prevalence and trends, 1991-1999. *American Journal of Public Health* 2002; 92(3): 371-377.

[33] T de Bruyn, supra, note 8 at 33-34.