ORIGINAL ARTICLE

Conflicting Messages: How Criminal HIV Disclosure Laws Undermine Public Health Efforts to Control the Spread of HIV

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Abstract Twenty-three U.S. states currently have laws that make it a crime for persons who have HIV to engage in various sexual behaviors without, in most cases, disclosing their HIV-positive status to prospective sex partners. As structural interventions aimed at reducing new HIV infections, the laws ideally should complement the HIV prevention efforts of public health professionals. Unfortunately, they do not. This article demonstrates how HIV disclosure laws disregard or discount the effectiveness of universal precautions and safer sex, criminalize activities that are central to harm reduction efforts, and offer, as an implicit alternative to risk reduction and safer sex, a disclosure-based HIV transmission prevention strategy that undermines public health efforts. The article also describes how criminal HIV disclosure laws may work against the efforts of public health leaders to reduce stigmatizing attitudes toward persons living with HIV.

Keywords HIV prevention · HIV disclosure · Criminal law · Public health

Introduction

In the late 1980s and early 1990s, many Americans were frantic about the possibility of contracting HIV (Brandt, 1988; Burris, Dalton, Miller, and the Yale AIDS Law Project, 1993; Herek, 1999). Because of commonly held beliefs that HIV infection was a disease that mainly affected society's "un-

Department of Psychiatry and Behavioral Medicine, Center for AIDS Intervention Research (CAIR), Medical College of Wisconsin, 2071 North Summit Avenue, Milwaukee, WI 53202 e-mail: cgalletl@mcw.edu desirables" (i.e., persons who were not part of mainstream society), public fears focused on the possibility of acquiring the virus through "innocent" modes such as casual contact or malicious exposure by someone who had HIV (Bateson & Goldsby, 1988; Burris et al., 1993; Holland, 1994; Tindall & Tillett, 1990). In misguided attempts to protect themselves and others from exposure, many people demanded to know who was infected (Burris et al., 1993; Herek et al., 1999). Some went as far as suggesting that infected persons be quarantined (Burris et al., 1993; Herek, 1999). Fueled in part by the disfavored social standing of many of the persons who were first infected, in part by communal desires to blame the afflicted and thus deny personal vulnerability, and in part by long-standing social aversion to sexually transmitted diseases, a tremendous stigma was attached to being infected with HIV (Brandt, 1988; Herek & Glunt, 1988).

In response, U.S. public health leaders launched information campaigns to combat HIV-related stigma, to quell fears of contagion through casual contact, and to empower the public to make realistic appraisals of their personal risk of acquiring HIV and to take precautions to avoid infection (United States Public Health Service, 1986, 1992; United States Public Health Service and CDC, 1988). National HIV information campaigns for adults emphasized the following key points: First, that susceptibility to HIV infection is universal-everyone is vulnerable, not just members of so-called "risk groups." Second, because the extended asymptomatic stage of HIV infection makes it virtually impossible to tell who is or is not infected, other than through laboratory tests, best practice is to treat everyone as if they had HIV and to protect oneself accordingly. Third, although abstinence from sexual risk behavior was safest-and barring that, sex within a mutually-monogamous relationship where neither partner was (or was at risk of becoming) infected was the next best

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choice—condom use, if practiced universally and consistently, was an effective means of preventing HIV transmission (Bayer, 1996; USPHS, 1986, 1992; USPHS and CDC, 1988). Finally, public health leaders assured the public that HIV could not be transmitted through casual contact and thus discrimination against persons living with HIV (with regard to housing, employment, education, etc.) is neither appropriate nor consistent with the compassionate response to which our system of public health aspires (USPHS, 1986, 1992; USPHS and CDC, 1988).

To a large extent, these public health campaigns worked (Holtgrave, 2002). The 1980's saw wide-scale adoption of safer sex among men who have sex with men (MSM) in urban HIV epicenters (Centers for Disease Control, 1985, 2001; Ekstrand & Coates, 1990), and a decrease in new HIV infections (Brookmeyer, 1991). Researchers noted some decrease in some stigmatizing attitudes toward persons living with HIV as well (Herek, 1999). Public health interventions aimed at preventing HIV transmission emerged as formidable, though not infallible, forces with which to contain the U.S. epidemic. Unfortunately, one of the nation's most-broad reaching, and some might argue, potentially most powerful tools with which to disseminate and reinforce this public health response, the criminal law, promulgated a message of a different kind.

Twenty-three U.S. states currently have laws that make it a crime for persons who have HIV to engage in various sexual activities without, in most cases, first disclosing their HIV-positive status to prospective sex partners. These laws are often referred to as "HIV exposure/transmission" laws (Galletly & Pinkerton, 2004; Lazarini & Burris, 2005; Wolf & Vezina, 2004). However, few of the laws require that actual exposure occurs and none require transmission. All but one of these laws address HIV specifically, while the one that does not (Kan. Stat. Ann., 2004) is certified as a legal tool to address HIV transmission-related conduct (92 Op. Att'y Gen. Kan., 1992). Four of the laws address other sexually transmitted infections (STIs) along with HIV (Fla. Stat., 2005; Ind. Code Ann., 2004; Stat. Ann. 2005; Va. Code Ann., 2005). Three of the laws do not include explicit provisions for serostatus disclosure (Kan. Stat. Ann., 2004; Md. Code Ann. Health-Gen., 2005; Wash. Rev. Code Ann., 2004); (Fla. Stat., 2005; Ind. Code Ann., 2004); however only one of these three laws (Maryland's) could be used to prosecute an HIV-positive person who, absent malice and with full disclosure, engages in consensual sex.

States address the matter of which behaviors require disclosure differently. Some are very specific, referring to anal, vaginal, and oral sex (e.g., S. D. Code Ann., 2004). Others are more general, such as Nevada's statute which requires HIVpositive persons to disclose before engaging "in conduct in a manner that is intended or likely to transmit" HIV (Nev. Rev. Stat. Ann., 2004). Penalties range from less than 12 months in jail or a fine of \$2500, or both, for non-disclosed exposure without malice (Va. Code Ann., 2005), to up to 30 years in prison for the same crime (Ark. Code Ann., 2005).

The most common functions of the criminal law are to deter persons from engaging in criminal activity, to renounce wrongdoing, to incapacitate (and in some cases rehabilitate) offenders, and to establish and promulgate social norms of appropriate behavior (Burris et al., 1993; Kaplan, Weisberg, & Binder, 1996). Since, as Lazzarini and colleagues (Lazzarini, Bray, & Burris, 2002) point out, the sexual behaviors targeted by HIV disclosure statutes are not easily deterred, and since, except in the most egregious cases, the majority of persons who violate these statutes will not be arrested, let alone prosecuted and incapacitated, by default, the purpose of U.S. HIV disclosure laws seems to be to establish and promulgate expected norms of behavior. The laws do this by articulating standards for conduct and then prompting, through social influence and the prospect of punishment, behavioral compliance with these standards.

The use of the criminal law to help establish health-related social norms is not new. Laws proscribing domestic violence, spousal rape, and driving while under the influence of an intoxicant each helped to influence societal acceptance of emergent social norms. Although there are a variety of ways to influence the adoption of social norms (consider the many strategies employed in public health campaigns), the authority granted the criminal law to punish those who do not comply makes the law exceptional in this effort. As Chambers (1994) concludes, "Western societies announce their norms of minimally acceptable social conduct most forcefully through their criminal codes."

Criminal HIV disclosure laws function as structural HIV prevention interventions in that they work on a societal level (as opposed to an individual or community level) to prevent further HIV infections (Blankenship, Bray, & Merson, 2000; Shriver, Everett, & Morin, 2000; Sweat & Denison, 1995). As structural interventions, the laws ideally should complement the HIV prevention efforts of public health professionals. While the public health system takes an avuncular role, emphasizing individual responsibility and encouraging community members to engage in voluntary actions to maintain or to achieve health, the criminal justice system can take a more authoritarian role, demanding compliance and meting out punishment if compliance is not met. Through this bifurcated response to HIV prevention, a health department or other public health organization can maintain the confidence of those it serves and leave the criminal justice system to address situations where punitive action must be taken. Unfortunately, the U.S. response to HIV/AIDS falls short of this idealized vision of the complementary roles of the public health and the criminal justice systems.

This article identifies several ways in which criminal HIV disclosure laws contradict rather than complement public

health efforts to stem the spread of HIV. First, criminal HIV disclosure laws pay scant attention to universal precautions and safer sex, ultimately disregarding or discounting central features of the public health response to HIV. Second, many of the laws fail to distinguish between higher and lower-risk sexual activities, thus minimizing distinctions that are central to the public health objective of risk reduction. Third, the laws implicitly endorse a flawed, disclosure-based norm for promoting safety in sexual interactions that undermines the traditional public health emphasis on each person taking responsibility for protecting his or her own health. Finally, the laws may reinforce HIV-related stigma, potentially alienating those persons upon whom prevention efforts depend. The conclusion of this article reflects on the volatile climate in which many of these laws were enacted and argues that empirical research is needed to assess both the potential positive and inadvertent negative effects of criminal HIV disclosure laws.

Prohibited activities

Individual statutes vary widely in how they describe prohibited activities. Some statutes, such as those in California, Florida, Michigan, New Jersey, Ohio, and Virginia, address sexual conduct only (Cal. Health and Safety Code, 2005; Fla. Stat., 2005; Mich. Comp. Laws, 2005; Stat. Ann., 2005; Ohio Rev. Code Ann., 2004; Va. Code Ann., 2005). Other statutes, such as those in Maryland, Nevada, Oklahoma, and Washington, apply very generally to activities involving "exposure" or "transmission" of the virus or the "transfer" of potentially infectious body fluid (Md. Code Ann. Health-Gen., 2005; Nev. Rev. Stat. Ann., 2004; 21 Okla. Stat., 2004; Wash. Rev. Code Ann., 2004). Still others list several prohibited "risk" activities, such as engaging in sex, sharing contaminated needles and syringes, or donating or selling infected blood or semen.

Although there is no one statutory approach to addressing situations where HIV-positive individuals fail to disclose their HIV status before engaging in sex, South Dakota's statute is fairly typical:

Any person who, knowing himself or herself to be infected with HIV, intentionally exposes another person to infection by:

- 1. Engaging in sexual intercourse or other intimate physical contact with another person;
- Transferring, donating, or providing blood, tissue, semen, organs, or other potentially infectious body fluids or parts for transfusion, transplantation, insemination, or other administration to another in any manner that presents a significant risk of HIV transmission;
- 3. Dispensing, delivering, exchanging, selling, or in any other way transferring to another person any nonsterile

intravenous or intramuscular drug paraphernalia that has been contaminated by himself or herself; or

4. Throwing, smearing, or otherwise causing blood or semen, to come in contact with another person for the purpose of exposing that person to HIV infection; is guilty of criminal exposure to HIV. Criminal exposure to HIV is a Class 3 felony (S. D. Codified Laws, 2005).

Table 1 lists the 23 U.S. states that have criminal HIV disclosure laws that could be used to address sexual interactions with an uninformed partner. The table specifies the years applicable laws were enacted and amended and the type of activities that are addressed in these laws, whether: (a) sexual activity only; (b) a variety of activities including sexual interactions (e.g., South Dakota's law, quoted above); or (c) a general manner of conduct, such as that which would "expose" another to HIV. Table 1 also indicates whether each law requires that the partner provide informed consent, which is discussed below (see "Disclosure as a Prevention Strategy").

These statutes undermine public health efforts to stem the spread of HIV in a variety of ways. Despite years of assurances by public health leaders that HIV cannot be spread through casual contact, several statutes address behaviors that pose neglible risk of transmitting HIV. Idaho's statute, for example, prohibits the transfer of "urine" and "saliva" absent disclosure (Idaho Code, 2005). Few of the statutes make distinctions between high and low risk activities. Several require disclosure prior to sexual activities ranging from anal intercourse to mutual masturbation (Ark. Code Ann., 2005; Mich. Comp. Laws, 2005; Stat. Ann., 2005; Ohio Rev. Code Ann., 2004). These laws directly contradict the public health emphasis on harm reduction, which encourages people to minimize risk when risk elimination is unfeasible. Also, none of the laws consider the HIV-status of the partner. An HIV-positive person who chooses to engage only in protected sex with a partner known to have HIV is still required to disclose under most of these laws. For persons who, for any of a variety of reasons, feel they cannot or dare not disclose, these laws preclude important means of safer sexual expression.

Condoms and the law

A central component of the public health response to HIV has been to encourage people to use condoms with nonmonogamous sex partners and with sex partners whose HIV serostatus is not known with certainty. Indeed, early in the epidemic, condom use was likened to the "universal precautions" practiced by physicians, nurses, and other health care professionals—assume every patient (sex partner) is infected and protect yourself accordingly. The pervasiveness of this safer sex message is remarkable. For more than a decade,

Table 1 Criminal HIV disclosure laws

State	Year law(s) enacted (amended)	Prohibited activities			
		Sexual acts only	Multiple activities	Transfer or expose	Informed consent
AR	1989		Х		no
CA	1998	\mathbf{x}^{a}			no ^b
FL	1986 (1988, 1995, 1997, 1998)	х			yes
GA	1988 (2003)		Х		no
ID^c	1986 (1988, 1990) & 1988		Х		yes
IL	1989		Х		yes
IN^d	1993 & 1998		Х		no
IA	1998		Х		yes
KS ^e	1992 (1993, 1999)		Х		no ^b
LA^{f}	1987 (1993)		Х		yes
\mathbf{MD}^{g}	1989			Х	no
MI	1988	х			no
MO	1988 (1997, 2002^h)		Х		yes
NV	1993 (1995)			Х	yes
NJ	1997	х			yes
ND^i	1989		х		yes
OH ^j	1989 (1990, 2000) & 2000	х			no
OK	1988 (1991, 1997, 1999)			х	yes ^b
SC	1988 (1990)		х		no
SD	2000 (2005)		х		yes
TN	1994		х		yes
VA	2000 (2004)	х			no
WA	1986 (1997)			Х	no ^b

Note. The criminal HIV disclosure statutes are as follows: Ark. Code Ann. § 5-14-123; Cal. Health & Saf. Code § 120291; Fla. Stat. § 384.24; Ga. Code Ann. § 16-5-60; Idaho Code § 39-608; 20 ILL. Comp. Ann. 5/12-16.2; Burns Ind. Code Ann. § 16-41-7-1; Iowa Code § 709C.1; Kan. Stat. Ann. § 21-3435; La. Rev. Stat. § 14:43.5; Md. Code Ann. § 18-601.1; Mich. Comp. Law Serv. § 333.5210; Vernon's Mo. Rev. Stat. § 191.677; Nev. Rev. Stat. § 201.205; N.J. Stat. § 2C:34-5; N.D. Cent. Code, § 12.1-20-17; Ohio Rev. Code Ann. § 2903.11; 21 Okla. Stat. § 1192.1; S.C. Code Ann. § 44-29-145; S.D. Codified Laws § 22-18-31; Tenn. Code Ann. § 39-13-109; Va. Code Ann. § 18.2-67.4:1; Wash. Rev. Code Ann. § 9A.36.011.

^aCalifornia's statute addresses only unprotected vaginal and anal sex.

^bViolation of the California, Kansas, and Washington laws requires that the HIV-positive person act with the intention of infecting or harming the partner. Consequently, these laws are silent on the issue of consent. Violation of Oklahoma's law requires that the HIV-positive person act with the intention of infecting the partner *and* that he or she fails to receive the partner's informed consent.

^cIn 1986 Idaho added AIDS, ARC, and "other manifestations of HIV infections" to an existing sexually transmitted disease statute. An HIV-specific criminal disclosure statute was enacted in 1988.

^dIndiana addresses failure to disclose that one has HIV or hepatitis B to a sex partner with two statutes. The first statute (1993) describes the expected conduct—specifically, HIV-positive and HBV-positive persons have a duty to warn past and present sex and needle sharing partners. The second statute (1998) establishes penalties, one for reckless non-disclosure and one for knowing or intentional non-disclosure.

^eKansas enacted a statute titled "Exposing another to a life threatening communicable disease" in response to requirements that U.S. states have laws to address willful exposure to HIV in order to be eligible to receive certain Ryan White CARE Act funds (92 Op. Att'y Gen. Kan. 29).

^f Although it appears that the Louisiana statute criminalizes non-disclosed exposure to HIV only when the HIV-positive person specifically intends to expose the partner, a Louisiana court has held that specific intention to expose the partner is not necessary for a violation to occur (*State v. Roberts*, 844 So. 2d 263 (La. App. 2003)).

^gAs discussed in the main text, Maryland's statute is silent on the matter of disclosure and consent.

^hAmong other changes, Missouri's 2002 amendment added a clause that explicitly excluded condom use as a defense against an alleged breach of its HIV disclosure statute.

^{*i*}North Dakota's statute requires that the HIV-positive person prove by a preponderance of evidence that serostatus disclosure, consent, *and* condom use occurred in order to successfully respond to charges of non-disclosed exposure to HIV.

^jIn 1989, Ohio enacted a statute that required HIV-positive persons to inform prospective sex partners of their HIV status. This statute was amended in 1990 and 2000. Also in 2000, Ohio lawmakers added a provision to an existing felonious assault statute that prohibits HIV-positive persons from engaging in "sexual conduct" with another unless they disclose their positive serostatus and their partner is at least 18 years old and can appreciate the significance of the disclosure.

public service announcements on television and radio, advertisements on billboards and bus benches, and posters and pamphlets in health care clinic waiting rooms across the country have touted the effectiveness of condoms as a means of reducing HIV risk.

In light of the ubiquity of this safer sex message and the documented effectiveness of condoms in preventing the transmission of HIV (Davis & Weller, 1999; Pinkerton & Abramson, 1997), it is perhaps surprising that only 3 of 23 existing U.S. HIV disclosure laws mention condoms, and only 2 of these laws appear to acknowledge their protective benefit.

California's HIV disclosure statute is unusual in two ways: it proscribes only unprotected anal or vaginal sex without prior serostatus disclosure, and it does so only in situations where the HIV-positive person *intended* to transmit the virus to another (Cal. Health and Safety Code, 2005). In this way, the statute addresses the most culpable state of mind and the riskiest sexual behaviors. Kansas, Oklahoma, and Washington also require that the HIV-positive person engaged in the prohibited activity with the intention of exposing the partner to the virus (Kan. Stat. Ann., 2004; 21 Okla. Stat., 2004; Wash. Rev. Code Ann., 2004). Contrary to the language of the statue, case law in Louisiana has established that intent to infect is not required (51). Although the impetus for proscribing unprotected but not protected sex may well have been to insure that only those persons who intended to infect another could be prosecuted (i.e., the use of condoms suggests an absence of intent), because disclosure is not required prior to protected sex, the statute appears to acknowledge the effectiveness of condoms in reducing the risk of HIV transmission.

North Dakota's HIV disclosure statute also appears, at first blush, to support the public health objective of preventing new HIV infections through the practice of safer sex. Similar to the laws in many other states, North Dakota's statute requires that HIV-positive persons disclose their serostatus to prospective sex partners. What is unique about this law is that it requires disclosure *and* condom use (N. D. Cent. Code, 2005). Because it mandates condom use, this statute appears to acknowledge the effectiveness of condoms, but it does so only in a limited sense. By requiring disclosure in addition to condom use, the law suggests that condoms cannot adequately protect prospective sex partners.

Missouri's HIV disclosure statute makes explicit the doubts about condom effectiveness implicit in North Dakota's law. Missouri's law makes it a felony for a person who has HIV to "[a]ct in a reckless manner by exposing another person to HIV without [their] knowledge and consent ... through contact with blood, semen or vaginal secretions in the course of oral, anal, or vaginal intercourse" (Mo. Ann. Stat., 2004). Although the terms "exposing" and "contact"

could suggest that only direct contact with the specified bodily fluid is proscribed absent consent (thus decriminalizing protected anal, vaginal, or oral sex), the statute concludes with the provision that "the use of condoms is *not* a defense to this violation" (Mo. Ann. Stat., 2004) emphasis added). Missouri's statute not only fails to acknowledge the significant reduction in transmission risk afforded by condoms, the statute expressly rejects it, as if to close a loophole created by public health messages stressing safer sex.

The HIV disclosure statutes of the other 20 states omit any reference to condom use. Therefore, HIV-positive persons in Missouri, North Dakota, and these 20 other states who adhere to public health directives and practice only condom-protected sex still can be convicted of violating their state's HIV disclosure law—a felony in most cases (Galletly & Pinkerton, 2004). Adherence to the letter of the law requires disclosure, irrespective of condom use.

In contrast to public health messages that stress the responsibility of people to protect themselves by practicing safer sex, HIV disclosure laws seemingly endorse a bipartite norm in which it is the HIV-positive person's responsibility to disclose his or her serostatus to prospective sex partners and then the partner's responsibility to protect him or herself. Because these laws require disclosure but (generally) are silent on the issue of condom use, they imply that once HIVpositive persons have disclosed their positive serostatus to potential partners, they have fulfilled their moral, legal, and social responsibilities to help minimize HIV transmission risk. As one HIV-positive man reasoned in Sobo's (1995) study of disclosure practices, "When I have [told and] the other person knows full well and they choose not to take any safety measures, that decision is totally up to them."

Moreover, the disclosure-based norm endorsed by these laws encourages at-risk persons to rely on prospective sex partners to disclose their HIV status, if positive, and to assume that there is minimal risk absent positive serostatus disclosure. Serostatus disclosure laws thus may foster a false sense of security among HIV-negative persons who may choose to forgo condom use unless notified of their partners' HIV-positive status (Bayer, 1996; Chambers, 1994; UNAID, 2002).

Twenty years of HIV prevention campaigns have sought to establish and reinforce social norms that emphasize sexually-active couples' shared responsibility to prevent HIV transmission (Berkowitz & Callen, 1983; USPHS, 1986). These norms are weakened by HIV disclosure laws that appear to limit HIV-positive persons' responsibilities to disclosure only, and to suggest that at-risk persons rely on partners disclosing their serostatus to determine whether condom use is necessary. In short, existing HIV serostatus disclosure laws not only fail to complement public health prevention efforts to promote condom use, they appear to undermine them.

Disclosure as a prevention strategy

The emphasis on serostatus disclosure and the lack of attention to condom use in existing HIV disclosure statutes implies that disclosure, per se, is sufficient to prevent transmission of HIV. To be effective as a structural intervention, a disclosure-based approach to HIV prevention depends on several fundamental conditions being satisfied: First, HIVinfected persons must be aware of their positive HIV status; second, HIV-positive persons must possess the skills needed to enable them to disclose their serostatus under all social and environmental circumstances; third, HIV-positive persons must choose to disclose their serostatus to all potential sex partners despite the sometimes substantial disincentives to doing so; and fourth, prospective partners, once informed, must either forgo sex entirely or practice safer sex. The third of these conditions is the ostensible target of HIV serostatus disclosure laws. However, the effectiveness of these laws clearly depends on the extent to which the other conditions likewise are met. But are these conditions met?

Despite recent initiatives to encourage at-risk persons to be tested and to learn their HIV status (Janssen, Holtgrave, Valdiserri, Sheperd, Gayle et al., 2001), the CDC estimates that approximately 25% of HIV-infected persons are unaware they are infected (Fleming, Byers, Sweeney, Daniels, Karan et al., 2000; Glynn & Rhodes, 2005). These persons may never have been tested, may have tested negative but subsequently acquired HIV, or may have been tested very early in the course of infection (i.e., during the "window period") and thus, though infected, did not have detectable antibodies. The latter possibility is particularly worrisome in light of mounting evidence that suggests that the virus may be up to 10 times more easily transmitted during the window period than in later periods of infection (Cohen & Pilcher, 2005; Pilcher, Tien, Eron, Leu, Steward et al., 2004). In short, if asked, a substantial proportion of persons with HIV would report that they are HIV-negative or do not know their HIV status.

Some individuals who have HIV may be aware of their positive serostatus and attempt to disclose, but for any of a number of reasons do not do so effectively. Because of the particularly sensitive nature of HIV-positive serostatus disclosure, many persons who have HIV disclose implicitly, either through silence (e.g., the HIV-positive persons says nothing after a prospective partner discloses that he or she is HIV-negative), nonverbal, environmental cues (e.g., the HIV-positive person leaves medications where they can be seen by the prospective partner), or "coded" verbal cues that a listener acculturated in an environment similar to that of the HIV-positive person might recognize as signaling that the speaker has HIV (e.g., the HIV-positive person mentions that he or she frequents a particular doctor's office or takes medications with side effects that the listener would associate with antiretroviral therapy). The advantage of implicit disclosure is that it allows the HIV-positive person to signal to the prospective partner that he or she has HIV, while maintaining some control over potentially-damaging information (Chambers, 1994). The obvious disadvantage is that these subtle communications are easily missed and rely on an assumption of shared meaning that may in fact not be shared at all. In the worst case scenario, individuals in an HIV-discordant partnership may deduce incorrectly that they share the same HIV-status and engage in unprotected sex.

Some persons who are aware of their HIV-positive status choose not to disclose this information to prospective partners (Ciccarone, Kanouse, Collins, Miu, Chen et al., 2003; Kalichman & Nachimson, 1999; Sowell, Seals, Phillips, & Julius, 2003). For example, in Marks, Richardson, Crepaz, Stayanoff, Milam et al., 2002) study of 839 HIV-positive men and women, nearly one-third reported that in the past three months they had had sex with someone to whom they had not disclosed their serostatus. Instances where persons know that they are HIV-positive but do not disclose may be less a matter of a conscious effort to deceive, as the application of the criminal law suggests, and more a matter of denial (Klitzman & Bayer, 2003), lack of self-efficacy to disclose (Kalichman & Nachimson, 1999), or concerns over potential repercussions of disclosure, including fears that the prospective partner will reject the HIV-positive person (Klitzman & Bayer, 2003) or will share his or her serostatus information with others (Chambers, 1994). Situational factors working against disclosure include engaging in sex in environments that implicitly discourage verbal communication between partners, such as bathhouses, adult bookstores, and noisy dance clubs (e.g., Elwood & Williams, 1999), engaging in sex as a means to procure money or drugs, or engaging in sex with persons with whom an individual has not developed rapport (Ciccarone et al., 2003; Latkin et al., 2001; O'Brien et al., 2003). All of these factors reduce the reliability of relying on disclosure to determine if a prospective partner has HIV.

A final condition for positive serostatus disclosure to function effectively as an HIV prevention mechanism is that the informed partners choose, post-disclosure, either to abstain from sex entirely or to practice safer sex. Results from empirical studies that address post-disclosure sexual risk behavior are mixed. Although some studies have documented positive associations between serostatus disclosure and subsequent condom use (e.g., DeRosa & Marks, 1998; Niccolai, Dorst, Myers, & Kissinger, 1999), several other studies have found no relationship between disclosure and condom use (e.g. Crepaz & Marks, 2003; Geary, King, Forsberg, Delarande, Persons et al., 1996; Marks & Crepaz, 2001; Stein et al., 1998; Wolitski, Rietmeijer, Goldbaum, & Wilson, 1998). The proportion of at-risk persons who decline sex after learning that their prospective partner has HIV is not known.

Also unknown is the proportion of persons who truly understand all the potential ramifications of having sex with an HIV-positive person. Of the 23 HIV disclosure laws, 12 require that the partner give something like informed consent, a concept borrowed from medical contexts that suggests that the HIV-positive person has a duty—similar to that of a physician with a patient—to provide the partner with sufficient information about the risks involved for the partner to make an informed choice. In seven states, the statutes require only that the HIV-positive person disclose his or her positive serostatus. These statutes are silent on whether the partner needs to understand the potential consequences of consenting to sex.

Public health leaders have long been aware of the significant limitations of relying on disclosure or other means of identifying HIV-infected partners (such as looking for visible signs of illness), and have instead advocated condom use with all partners who are not known with certainty to be uninfected (Bayer, 1996). The Surgeon General's Report (1988) explicitly warned against relying on partners to disclose:

It's hard to be absolutely sure what risks your sex partner has taken. Don't take someone's word whether or not they might be infected, no matter how well you know them. Remember, you can't tell just by looking at someone whether they are or are not infected. Some people don't understand that something they did might have infected them ... Some people deny that they might be infected. Some people don't tell the truth.

In contrast, HIV disclosure laws, which by-and-large omit any reference to condom use, turn the public health response to HIV upside down by implying that reliance on disclosure is an effective strategy for reducing HIV risk and by weakening efforts to reinforce presumptive condom use as a social norm.

HIV-Related stigma

Early in the U.S. AIDS epidemic, discrimination and stigmatizing attitudes towards persons with HIV were identified as a barrier both to prevention efforts and to the achievement of a fair and compassionate response to persons who were infected (Burris, 1999; Tindall & Tillett, 1990) (Presidential Commission, 1988). Action was taken on several fronts: civil laws were enacted to protect the confidentiality of persons living with HIV; disability discrimination laws were interpreted to include protection for persons with AIDS (Burris, 1999); and public health organizations launched wide-scale media campaigns designed to reduce if not elim-

inate stigmatizing attitudes in society at large. For example, the CDC's "Faces of AIDS" media material, the first component of the "America Responds to AIDS" campaign, sought to "humanize" AIDS by urging members of the general public to identify with (rather than distinguish themselves from) persons who were infected with HIV (Woods, Davis, & Westover, 1991). Similarly, the Surgeon General's Report (1988) depicted a white, female person with AIDS below whose picture reads the caption: "... AIDS is not a 'we,' 'they' disease, it's an 'us' disease." Stories of community members helping HIV-positive persons, or campaigning for HIV-related causes, were incorporated in many HIV prevention materials to provide models for the behavior of the public. Responding reasonably and compassionately to HIV infection was portrayed as a shared responsibility. The USPHS (1992) emphasized that, "All of us have a job to do in stopping the spread of HIV and in caring for those infected and their families and friends."

In part, these efforts to reduce HIV-related stigma were motivated by a nearly universal disdain, among those working in public health, for unwarranted discrimination against persons living with HIV (Burris, 2002; UNAID, 2002). More pragmatically, the success of the U.S. response to HIV depends on voluntary compliance with public health recommendations to be tested and, if infected, to seek treatment and to avoid risky behaviors (Burris, 2002; Burris et al., 1993). Because stigmatizing attitudes and the discrimination associated with them could serve as substantial disincentives to be tested if one suspects he or she might be infected (CDC, 1985; Chesney & Smith, 1999; Herek, Capitanio, & Widaman, 2003) or, if HIV-positive, to seek assistance in carrying out treatment and secondary prevention measures (CDC, 2003; Chesney & Smith, 1999), reducing the stigmatizing attitudes associated with HIV and AIDS was given a high priority.

In contrast to public health efforts to reduce HIV-related stigma, HIV disclosure laws-which potentially punish HIVpositive persons for engaging in consensual sexual activitieshighlight the distinction between persons with HIV and uninfected persons (whose consensual sexual activities are not subject to criminal scrutiny). In so doing, the criminal law reinforces the "us versus them" dichotomy that is central to prevailing theories of stigma (e.g. Devine, Plant, & Harrison, 1999; Hoffman, 1963; Link & Phelan, 2001). The association of HIV infection with criminality also emphasizes that the trait is undesirable and dangerous-that it diminishes not simply the health-status but also the social standing and moral character of persons who are infected (Burris, 2002). Moreover, by suggesting that criminal laws are needed to protect an "innocent" public from HIV infection, HIV disclosure laws may perpetuate the stereotype of the wanton or desperate HIV-positive person who is a threat to society

(Sobo, 1997), thereby contributing to continued HIV-related stigma.

Stigmatizing attitudes and beliefs are detrimental to efforts to prevent further HIV transmission and to promote a fair and compassionate response to those already infected (UNAID, 2002). HIV-related stigma can create an environment where infected persons hide their HIV-positive diagnosis, driving the epidemic "underground" (Burris, 2002; Tindall & Tillett, 1990). Anticipation of stigmatizing responses from health practitioners and service providers may discourage persons with HIV from seeking treatment or other support services, which can adversely affect both their health and their quality of life (Chesney & Smith, 1999; Fortenberry, McFarlane, Bleakley, Bull, Fishbein et al., 2002; Lee, Kochman, & Sikkema, 2002; Miller & Kaiser, 2001; Valdiserri, 2002). Indeed, HIVpositive persons who perceive or experience greater diseaserelated stigma report greater numbers of HIV-related symptoms and poorer quality of life than do other persons with HIV (Ranucci & Vosvick, 2004; Scherbarth & Vosvick, 2004).

Moreover, when HIV-positive persons do not seek treatment, society loses the benefit that early medical intervention provides, such as reduced perinatal transmission through antiretroviral prophylaxis, reduced transmission of opportunistic infections such as tuberculosis, and reduced infectivity associated with effective antiretroviral therapy. A desire to conceal their disease could place some HIV-positive persons out of the reach of public health workers who otherwise could help them to adopt behaviors that reduce the risk of secondary transmission (Burris, 2002). At worst, efforts to conceal one's serostatus could even prompt a person who is aware that he or she has HIV to engage in unsafe sex without disclosure in an effort to avoid arousing suspicion that he or she may be infected (Chesney & Smith, 1999).

HIV-related stigma also could negatively impact prevention efforts with sero-negative persons (CDC, 2003; UNAID, 2002). HIV-related stigma may make at-risk persons more likely to deny that susceptibility is universal and that—absent some additional factor of sinisterism—behaviors practiced by "typical" or "average" individuals, such as engaging in sexual intercourse, may make them vulnerable to HIV infection. At-risk individuals also may avoid seeking information about HIV transmission and prevention or being tested lest they be associated with the stigmatized group (CDC, 2003; UNAID, 2002). Finally, they may be deterred from seeking help for behaviors such as drug addiction or sexual compulsivity that increase their risk of becoming infected (Chesney & Smith, 1999).

In summary, to the extent that HIV disclosure laws foster perceived stigma among persons living with HIV, or reinforce stigmatizing attitudes in society, these laws counteract the public health goal of reducing HIV-related stigma and the associated benefits to HIV-positive persons and to society.

Discussion

The U.S. public health system relies on voluntary cooperation by the American public to help prevent the spread of HIV. The public health response to HIV/AIDS is founded on the following key recommendations. First, all sexuallyactive Americans are encouraged to practice safer sex correctly, consistently, and universally with any partner whose HIV status is not known with certainty. Second, persons who suspect that they may be infected should seek testing and take steps to eliminate or modify behaviors that put them at risk. Third, persons who have been diagnosed as HIV-positive are encouraged to seek treatment, to apprise past sexual partners that they may have been exposed to the virus, and to avoid behaviors that would put future partners at risk. Prevention messages stress that HIV infection is not just a problem for members of so-called "high risk" groups-everyone is susceptible-and that individuals can and should protect themselves (USPHS, 1986, 1992 USPHS and CDC, 1988).

Ideally, laws aimed at preventing the spread of HIV should complement public health efforts to do the same. However, in many respects, existing HIV disclosure laws seem to contradict rather than complement these efforts. By failing to distinguish between lower-risk and higher-risk activities, and by insisting on disclosure regardless of the partner's HIVstatus, these laws reinforce a norm of risk elimination (or "absolutism"— (Cates & Hinman, 1992) that is at odds with the public health emphasis on risk reduction. Moreover, 21 of 23 U.S. HIV disclosure laws either omit any mention of condom use or dismiss their effectiveness, thereby weakening normative support for safer sex, one of the mainstays of public health HIV prevention efforts. Rather than acknowledging a shared responsibility to prevent HIV transmission, these laws shift the burden of prevention to HIV-positive persons, who are required to disclose their serostatus to prospective partners (Bayer, 1996). To the extent that at-risk persons trust their partners' ability and willingness to disclose if they are HIV-positive, the universal practice of safer sex becomes selective safer sex, and reliance on self to avoid becoming infected becomes reliance on others. Moreover, by singling out persons who have HIV in a criminal statute and by criminalizing sexual behavior that would be legal for HIV-negative or untested persons, these laws link HIV-positive status with criminality, potentially reinforcing the stigmatizing attitudes that public health leaders identify as significant barriers to prevention efforts.

A majority (14) of the existing HIV disclosure laws were enacted in the 1980s amid a climate of fear and uncertainty about the future course of the epidemic. Many Americans

felt that laws were needed to protect the "unsuspecting victims" of callous HIV-infected persons who otherwise would wantonly spread the virus throughout the population. Some officials advocated quarantining HIV-infected persons (Chambers, 1994). A legislative response was needed to address the fears of the general public while respecting the civil rights and preserving the dignity of persons living with HIV. HIV disclosure laws were enacted swiftly, as a compromise of sorts, within a polarized and frequently impassioned political environment (see Schulman's, 1988) article, "Remembering Who We Are: AIDS and the Law in a Time of Madness"). Missouri's statute, for example, was hastily drafted, "under the coercion of having something worse if it was not drafted" (Closen, Bobinski, Hermann, Hernandez, Schultz et al., 1994). The authors of these original laws did not have the time, or perhaps the expertise, to carefully consider the public health implications of these statutes.

Several commentators have suggested that lawmakers were prompted to enact new disclosure laws or to strengthen existing laws in response to the widely publicized case of Nushawn Williams who, in 1997, infected several women and girls-including at least one minor-and exposed many others to the virus (Shevory, 2004; Wolf & Vezina, 2004). Between 1997 and 1998, three states enacted new criminal HIV disclosure laws (Cal. Health and Safety Code, 2005; Iowa Code Ann., 2005; N. J. Stat. Ann., 2005) and, of the four states amending existing statutes during this period, three increased the severity of the penalty (Fla. Stat., 2005; Mo. Ann. Stat., 2004; Wash. Rev. Code Ann., 2005). Possibly in response to the Williams case, Missouri amended its law in 1997 to prohibit undisclosed "exposure" specifically and to increase the penalty when the uninformed partner is under age 17 and the HIV-positive person is over 21. The latter provision was omitted in a 2002 amendment that increased the severity of the offense overall and increased it further if the partner became infected. Likewise, Florida's statute was substantively amended in 1997 to increase the penalty for undisclosed exposure and to make provisions for more severe sentences for persons committing multiple violations. Iowa's serostatus disclosure law-one of the three statutes enacted between 1997 and 1998-has one of the most severe penalties of any such law. Although this law is virtually identical to Illinois' 1989 law, the Iowa statute provides for a maximum penalty of 25 years of incarceration, whereas the Illinois penalty range is 3–7 years.

If the Williams case did motivate these legislative additions and amendments (several of which resulted in fairly expansive versions of criminal HIV disclosure laws) the legislative atmosphere would likely have been reactive. As in the early years of the U.S. HIV epidemic, fear and anger may well have heightened the impulse to criminalize. Coordinated efforts to address the public's fears with sound health information buttressed by a legal instrument of last resort would be unlikely.

Surprisingly, despite the fact that nearly half of the 50 U.S. states have criminal HIV disclosure laws, virtually no research has been conducted to evaluate whether these laws are needed, and if so, whether they are effective and whether they are associated with any of a host of potential negative consequences. A sound program of empirical research is needed to address such key questions as: what proportion of persons with HIV contracted the virus from a partner who knew but did not disclose that he or she was infected? Are these laws effective in prompting HIV-positive persons to disclose their serostatus to prospective sex partners and if so, does disclosure increase the likelihood that safer sex or abstinence will be practiced? Is the existence of these laws associated with negative consequences such as, for persons who have HIV, increased perception of HIV-related stigma, or, for persons at risk, decreased willingness to seek HIV testing?

Perhaps most importantly, research is needed to determine the extent to which criminal HIV disclosure laws undermine public health initiatives to encourage sexually-active persons to protect themselves and their partners by practicing safer sex. Viewed as structural interventions intended to prevent the spread of HIV, criminal HIV disclosure laws may inadvertently do more harm than good.

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