The focus of debates over HIV-infected health care workers often centres on issues of public safety. In these debates, patients’ safety issues overshadow and even undermine the rights of the health care provider. In this discussion, we will examine testing for HIV infected health care workers, reporting the infection, confidentiality issues and patient notification. Furthermore, several issues surrounding this debate of how to balance the rights of the patient and those of the infected health care provider will be examined.

**Risk of HIV Transmission**

The first factor to consider in this issue is the risk of acquiring HIV from an infected health care worker. The U.S. Centres for Disease Control and Prevention (CDC) developed models to predict the risk of HIV transmission from physician to patient based on five surgical specialties: General, Orthopaedic, Gynaecologic, Trauma, and Cardiac. This risk was estimated to be between 1 in 42,000 and 1 in 420,000. By comparison, the mortality rate of receiving a general anaesthetic is 1 in 10,000 and that of pregnancy is 1 in 15,000. Thus, patients treated by an HIV-positive physician appear to be at minimal risk. Based on rates of sharp injuries in surgical procedures and the number of procedures the average U.S. surgeon performs each year, it has been estimated that an HIV-positive surgeon would infect 0.7 patients in his entire career. And indeed, in retrospective studies of more than 22,000 patients treated by 63 HIV-positive health care workers, there has been no evidence of a single case of HIV transmission from the health care worker to the patient. Based on these data, the risk of transmission from a health care worker to a patient appears to be negligible.

The only documented case of HIV transmission from an infected health care professional to his patients was reported in 1990. The CDC stated that a Florida dentist, Dr. David Acer, had infected six of his patients before dying of AIDS in 1990. However, the means of HIV transmission from Dr. Acer to his six patients is unclear. He himself was a patient in his own practice and his methods for sterilizing equipment were inadequate. One infected patient developed the disease some two years after his first dental visit, suggesting that he may have acquired the virus elsewhere. All six of the infected patients also had risk factors for HIV infection other than being patients in Dr. Acer’s dental practice. Lastly, Dr. Acer was known to have had sexual relations with at least one of his patients. Thus, it is not certain that Dr. Acer infected his patients with HIV while treating them in his dental practice.

As demonstrated by this case, the risk of HIV transmission from health care worker to patient can be very difficult to ascertain because of other circumstances. However, it is important to identify the risk factors in individual cases to predict the likelihood of HIV transmission. In relation to the health care provider, risk factors include viral load, treatment regimen, stage of infection, and presence of neurological disorders. Those associated with the clinical setting include compliance with universal precautions and infection control procedures, invasiveness of procedures performed, and willingness to inform patients after exposure to infected blood.

The widely publicized case of Dr. Acer raised several questions involving the HIV-infected health care worker including mandatory HIV testing, reporting of HIV status, practice restriction of HIV-positive workers, and patient notification. Public pressure to enact legislation surrounding these issues intensified as the media attention focused on one of Dr. Acer’s infected patients, a teenager named Kimberly Bergalis. She spoke in front of the U.S. Congress before her death and urged for laws to protect other patients and health care providers from possible HIV transmission in the health care setting.

**Mandatory HIV Testing**

The U.S. Congress responded to public demands for mandatory HIV testing by passing legislation recommending HIV testing for health care workers involved in invasive procedures. The Congress also considered legislation that would have imposed fines or prison sentences on health care workers who did not inform their patients if they were HIV-positive, but this was not passed.

In 1992, the Laboratory Centre for Disease Control (LCDC) of Health Canada made several recommendations in response to this...
issue. The LCDC suggested that mandatory HIV testing of health care workers should not occur, but those who have had previous significant exposure to HIV or risk factors for infection should be encouraged to seek HIV testing voluntarily. The Canadian AIDS Society, the Ontario Law Reform Commission, the Canadian Public Health Association, the Canadian Human Rights Commission, and the Canadian Medical Association (CMA) have all concluded that these recommendations are justified and respect the rights of the health care worker. These organizations also recognize that the prevention of HIV transmission in the health care setting is best conducted by practicing universal precautions and promoting appropriate infection control. The medical ethical principle of beneficence dictates that health care workers have a responsibility to get tested for HIV if they place their patients at a significant risk of infection. Voluntary HIV testing requires the professional responsibility of all health care personnel. Infected workers should seek medical evaluation by a primary care physician and advice on risk assessment for transmission. In addition, patients who are significantly exposed to an infected health care worker must be advised to undergo HIV testing.

Mandatory Reporting of HIV Status

Despite the overwhelming response of various organizations to ban compulsory testing, the College of Physicians and Surgeons of Ontario (CPSO) adopted a controversial policy in 1994 that supported voluntary HIV testing but required mandatory reporting of HIV-positive physicians by their treating physician. The Ontario Medical Association (OMA) called this policy discriminatory and favoured a policy that respected the privacy of physicians. The OMA Task Force on HIV/AIDS recommended that physicians be encouraged to voluntarily disclose their HIV status and only physicians who performed invasive procedures be subjected to compulsory reporting. The CPSO policy was suspended after being challenged by a Toronto physician in 1994. The physician argued that “mandatory reporting of HIV-infected physicians would not protect the public from undiagnosed HIV infection,” and that “the best way to protect the public from the spread of HIV in the health care setting is by strict adherence to universal precautions and the voluntary use of an expert advisory panel on an anonymous basis.”

Many organizations have supported non-nominal reporting of HIV/AIDS, in which the name and other identifying information of the patient are not reported to public health authorities. The Canadian Bar Association in Ontario suggested that personal identifiers such as the patient’s initials, address, and date of birth should be omitted from notification forms. The Medical Health Officer since this allows for accurate epidemiological data collection and monitoring of HIV spread but protects the privacy of the infected individuals. Additionally, since it is the physician and not the Medical Health Officer who is initially responsible for partner notification, it is unnecessary to obtain this information for contact tracing purposes.

Cases of HIV seropositivity must be reported in all provinces and territories with the exception of Quebec, British Columbia, and Yukon. Depending on the province, reporting of HIV status can be nominal, where the patient’s name and other identifying data are required, or non-nominal, where identifying data are not necessary. In Newfoundland, New Brunswick, Ontario, and the Northwest Territories, nominal reporting of HIV seropositivity to health authorities is mandatory. However, in Ontario, physicians who provide professional services to a patient in certain specified clinics are exempt from reporting the patient’s name and address. In the other provinces, HIV reporting is non-nominal or at the discretion of the physician or Chief Medical Officer. Health Canada also suggests that health care providers are ethically obligated to report their serologic status to their profession’s regulatory body so their professional practice can be evaluated and monitored. In all provinces and territories, public health legislation allows AIDS to be notifiable to health authorities. Legislation then permits the Chief Medical Officer to report the identity of the infected health care worker to the relevant disciplinary body. Several provinces, including Newfoundland, Nova Scotia, New Brunswick, Ontario, and Manitoba, require nominal reporting of AIDS.

As discussed previously, the risk of HIV transmission from a health care professional to a patient is relatively low. Mandatory reporting would exaggerate the health risks involved in receiving care from an HIV-infected health care worker. In addition, compulsory reporting of infected health care personnel discourages workers from getting tested. This leads to an increase in cases of undiagnosed and unmonitored HIV and a decrease in the number of workers getting treatment for HIV infection. There is also a fear amongst health care providers of stigmatization, discrimination, and prejudice in the professional setting after revealing their HIV-positive status, which could threaten their careers and livelihood. The negative attitudes and beliefs towards those with HIV/AIDS are usually deeply rooted in society and very difficult to change. A study by the American Association of Physicians for Human Rights showed that in a sample of American and Canadian health care workers who were HIV-positive or who participated in high risk behaviours, two-thirds avoided testing or treatment because they feared revelation of their identity and job loss due to their HIV status. Although the Ontario Human Rights Code prohibits HIV-related discrimination in employment, it does permit some discrimination if the disabled person is found incapable of performing the tasks of his employment and cannot be accommodated without causing undue harm to his employer. Thus, reporting may be justified in cases of increased transmission risk to patients, but confidentiality for the HIV-infected health care worker must be considered.

Confidentiality

Physicians are legally bound to maintain the confidentiality of their patients during the course of a medical relationship. In this context, patients are allowed to seek treatment for their ailment without fear that their condition or treatment will be disclosed. This will not only benefit the patient but also others who may be at risk of infection. In most provinces and territories, physicians are required by law to keep confidential patient information concern-
Physicians may be held civilly liable for negligence to a patient who becomes infected with HIV after treatment by an HIV-positive health care worker. The Supreme Court of Canada stated that if there is a clear and imminent threat of serious bodily harm to an identifiable group, the duty of confidentiality may not apply and this confidential information may be disclosed to protect public safety. However, since occupational transmission by a health care worker is rare, this may not constitute a clear danger to the health of patients. However, Ontario law provides immunity to the physician from liability in cases of reporting where it was made in good faith and in accordance with the law. The treating physician must then weigh the legal and ethical obligations of patient confidentiality.

**Patient Notification**

In connection with the regulation of practice after HIV infection, look-back studies and notification programs for patients have been recommended and discussed. Look-back studies have been used to identify potential HIV transmission from an infected health care worker to patients. They are utilized to identify patients who may have been significantly exposed to HIV risk and should get tested and to prevent further HIV transmission. Look-backs are also useful tools to support research findings, clarify legal or ethical issues, evaluate risk, and reassure the public.

Look-backs and notification programs were put into place when a doctor who practised at four McGill University teaching hospitals collapsed while working in 1992. He immediately reported his status to his supervisors, stopped practising medicine, and entered the hospital for an AIDS-related illness as a patient. The medical school responded to media inquiries by refusing to supply the name or the specialty of the infected doctor in order to protect the physician’s right to privacy and confidentiality. The doctor’s lawyer stated that providing “any identifying information would do no more than cause irreparable prejudice and damage to our client.” However, the hospital representatives then reassured the public by presenting studies showing the small risk of transmission of HIV from doctor to patient. They also opened telephone hot lines to concerned patients who wanted to find out if they had been treated by the infected physician.

The Consensus Conference held by the LCDC of Health Canada in 1996 suggested guidelines for look-back studies and patient notification programs. The conference participants recommended that a look-back and a notification program be conducted when the professional practice of an infected health care worker is modified because of the HIV transmission risk posed by his infection. Notification programs should encourage patients to be tested for their benefit and that of their families. These programs may involve the use of the media, notification letters, information to local physicians, and specific recommendations regarding testing, all within the confidentiality guidelines. The notification process should also include assembling a list of names of people to be notified of possible contamination, setting up a response team, notifying all the patients at once, and preparing to respond to questions from the public by possible means of a telephone hot line. All of these would protect public health, prevent further transmission of HIV, yet protect the infected health worker’s rights to privacy and confidentiality.

**Regulation of Practice**

For an HIV-positive health care worker who performs invasive, exposure-prone procedures, the risk of transmission must be assessed and measures must be taken to prevent additional risks of transmission to patients. However, determining which procedures are deemed to be “exposure-prone” has been a subject of long and difficult debates. The CDC tried to develop a list of these exposure-prone procedures for almost two years but failed to gain consensus on the tasks listed. Many experts in the field were against the development of such a list because these procedures cannot be defined by any scientific or rational method since there is no definitive data on HIV-related procedural risks. In addition, developing this list would require all workers who performed these procedures to be HIV-negative. This would necessitate mandatory testing of all health care workers who carry out these tasks. Moreover, even if a worker’s HIV test came back negative, this would not necessarily mean that he was not infected since the seroconversion period after exposure to HIV is three to six months. This would then lead to compulsory HIV testing of health care workers on a regular basis at a great cost to the health care system without obvious benefits. In addition, regulation of practice of physicians because of their medical status may lead to similar considerations of other conditions that may affect a clinician’s ability to practise, such as depression, epilepsy, or Parkinson’s disease. Thus, any condition that could affect competence could come under scrutiny and be regulated in practice to protect the public.

The Consensus Conference agreed that an expert panel should be consulted after any health care worker or student is infected by HIV and who performs or will perform exposure-prone procedures. The tasks of this advisory panel are to assess the transmission risk to patients posed by the HIV-positive health care worker and to determine whether it is safe to allow the health care worker to continue practising exposure-prone procedures. To analyze whether practice modifications must be recommended, Health Canada discussed a number of factors that must be considered: risk analysis of work activities with special reference to exposure-prone procedures, procedural techniques, the skill and experience of the infected worker, compliance with universal precautions and other infection control practices, and the likelihood of compliance with the practice recommendations. Health Canada also suggested that all health care workers who perform exposure-prone procedures have an ethical obligation to know their serological status with respect to bloodborne pathogens. All infected health care workers...
also have an obligation to inform their profession regulatory body regarding their status. This body should then take an active role in monitoring the infected health care worker’s practice in the professional setting.

Confidentiality of the infected health care worker remains of prime importance. If there are no changes to practice, then the expert panel does not need to know the identifying details of the patient. If practice modifications are recommended by the expert panel, then the identity of the infected health care worker must be revealed to the expert panel and the regulatory body if the practice is to be regulated, or to the local public health agency or occupational health service if it is unregulated.

The risk of HIV transmission in the health care workplace arises from performing invasive, exposure-prone procedures. However, it is not the procedures which create this risk but accidents during these procedures which result in exposure. Education, stringent application of universal precautions, and a confidential and sympathetic environment to encourage workers to seek help should reduce the incidence of HIV contamination. HIV-positive physicians, especially those who regularly perform invasive procedures, should seek advice from specialists or an expert panel on the extent to which they should limit their professional practice in order to protect their patients. HIV-positive physicians and surgeons should not continue their practice solely on the basis of their own assessment of the risk they pose to patients. Restricting HIV-positive physicians from practicing certain particularly exposure-prone procedures may allow sufficient protection for the patients.

Conclusion
In addressing the relatively low risk of HIV transmission from an infected health care provider to a patient, many medical organizations assert that the best way to protect the public from the spread of HIV infection in health care settings is to promote stringent adherence to universal precautions, infection control procedures, or other prophylactic measures. In addition, voluntary approaches to HIV testing, reporting of serologic status, and consultation of an expert advisory panel on an anonymous basis will support risk reduction. It is important to ensure that HIV-positive health care workers are protected from unjustified discrimination in the workplace and that their HIV status is not unduly disclosed.

References