POLICE AND HIV/AIDS: The Risk, the Reality, the Response

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ABSTRACT: *Risk and fear have been examined empirically and theoretically in the policing literature. To date, however, there has been minimal effort to examine these concepts in the context of HIV/AIDS. Since the HIV/AIDS epidemic was first detected nearly 20 years ago, relatively little attention has been given to the complex issues it presents for police officers. The following discussion draws from both the policing and epidemiological literatures to examine police officers' fear and risk of occupational HIV transmission and individual and departmental responses to this fear. Important elements of educational programs and policies are also addressed.*

INTRODUCTION

The relationship between risk and fear of danger has been examined empirically and theoretically in the policing literature (Cullen, Link, Travis & Lemming, 1983; Gross, 1991; Jermier, Gaines, & McIntosh, 1989; Manning, 1977) but has rarely been addressed in the context of HIV/AIDS. Existing sources of information on police officers and HIV/AIDS fall short in three respects. First, general sources of information on preventing occupational HIV transmission do not take into account the unpredictable and uncertain nature of much police work, or the wide range of situations an officer may encounter. Second, many law enforcement-specific sources are outdated. Because new information about HIV/AIDS is continually emerging, up-to-date materials are needed that reflect the most current information available, and address new concerns. For example, in the 1980s, the National Institute of Justice published a series of reports addressing workers' concerns about HIV/AIDS, including *AIDS and the Law Enforcement Officer* (Hammett, 1987) and *AIDS in Probation and Parole* (Hunt, 1989). Even though much of the information contained in these reports has not changed over time, it needs to be reinforced by reference to recent medical and legal findings. Given the rate at which new HIV-related information becomes available, sources that are several years old lack

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credibility and generate distrust. As one police officer observed, "With a disease like this, 100% fatal and no cure imminent, there is no room for error and misinformation" (Barr & Warshaw, 1994, p. 59).

Finally, many police-specific sources of information are too narrow in scope, focusing on officers' HIV/AIDS-related knowledge, fear, or behaviors rather than exploring the links among the three. The existing literature also tends to focus uncritically on how officers *should* respond to people with HIV (in order to avoid HIV infection or a lawsuit), without addressing the legal and social implications of responding to HIV with prejudice and fear rather than professionalism.

The aforementioned shortcomings in the literature may contribute to officers' overestimating their risk of occupational HIV infection and experiencing heightened levels of fear. This fear in turn contributes to some officers' mistreatment of persons thought or known to be infected with HIV (cf. Flavin, 1998). This article explores the source of police officers' fear of HIV as well as their actual risk of HIV infection. It also examines individual and departmental responses to the fear and considers the important role played by policy and education programs. The policing literature on fear and risk and the epidemiological literature on HIV transmission suggest that officers' fears are not based so much on their objective risk of becoming infected. Instead, they may stem from the uncertain and unpredictable nature of police work and possibly from officers' discomfort with HIV's association with homosexuality and drug use.

FEAR, DANGER, AND UNCERTAINTY

Cullen et al. (1983) describe the "paradox in policing": Even though most officers in their study did not believe that physical injury occurred frequently in police work, nearly four-fifths believed they worked at a dangerous job and two-thirds thought policing was more dangerous than other kinds of employment. Similarly, many officers' perceptions of the danger of being exposed to HIV in the workplace do not match their actual risk. The following section compares HIV/AIDS to other occupational dangers officers face and attempts to explain the discrepancy between officers' fears of occupational transmission of HIV and the reality.

Danger and risk are important in shaping the policing occupational role. The emphasis on risk and danger of the occupation is used to reinforce safety messages, transforming everyday routines into a "craft of identifying threats to public and officer safety" (Crank, 1998, p. 110). Danger may serve to make work more enriching, meaningful, and interesting (Jermier et al., 1989; Roberts, 1993). Also, the threat of danger

serves to solidify relationships among members of the police subculture because an assault or accident that hurts one officer affects other members of the squad (Crank, 1998).

Three elements characterize a dangerous setting: the inherent degree of physical and emotional danger, the potential for accidental and delayed harm, and the objective and subjective nature of the danger (Jermier et al., 1989). Using these criteria, policing would definitely be categorized as a dangerous occupation although incidents of bodily harm to police officers are infrequent; most injuries to police are the result of accidents, not assaults; and most injuries are relatively minor (Brandl, 1996; Crank, 1998; Cullen et al., 1983). Assessing exposure to harmful agents must take into account not only the likelihood of the occurrence of harm, but also the potential severity of the harm. For example, the risk of a police officer being shot is similar to the occupational risk faced by nuclear power plant workers and airline pilots. Although the probability of being killed in the line of duty is low, the harm is potentially catastrophic, producing a level of physical danger comparable to someone (such as a professional boxer or a sanitation worker) who has a higher chance of being harmed, but faces a less catastrophic harmful event (Jermier et al., 1989).

In some respects, HIV/AIDS poses a unique occupational threat to police officers. First, the source of the risk is an invisible microbe, not a visible (if unexpected) assailant. Second, the officer does not know what harm he or she has suffered until 3-6 months later, when sufficient time has elapsed for antibodies to be detected in testing. Also, given the nature of HIV infection, an officer who becomes infected could remain healthy for a decade or more (if not indefinitely) before showing symptoms of HIV infection. Furthermore, unlike a black eye or a broken bone, HIV infection is incurable and potentially makes the police officer subject to prejudice and discrimination. And while a vaccine is available to protect against death by hepatitis, there is no vaccine that can provide preemptive protection against HIV infection.

In other respects, HIV transmission can be viewed as just one of the myriad of occupational dangers an officer faces. As with other injuries, it may stem from an assault or from an accident (Brandl, 1996). Moreover, the perceived danger posed by HIV is defined not only by the risk presented by various modes of transmission, but also by personal and social constructions of risk. That is, perceptions of danger are shaped by an officer's knowledge of HIV transmission and his or her control over the situation (Jermier et al., 1989).

As will be discussed later, officers' exposure to HIV while on the job is a relatively rare event and the actual incidence of occupational transmission of HIV is extremely low. Still, the fear of HIV among

police officers is substantial. A study by Burgess et al. (1992) compared differences in the fear of occupational exposure to HIV among six groups of workers: law enforcement personnel, correction officers, emergency nurses, emergency physicians, social workers, and rape-crisis workers. Fear of becoming HIV positive in the workplace was rated on a widely used scale ranging from 1 ("not at all fearful") to 10 ("extremely fearful"). Even after controlling for sex, years of experience, and experience with HIV/AIDS, emergency nurses were found to have the highest mean level of fear (5.6), followed by law enforcement personnel (5.2), emergency physicians (4.9), and corrections officers (2.9). Similarly, a Swedish study reported that police officers expressed greater fear of becoming infected than either nurses or the general public (Herlitz & Brorsson, 1990).

For most officers, the fear of HIV does not match their realistic risk of occupational exposure. Studies of law enforcement officers in California and North Carolina found that low knowledge of HIV/AIDS was linked to a higher self-assessment of risk (Gellert, Maxwell, Higgins, Barnard, & Page, 1994; Yearwood, 1992). In a New York City study, only around 10% of the officers thought it likely that HIV would be transmitted by working near someone with HIV. Yet, over one-third of the officers reported being afraid of contracting HIV by working with someone who has AIDS, which suggests that "some fears may override factual information" (Barr & Warshaw, 1994, p. 60). There also is evidence that even though an officer may intellectually "know" that HIV is not transmitted by a particular behavior, he or she may still suspect that infection might be transmitted in this way. For example, Herlitz and Brorsson (1990) reported that one-third of all respondents said they would demand a separate toilet for an HIV+ colleague even though only one-fifth thought public toilets might pose a risk of infection.

As with other sources of danger, however, apparently it is not the actual incidence of occupational HIV transmission so much as the *potential* for risk that contributes to fear among officers (Crank, 1998; Cullen et al., 1983; Jermier et al., 1989). Police work is marked by unpredictability and uncertainty (Manning, 1977; McNulty, 1994). No procedures or policies can anticipate the wide range of circumstances or situations in which police may find themselves (Kennedy, Homant, & Emery, 1990). The knowledge that should infection occur, it could have fatal consequences no doubt contributes to heightened levels of fear and anxiety, as does the knowledge that universal precautions cannot provide protection in every situation where there is a risk of HIV transmission.

THE RISK AND THE REALITY

According to the concept of universal precautions, all human blood and certain body fluids (including semen, vaginal secretions, cerebrospinal fluid, pleural fluid, and any unidentifiable body fluid) should be treated as if they contain HIV, HBV, or other bloodborne pathogens. That is, personal protective equipment such as gloves or a mask should be used in the presence of blood or other potentially infectious materials. Universal precautions do not apply to sweat, sputum, tears, urine, feces, or vomitus unless these body fluids contain visible blood. The unpredictable and uncertain nature of police work limits the application of universal precautions and thus contributes to the fear that officers experience regarding HIV/AIDS. Police officers often find themselves in emergent situations involving fights and assaults during which there may be insufficient time to take adequate precautions (Hoffman, Henderson, O'Keefe, & Wood, 1994; Pagane, Chanmugam, Kirsch, & Kelen, 1996). For example, when responding to a domestic dispute, the officer may encounter a range of situations that may or may not involve blood or that may become bloody if one or both parties become combative.

A study of Denver police officers conducted from December 1989 through March 1991 documented 42 exposures to blood. Two-thirds of the 42 blood exposures occurred in circumstances in which the officer was either restraining or being assaulted by a suspect and did not have time to put on protective gloves and clothing or in which gloves would not have been protective because of penetration by needles (Hoffman et al., 1994). In other words, while precautionary routines are helpful, they cannot address the full range of situations an officer may encounter (Whitmire & McCall, 1994). It is important, then, to examine the risk associated with officers in instances where no precautions are exercised.

In general, workplace-related risk of HIV exposure can be divided into three categories (Crutcher, Lamm, & Hall, 1991; Department of Health and Human Services, 1987). Category I applies to those workers at greatest risk of occupationally acquired HIV infection, such as health care workers, including emergency medical workers. Police officers and correctional personnel fall into Category II, where there is intermittent exposure potential. Although police officers can be exposed to HIV by coming into contact with blood or other body fluids at a crime scene or by being injured by a needlestick or other sharp object during a search, their exposure is not routine. Workers such as office personnel who have rare or no exposure potential fall into Category III.

Even though health care workers (HCWs) are considered to be at substantially higher risk for occupational exposure to HIV relative to police officers, HCWs' incidence of occupational HIV transmission is still low. Over a 19-year period (from January 1978 to December 1996), there were only 52 documented cases of occupational transmission of HIV infection and 111 cases of possible occupational transmission (CDC, 1996a). Of the 15 types of HCW reported, emergency medical technicians (EMTs) and paramedics arguably are the most similar to police officers in the *nature* (but not the *frequency*) of their exposure. Both, for example, are present at bloody crime scenes and may have contact with "sharps" such as syringes, knives, razor blades, and broken glass. Interestingly, the Centers for Disease Control and Prevention (CDC) has documented no occupational transmission cases among EMTs and paramedics and only 10 cases of possible occupational transmission.

No studies have systematically and comprehensively evaluated the risk of police officers who come in direct contact with persons infected with HIV. However, studies of health care workers provide some idea of the probability of transmission through various exposure routes. The two main routes of occupational transmission are those involving exposure that is either percutaneous (i.e., via a needlestick injury or a cut with a sharp object such as a scalpel or lancet) or mucocutaneous (i.e., via nonintact skin or mucous membranes including those that line the mouth, eyes, and nostrils). While the estimated transmission risk for both routes of exposure is extremely low (with infection occurring in fewer than one-third of 1% of all cases), several factors influence the transmission risk of a specific exposure event (CDC, 1995; Gerberding, 1998).

First, the risk of transmission increases with the quantity of blood involved in the exposure (e.g., a device visibly contaminated with the infected person's blood; a deep injury; or a procedure involving a needle placed directly in a vein or artery). Second, the risk of HIV infection increases if the source of the blood was someone who died of AIDS within 60 days after the exposure. This is thought to be due to the higher "viral load" (i.e., a higher concentration of HIV) present in the source-person's blood. Also, the risk of infection was *reduced* by nearly 80% if the health care worker used zidovudine (AZT or ZDV) following exposure. Current research is also investigating whether prolonged duration of contact with blood or the immunological response of the exposed person influences the probability of infection (CDC, 1995; Gerberding, 1998). Additional factors influencing the risk of infection in individual cases may emerge with additional research, prompting one researcher to conclude that "risk assessment remains, at best, an art"

(Gerberding, 1998, n.p.). The following section describes the incidence of officers' exposure to HIV, as well as the risk of infection associated with possible modes of officers' occupational exposure.

Incidence of Officers' Exposure to HIV

While police officers do face the risk of becoming infected with HIV via occupational exposure (albeit a comparatively small one), as of July 1997 the Centers for Disease Control and Prevention (CDC) Business and Labor Resource Service had no confirmed cases of a police or correctional officer whose workplace exposure resulted in HIV infection (CDC BLRS, 1997a). Federal Bureau of Investigation personnel conducted a survey of all law enforcement agencies in the United States and its territories with the aim of identifying the extent to which officers contracted HIV or hepatitis B while performing their official duties between 1981 and 1991 (Bigbee, 1993). The law enforcement agencies reported seven cases of HIV infection that they deemed to have occurred via occupational transmission. Three of the cases were reported to have occurred when the officer absorbed infected blood through a break in the skin, two from needlestick injuries, and one from a blood transfusion. In one case, no details were provided regarding the circumstances of the reported occupational transmission. The CDC, however, did not find sufficient evidence that any of these officers contracted the infection while on the job.

Although this evidence indicates that the likelihood of a police officer becoming *infected* with HIV while on the job is low, a police officer's risk of being *exposed* to HIV is higher. Some studies have tried to estimate officers' frequency of exposure to HIV. In Orange County, California, law enforcement officers reported 292 occupational exposures to blood and body fluids from May 1989 to November 1992 (Gellert, Higgins, Maxwell, & Barnard, 1993). Upon investigation of these suspected exposures, no actual risk of HIV transmission was found for 29% of the cases, and exposure was doubtful in 34% of the cases. Law enforcement officers and first responders most commonly were exposed to HIV during the handling of sharps and the management of open soft-tissue injuries. Five percent of reported exposures involved an HIV+ source, suggesting the risk to personnel is real. However, during the study no officers were identified as HIV positive, and no transmission of HIV to public safety officers (including first responders) was documented.

Similarly, a retrospective analysis of exposure to bloodborne infectious organisms (including HIV, hepatitis B, and hepatitis C) among New York City police officers examined self-reported incidents of inju-

ries (Pagane et al., 1996). During 1992, officers reported 121 transcutaneous exposures, of which 106 resulted from human bites and 15 from needlestick injuries. Officers assigned to patrol or narcotics were exposed to blood at a rate of approximately 43.6 exposures for every 10,000 police officers. No significant differences were found in the exposure rate between men and women officers. The study did find that officers between the ages of 20 and 29 had a significantly higher rate of exposure than did officers of other ages.

A Denver study sought to measure police officers' risk of exposure to blood and HIV and to document how exposures occurred. As in the New York City study, the authors found that in every type of assignment, police officers were exposed to blood. The rate of exposure, however, was quite small, ranging from .09 to 1.52 per 10,000 person-days, or one exposure every 40 years (Hoffman et al., 1994, p. 915). Although the rate of officers' exposure in the study was small, the percent of source persons with HIV was high (15.6%). This finding prompted the study's authors to conclude that "Denver police officers rarely have percutaneous or mucosal exposures to blood, but when they do, their risk of exposure to HIV-infected blood is relatively high" (Hoffman et al., 1994, p. 916).

Possible Routes of Occupational Exposure to HIV

Studies of needlestick injuries suggest that they present a small but significant risk of HIV infection. The average risk of HIV transmission associated with needle punctures or other percutaneous injuries is 0.32% (21 infections following 6,498 exposures) (CDC, 1995; Gerberding, 1995). Some studies have investigated the impact of needle and syringe legislation on officers' risk of needlestick injuries. For example, Connecticut enacted laws that permit the purchase in pharmacies of up to 10 needles and syringes at one time and the possession of up to 10 clean needles and syringes. Prior to legislation, purchase and possession of needles and syringes without a prescription had been illegal. Concern was raised that the increased likelihood of IDUs carrying needles and syringes on the streets might place Hartford police officers at greater risk for needlestick injuries. However, a comparison of needlestick injury rates among officers in the months preceding and following the new legislation revealed similar injury rates (CDC, 1993; Groseclose et al., 1995). In fact, Groseclose et al. (1995) reported that the injury rates actually dropped from six injuries in 1,007 drug-related arrests in the six months prior to the introduction of the new laws, to two in 1,032 arrests in the six months after the new laws were enacted.

Police officers also have expressed fear that in the course of breaking up a fight they may receive a cut that could expose them to HIV (Blumberg & Langston, 1991). Gerberding (1998) reports findings from a study of health care workers that estimate that the measured mucocutaneous transmission risk is 0.03% (one infection following 2,885 exposures through mucous membranes or nonintact skin).

Richman and Rickman (1993) report two cases involving contact with flesh wounds that may have resulted in HIV transmission. The first involved a fight in which a man sustained several facial injuries with profuse bleeding. In a second incident, a soccer player was discovered to have HIV one month after colliding with an HIV-infected soccer player and suffering skin wounds involving copious bleeding. In the latter case, however, public health officials could not rule out the presence of other risk factors that may have accounted for the infection. In sum, "transmission of HIV has occurred through contaminated blood on broken skin, albeit rarely" (Richman & Rickman, 1993, p. 405). HIV infection has never been linked to cutaneous exposure involving intact skin or casual contact with people with HIV (Gerberding, 1998).

According to the CDC, HIV has not been recovered from the sweat of HIV-infected persons, so sweat does not present a risk of HIV transmission. HIV has been found in tears in only minute quantities from some people with HIV/AIDS. Contact with tears or airborne droplets (as in a sneeze) has never been shown to result in transmission of HIV.

Exposure to saliva uncontaminated by blood is considered to be a very rare mode of HIV transmission for several reasons: (1) HIV-inhibiting factors are found in the saliva of both people infected and uninfected with HIV; (2) HIV rarely exists in the saliva of HIV+ persons; (3) none of the cases of AIDS reported to CDC has been attributed to saliva alone; (4) levels of HIV are low in the saliva of HIV+ persons; and (5) there have been no documented cases of HIV transmission in association with kissing in studies of nonsexual household contacts of HIV-infected persons (CDC, 1997; Richman & Rickman, 1993). The risk of HIV transmission via spitting is considered extremely low.

Biting presents more of a risk of HIV transmission than does spitting. One study found that officers were more afraid of being bitten by someone with HIV than being spat upon or having to restrain someone with HIV (Yearwood, 1992). Typically, the biter is at greater risk of becoming infected than the person who is bitten because the former comes into contact with the victim's blood while the reverse may not be the case. Because HIV and HIV-infected immune cells can exist in saliva, there is a theoretical possibility that exposing saliva to the blood-

stream could cause HIV infection. Richman and Rickman reviewed 13 cases in which people had been bitten by HIV-infected individuals and found no one became infected. The authors concluded that "the transmission of HIV through human bites is biologically possible but remains unlikely, epidemiologically insignificant, and, as yet, not well documented" (Richman & Rickman, 1993, p. 402).

There have been at least two published cases in which HIV transmission through bites may have occurred. One case involved a person with AIDS experiencing a grand mal seizure who unintentionally bit someone offering first aid to prevent airway obstruction. Experts concluded that the blood present in the source patient's saliva was probably crucial for HIV transmission in this case (Vidmar et al., 1996). In another incident in 1994, an HIV+ woman bit a 91-year-old man three times. The bite victim initially tested negative, but tested HIV+ within 40 days after the assault. The woman had bleeding gums and tore the man's skin, causing bleeding and extensive tissue damage. There is no evidence the victim was infected by other routes, and DNA studies show the two people's strain of HIV are closely related (Liberti et al., 1996). In both biting incidents, the nature of the incident suggests HIV was passed via blood-to-blood transmission, a common and well-documented method of HIV infection rather than from a newly documented method of transmission (Liberti et al., 1996; Vidmar et al., 1996). As mentioned earlier, the likelihood of HIV transmission by needlestick is extremely low. Yet, needlesticks are estimated to transmit, on average, 20 times more HIV-infected cells than a human bite (Richman & Rickman, 1993). It should be noted, however, that the presence of blood in the saliva heightens the theoretical risk of HIV transmission through human bites.

In sum, there are a number of occasions in which officers may be afraid of being exposed to HIV. For example, there may be large amounts of blood, body fluids, and tissue present at scenes where physical force was used to inflict injury. These conditions may present HIV exposure but can be managed by employing precautions such as wearing latex gloves and a waterproof gown or overalls and wearing protective eyewear and disposable masks if there is a chance of blood splashes (Laszlo & Ayres, 1990). Similarly, exposure to HIV while administering CPR can be significantly reduced through use of a pocket mask with a one-way valve (Laszlo & Ayres, 1990). These and other protective guidelines for searching and transporting arrestees, conducting crime scene investigations, or performing CPR and other first aid measures have been documented extensively elsewhere (see CDC, 1989; Gerberding & Rankin, 1994; Laszlo & Ayres, 1990).

Still, it is important to acknowledge that many situations are volatile and unpredictable and, thus, do not permit police officers to take appropriate precautions. For example, an officer may come into unexpected contact with a needle (either as the result of a deliberate assault with a syringe or accidental contact during a search), may experience blood-to-blood contact during a fight or scuffle, or may be spat upon or bitten. Because of the fragility of the virus when outside the human body, however, the risk associated with each of these ranges from virtually nonexistent to very small, especially in comparison with the risk associated with sharing injection equipment or engaging in unprotected sex. According to the CDC, 99.7% of needlestick/cut exposures and 99.9% of eye, nose, or mouth exposures do *not* lead to infection. The risk after exposure of the skin to HIV infected blood is estimated to be less than 0.1% (CDC 1997). Even though the risk of infection is low, the physical and social stakes associated with being infected are very high, so the importance of taking precautions must be stressed.

THE RESPONSE

Some level of fear and danger may be useful because it inspires workers to take the necessary precautions and to remain vigilant to potential risks (Burgess et al., 1992; Crank, 1998; Cullen et al., 1983). High and unwarranted levels of fear, however, have been associated with stress and emotional exhaustion, which can compromise a person's ability to do his or her job (Cullen et al., 1983; Jermier et al., 1989). Further, and of central interest in this paper, fear may result in discriminatory treatment of suspects, offenders, and even fellow officers known or suspected to have HIV.

Police Response to Civilians and Offenders with HIV/AIDS

Among the most adverse reactions to HIV/AIDS have been the reluctance to administer first aid and the violation of suspects' rights to privacy. Thirty percent of the police officers in one study reported they would avoid helping people in need out of fear of contact with infected blood (Herlitz & Brorsson, 1990). Leinen (1993) found that the majority of the 41 officers he interviewed to approach injury cases with caution, minimizing their exposure to wounds by taking precautionary measures such as wearing rubber gloves. Nonetheless, he found evidence that fear of HIV/AIDS does on occasion interfere with an officer's duty to assist accident and injury victims. One officer described a situation in which a person came into the station with a head injury and covered with blood. His initial response was to help the man but then:

> I physically, for the first time in my life, stopped. I thought that the guy may be a junkie and I don't want to go over and touch him. I got an ambulance. I'm not putting my mouth on anybody, and I'm not touching anybody's blood or saliva. (Leinen, 1993, p. 61)

Much of the reluctance to administer first aid — even while wearing gloves — reflects ignorance and reliance on false information. An officer reports, "My partner, he's got the idea that even if a person looks at you, you can get AIDS from him. I've tried to talk to him time and time again, but there's no telling him. He knows what he knows" (Leinen, 1993, pp. 58-59). Another officer reports that "straight cops have all the *mis*information that all the straight people have. They have the information that you're going to get [AIDS] by touching somebody" (Leinen, 1993, p. 59).

Anecdotal reports from individual departments in several states also suggest the existence of an unofficial practice of including HIV status on police records. When the police dispatcher gets a call, the dispatcher will notify the patrol car that the person is HIV+, frequently by use of a code. Presumably, this policy exists to protect the officer from unknowingly becoming exposed to HIV. In reality, such practices actually *reduce* the safety of police officers by providing them with a false sense of security. Police dispatchers will not know the HIV status of most of the individuals with whom the officers will come into contact. Therefore, it cannot be assumed that because no warning is given that the suspect is not infected with HIV. Instead of providing better protection for the officers, such protocols undermine the basic principle of universal precautions: to assume that everyone is potentially infectious.

This raises another concern: that fear, ignorance, and prejudice may lead some officers to violate individuals' rights to privacy and confidentiality. HIV continues to be associated with lifestyles that have been deemed "unacceptable" by mainstream society. As a result, HIV+ individuals often experience discrimination. Even infected heterosexual nondrug users, who comprise less than 20% of those infected with HIV, may be stereotyped as being either injection drug users or gay. Because of the high potential for discrimination, maintaining the confidentiality of one's HIV status is of primary concern to those infected (Souza, 1995).

Doe v. Borough of Barrington (1990) and *Doe v. Town of Plymouth* (1993) held that an officer and his or her police department can be held liable for a police officer's disclosure of an individual's HIV status without compelling reason to do so. In both cases, the town was held responsible for its alleged failure to train and supervise police of-

ficers in the protection of privacy rights of individuals with HIV/AIDS. In general, the plaintiff's rights to confidentiality are balanced against the state's interest in disclosure. Typically, the personal right to privacy is found to outweigh the governmental interest (Souza, 1995). For example, in *Doe v. Borough of Barrington*, the officer asserted that his concern for preventing the transmission of the disease prompted his disclosure of a citizen's HIV status to a neighbor. The court acknowledged that preventing transmission is an appropriate objective, but it concluded that this objective was not served by the disclosure since HIV is not spread by casual contact. Consequently, the court ruled that the release of the personal information violated the plaintiff's privacy rights.

The case of A.L.A. illustrates some of the harmful social consequences of unauthorized disclosure. A.L.A. was arrested for passing a bad check at a retail store. During a search incident to the arrest, Officer Johnson discovered a piece of paper in A.L.A.'s wallet indicating he was HIV positive. Later, Johnson told A.L.A.'s sister and his two housemates, at least one witness at the store, and the jailer that A.L.A. was HIV+, even though A.L.A. had not engaged in any conduct that would have placed any of these people at risk. As a result of Johnson's disclosures, A.L.A.'s friends and family shunned him, and fellow prisoners and the guards harassed him. While in jail, A.L.A. underwent testing that revealed that he was not and had never been infected with HIV. The district court's ruling was eventually reversed, and the plaintiff was permitted to sue for unauthorized disclosure of the false information that he was infected with HIV (*A.L.A. v. West Valley City*, 1994).

In Indiana, a waiter lost his job as a result of a police officer's disclosure. "John Doe" filed suit against a city police officer who repeatedly visited the restaurant but would not allow Doe to wait on him because Doe has AIDS. The officer's comments and threats prompted Doe to leave the restaurant and Doe was fired. Doe sued the police officer for disclosing his HIV status to workers and customers and intentionally inflicting emotional distress. The City of Kokomo was also named for failing to properly train officers about HIV confidentiality. As part of the out-of-court settlement, police were ordered to pay $60,000 and the City was ordered to educate police officers on confidentiality (*Doe*, 1997; "Police Must Pay," 1997).

Another privacy issue involves the testing for HIV antibodies of suspects who may have exposed a police officer to HIV/AIDS. These cases require that the privacy rights of the suspect be balanced between curbing the spread of HIV and the emotional and physical health of the officer. Many courts have assigned greater weight to public health in-

terests and permitted minimally invasive, minimally risky blood and saliva tests of persons charged with needle-use and sex crimes. Several courts, however, have required statutory authorization to test defendants. Where no statute exists, some courts have permitted testing only if it is reasonably related to establishing the allegations. In these cases, the Ninth Circuit has held that HIV testing requires a proper search warrant (Gostin, 1996, pp. ix-x).

A number of cases suggest that police who may have been exposed to HIV are not entitled to test a person's blood without first obtaining a warrant. For example, both *Walker v. Upper Merion Police Department* (1996) and *Barlow v. Ground* (1992) involved instances where the suspect scuffled with or bit police officers. Subsequently, the suspect's blood was drawn to be tested for HIV, but no warrant was obtained. In both cases, the court found the drawing of blood violated the plaintiff's Fourth Amendment rights against illegal searches and seizures. The courts reasoned that evidence of a person's HIV infection (i.e., HIV antibodies) would not disappear and, therefore, there was no pressing element of time.

Even if a warrant is issued, there is no guarantee that its justification will survive close scrutiny by the courts. For example, police obtained a warrant to test a defendant for HIV who bled on several officers during an arrest for car theft. The jury was convinced that the police lacked probable cause to suspect that the defendant was HIV+, and awarded $5,000 to the defendant ("Jury Faults Police," 1995).

Police Response to Fellow Officers with HIV/AIDS

The consequences of fear and prejudice are not confined to officers' treatment of citizens, but may also affect their treatment of fellow officers who have or are perceived to have HIV/AIDS. HIV/AIDS is a particularly sensitive subject among police not only because of the possibility of occupational HIV transmission, but also because of the law enforcement taboos against homosexuality and drug use (Boxall, 1996; Buhrke, 1996; Flavin, 1998; Leinen, 1993). This creates a particularly difficult situation for HIV+ police officers, most of whom have contracted HIV off-duty through unprotected sexual activities (Suraci, 1997). To date, very little research has been conducted on HIV+ officers, precluding an extensive discussion.

Local, state, and federal law enforcement personnel with AIDS are protected from discrimination by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (Goldfein & Hanssens, 1996). The purpose of these acts is to assure civil rights protections to qualified people with disabilities. The ADA is modeled after

the Rehabilitation Act, so the two acts are very similar in scope. The main difference between them is found in the sectors to which they apply. In very general terms, the ADA prohibits disability-based discrimination in the private sector and in state and local government, whereas the Rehabilitation Act applies to employers and organizations receiving federal assistance.

In spite of the protections provided by federal legislation, harassment and discriminatory treatment occurs. Experiences reported by gay police officers suggest that fear of HIV/AIDS may be aligned with homophobia. For example, a gay Miami Beach police officer, Pete Zecchini, described how in 1995 he was reassigned to patrol duty after being transferred to the front desk ostensibly out of concern for his safety. He subsequently was tear gassed in an area restricted to authorized personnel and specially admitted personnel. He observed:

> Realizing that I would be even less safe on the streets, I reluctantly resigned from the police department. I believe I was discriminated against because my lover of thirteen years is totally disabled with AIDS, and some officers perceived I was HIV-positive. I have begun litigation against the City of Miami Beach in hopes of making some difference (Buhrke, 1996, p. 272).

Law enforcement officials also justified placing "John Doe," a straight New York Police Department detective with AIDS, on restricted duty by citing a concern for his well-being. Doe reported he was relegated to mopping precinct floors, cleaning toilets, and changing tires on squad cars following an anonymous tip to the Internal Affairs Bureau reporting his condition in 1995. Doe also claimed that six police officers wearing body armor and gloves beat him up because he has AIDS. A 14-year veteran, Doe filed a suit against the City seeking $20 million in damages, his reinstatement to active duty, back pay, and compensation for his legal fees (Guart, 1997).

Not all experiences of HIV+ officers have been negative. Preliminary evidence suggests a wide range of experiences coping with the demands of being a police officer, being HIV+, and, for some, being gay. For example, a 16-J. year veteran of the San Francisco Police Department (SFPD) who decided to disclose his HIV status only to a few close friends observed, "If anyone asked, I was prepared to tell the truth. However, only one person ever did. . . . Whatever people knew, they respected my privacy in the matter" (J. Land, personal communication, July 23, 1997).

Before his death in 1995 of AIDS-related complications, Lee Jensen also was a police officer in San Francisco. Jensen reported that

when his AIDS diagnosis prompted him to take an extended medical leave, city and county employees (including other police officers) donated over 200 hours of leave to him (Buhrke, 1996). Elsewhere, an HIV+ officer in an unnamed metropolitan police department described his department's response to his 18-month disability leave as "incredibly supportive" (Buhrke, 1996, p. 265). In San Francisco, the response to HIV+ officers may be shaped in part by the prevalence of HIV in the area and general attitudes to gays and lesbians. A patrolman with the SFPD for over 15 years explained:

> Here, it is widely assumed that half the gay male population has HIV. . . In San Francisco, everyone knows gay people, so the fears were frequently addressed with compassion and concern. Then, gay cops started to die. Some of them were well loved and respected, some were not. But everyone seemed truly shaken by the loss of these young men (J. Land, personal communication, July 23, 1997).

Some officers have organized in an effort to address the multitude of issues surrounding HIV infection. For example, in 1994, the Gay Officer's Action League-New York (GOAL-NY) held its first annual International Conference of Gay and Lesbian Criminal Justice Professionals. Among the workshops offered was one focusing on the impact of HIV/AIDS on gay police personnel. In the New York City area, Jack Lambe, a retired New York City police officer with AIDS, spearheaded the effort to form an off-hours support group for police officers with HIV/AIDS called "Positive Police" (Boxall, 1996). The group helps officers deal with such issues as feelings of isolation, fear of losing one's job, and concerns about failing strength or possibly infecting others if one is hurt and bleeding. While laudable, these individual efforts are limited in the impact they can have on police officers' fear and attitudes. As discussed in the following section, departmental educational programs and policy development are essential components in promoting widespread, lasting, and humane treatment of people with HIV/AIDS.

THE IMPORTANCE OF HIV/AIDS-RELATED TRAINING AND POLICY

The single most important factor influencing uniformed police officer's workplace attitudes toward HIV/AIDS is their level of knowledge about HIV transmission (Barr & Warshaw, 1994). Officers gain information about HIV from a variety of sources, including the media. A 1989 study found that nearly all of the 445 New York City police officers used the media as a source of HIV/AIDS-related information

(Barr & Warshaw, 1994). Results from a 1987 survey of 728 police officers who attended AIDS education training indicate that around 60% of officers report newspapers or magazines as their primary information source on AIDS (Sheridan, Lyons, Fitzgibbon, Sheridan, & McCarthy, 1989). While the mass media may be a good source of general information about how HIV is and is not transmitted, it rarely addresses police-specific concerns about, for instance, whether HIV can be transmitted through a bite. For example, news reports of assaults by needlestick often emphasize the sensationalized "newsworthy" aspects of the incident rather than the low probability of transmission. Thus, the media should not be assumed to serve consistently as a reliable, disinterested source of HIV/AIDS-related information.

Officers' frequent contacts with hospital personnel suggest that the medical community may also have a significant impact on officers' fear and perceived risk (Whitmire & McCall, 1994). Around one-quarter of officers in a "large urban department" report their primary source of information is health professionals (Sheridan et al., 1989). The reliance on health professionals may be related to the prevalence of HIV in the surrounding area. For example, nearly three-quarters of New York City police officers working in an area of higher prevalence of AIDS cited a physician or health specialist as an extremely or somewhat informative source as compared to only around one-third of the officers in an area with a much lower AIDS prevalence (Barr & Warshaw, 1994). It should not be assumed, however, that the information hospital personnel convey is always accurate. For example, one rural police officer reported that "a doctor had told her that AIDS can be transmitted through the air, and if a doctor said that, [then] it must be true" (Whitmire & McCall, 1994, p. 150).

Misinformation about the way HIV is transmitted may contribute to officers' fears and prejudices. Studies of police officers in Orange County, California, and New York City (Gellert et al., 1994; Barr & Warshaw, 1994) suggest that notions that HIV can be transmitted through casual contact persist in spite of public health messages to the contrary. While able to identify the major modes of HIV transmission, significant percentages of officers respond incorrectly to items regarding means that do *not* transmit HIV, such as being bitten by a mosquito or other insect, being coughed or sneezed on by someone with HIV, eating at a restaurant where the cook has HIV, or sharing eating utensils with someone who has HIV. For example, around one-third of the New York City sample and almost 80% of the Orange County sample incorrectly thought it was very or somewhat likely that HIV/AIDS could be transmitted through a cough or a sneeze (Gellert et al., 1994; Barr & Warshaw, 1994).

Court rulings also may promulgate inaccurate information about the transmission of HIV. Such decisions undermine attempts at educating police officers and other law enforcement officials to the actual risk. Assisted by his colleagues on the AIDS Litigation Project, Lawrence Gostin of Georgetown University Law Center examined cases litigated in federal and state courts from 1991 through 1996 that involved the intentional exposure of another person to HIV (Gostin, 1996). He found that prosecutors typically invoke two types of criminal charges against persons who risk transmitting HIV: assault and attempted murder. People with HIV have been criminally convicted for various behaviors, not all of which have been scientifically found to pose a significant risk of transmission.

These convictions reflect in part that the issue of intent is more salient to the courts than is the issue of transmission likelihood. For example, *State v. Smith* (1993) upheld the conviction of attempted murder for biting a correctional officer. The court reasoned that the conviction is based upon the defendant's criminal intent at the time of the act, *not* the actual chance of transmission. Similarly, in *People v. Caine* (1995), the court held that saying "I'll give you AIDS" while sticking someone with a syringe was sufficient to convict for attempted second-degree murder, regardless of whether or not the syringe actually contained HIV. The issue is further complicated by the fact that "notably absent in many judicial opinions is a careful differentiation between significant and remote risks of transmission. Although courts enunciate a 'deference' to scientific opinion, they also may grant 'expert' status to testimony that is loosely grounded in solid science" (Gostin, 1996, pp. 24-25). For example, in *Burk v. State* (1996), the court upheld the felony reckless endangerment conviction of an HIV+ individual who attempted to bite a police officer. The court relied, in part, on the misleading testimony of Burk's treating physician who asserted that it was

> *very strongly probable* that someone could get the HIV virus if bitten by an infected person. [The physician] further testified that *although he was not aware of any known reports of anyone contracting AIDS through the transmission of saliva*, the HIV virus had been found in saliva and he did not see why it could not be transmitted that way (p. 531, emphases added).

Although not addressed in the literature, officers probably also serve as a source of misinformation about HIV. Research suggests that officers attach particular importance to the informal learning that occurs "on the street" versus the formal book learning that takes place in the police academy (Hunt, 1985; McNulty, 1994). For example, one officer

noted that "quite a few guys have told me that they wouldn't [administer first aid to] *anyone* who looks like a junkie or a fag, no matter who they were" (Leinen, 1993, p. 60).

Whether the result of the police personality (Skolnick, 1994) or the police culture (Crank, 1998), suspicion accounts for many officers' distrust of factual information being disseminated (Barr & Warshaw, 1994; Whitmire & McCall, 1994). Thus, probably the best means of lessening unnecessary fear about HIV transmission and the negative consequences that stem from this fear is to provide officers with accurate information via training. Appropriate educational programs not only teach officers about the epidemiology, transmission, and prevention of HIV, but may appropriately alter their perceptions of risk (Sheridan et al., 1989). Evidence suggests, however, that not all police departments are providing adequate educational programs. In 1992, 70 law enforcement supervisors attending the FBI National Academy were informally surveyed about their policies regarding bloodborne diseases, including HIV/AIDS and hepatitis B. More than half of those surveyed indicated they did not have a comprehensive departmental policy in place regarding bloodborne diseases, were unaware of recent OSHA regulations requiring employers to provide vulnerable employees with protective equipment (e.g., gloves), and had not provided at least four hours of training on bloodborne diseases to each employee within the past four years (Stewart, 1993). Similarly, a 1992-1994 national study found that half of the 337 police chiefs surveyed thought that at least "moderate" improvement was needed in their police officers' training on infectious diseases (McEwen, 1996).

Edwards and Tewksbury (1996) surveyed the directors of 49 state police training academies and 49 state police personnel directors. They found that most state police agencies offer basic HIV/AIDS instruction to recruits, and through in-service training. The two primary reasons for initiating HIV/AIDS instruction are to meet legal requirements and to address safety concerns of officers and other agency personnel. The quality and quantity of instruction, however, vary widely. For example, course materials ranged from a brief, handwritten outline, to elaborate training materials and professionally produced videotapes.

Edwards and Tewksbury observe that standardizing training by either the national medical or law enforcement community is "essential," given the lack of uniformity in instructional content (1996, p. 58). Among other things, experts recommend that HIV/AIDS education programs accomplish the following:

(1) provide accurate information about how HIV is and is not transmitted;

(2) defuse unwarranted fears and anxieties about contact with HIV-infected persons, including coworkers;
(3) educate officers on universal precautions, as well as the potential for infection during arrest, first aid, search, and crime scene processing activities;
(4) tie the content explicitly to departmental policies and procedures regarding the rights of employees with HIV/AIDS, HIV-antibody testing, confidentiality, and other HIV/AIDS-related issues;
(5) involve staff in the development of training programs and materials to lend credibility to the program and ensure the program addresses the issues raised by the staff;
(6) adopt a proactive stance, that is, education should take place prior to a job-related exposure incident;
(7) be offered on an ongoing basis;
(8) contain an evaluation component to assess the content, quality, and effectiveness of the training program; and
(9) be provided to all officers, regardless of their assignment, given that assignment does not appear to be correlated with risk of exposure (Barr & Warshaw, 1994; Hammett, 1987; Stewart, 1993).

Furthermore, education programs should acknowledge that — compared to other work settings — the police work environment has a higher degree of uncertainty. Thus, not only should officers be trained in the use of universal precautions, but police training programs also must acknowledge the limitations of universal precautions if they are to have credibility with the officers.

Programs should reflect the particular concerns and needs of the police officers and should relate to situations they encounter in their daily activities. Officers are not expected to engage in kissing or other sexual activity on the job, so educational messages about the relative risk associated with sexual activity are of limited utility in quelling fears and minimizing the risk of occupational HIV transmission. The risk associated with administering CPR, being bitten by someone with HIV, or having blood splash into one's eyes, however, is another story (Flavin, 1998). Further, updated information should be used to clarify the risk of infection associated with certain situations.

Because police officers are trained to be suspicious and distrustful, another prerequisite for an effective educational campaign is ensuring that police officers are confident in the source that distributes the information (Herlitz & Brorsson, 1990). The educators should be considered by the police officers to have a high level of integrity.

In addition to educational programs, departmental policies can ensure both the safety of officers and the fair and humane treatment of people with HIV/AIDS. Montgomery and Lewis's (1995) study of 558 hospitals found that fear levels are lower in organizations with policies that directly address the type of knowledge uncertainty held by employees. The authors emphasize that the education of workers about modes of transmission may help reduce uncertainty about how HIV is transmitted, but is inadequate in dealing with uncertainty about how HIV+ persons in the workplace should be treated.

While information on law enforcement HIV/AIDS-related policies is scant, evidence exists to suggest that this too is an area in which there is much room for improvement. For example, in 1992 the Police Executive Research Forum prepared a model police statement on the Americans with Disabilities Act as a guide to law enforcement agencies (PERF, 1992). Although reference is made to impairments commonly associated with advanced stages of HIV infection, such as visual and mobility impairments, nowhere in the 19-page document is HIV or AIDS specifically mentioned. This oversight is particularly noticeable in the sections addressing officer response to emergency calls for service.

Most agencies with educational programs and policies initiated these efforts because of legal requirements (e.g., mandates from OSHA) and a desire to protect personnel (Edwards & Tewksbury, 1996). Only 10% of agencies, for example, cited a desire to treat citizens with HIV/AIDS fairly as a reason for developing an HIV/AIDS-related policy. Similarly, while 29 agencies have policies addressing how to handle a person with HIV, only nine of these policies address the employment of people with HIV.

As with educational programs, a department seeking to develop a humane and comprehensive workplace HIV/AIDS policy does not need to start from scratch. A number of resources are available. Among the major issues that an HIV/AIDS-related policy should address are the following:

(1) antidiscrimination in employment practices and reasonable accommodations;
(2) antidiscrimination in services to public;
(3) HIV-antibody testing and counseling;
(4) confidentiality of HIV-related information for both employees and the public;
(5) infectious disease control procedures; and
(6) availability and content of HIV/AIDS-related training (Hammett, 1987; Laszlo & Ayres, 1990; Laszlo & Smith, 1991).

Such policies should be adaptable to changes in current knowledge on medical transmission and the law. Further, they should specify the schedule by which the policy will be reviewed periodically and amended as necessary. Anecdotal evidence suggests that the police officers with HIV/AIDS are themselves instrumental in the development of humane responses to HIV/AIDS. John Land describes his experience with the San Francisco Police Department:

> Those who died early forged departmental and city policies regarding HIV disabilities. [For me, it] was a simple matter to request a disability retirement, even though my health remained relativity good. I could have stayed on, and would have been accommodated in countless ways, such as low stress assignments, donated sick time, flexible scheduling, as well as more personal acts of compassion (J. Land, personal communication, July 23, 1997).

CONCLUSION

HIV/AIDS presents a serious and often complex set of challenges for both public health officials and law enforcement officers. Yet, these issues are not adequately addressed in either the existing policing literature regarding risk and fear or the epidemiological literature. This article has attempted to provide an overview of these issues and to summarize significant recent findings related to the fear, knowledge, and risk of HIV transmission and the treatment of both suspects and police officers who have or are perceived to have HIV/AIDS. This discussion stresses the important roles that policy and education play in reducing fear and risk and ensuring the compassionate and fair treatment of people with HIV/AIDS.

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