DO CRIMINAL LAWS INFLUENCE HIV RISK BEHAVIOR? An Empirical Trial╬

Scott Burris,† Leo Beletsky,†† Joseph Burleson,* Patricia Case** and Zita Lazzarini+

SUMMARY

All states have criminal laws that can be used to punish sexual behaviors that pose some risk of HIV transmission; half have HIV-specific laws criminalizing sexual contact by people with HIV unless they abstain from unsafe sex, or disclose their HIV status and obtain consent from their partners. Whether these laws influence behavior is unknown. Illinois and New York exhibit contrasting legal conditions. Illinois has an HIV-specific law explicitly requiring disclosure by HIV+ persons. New York has no HIV-specific law. This study tests the null hypothesis that differences in law and beliefs about the law do not influence condom use in anal or vaginal sex.

In this empirical study, 490 people at elevated risk of HIV were interviewed, 248 in Chicago and 242 in New York City. Approximately half in each state were men who have sex with men ("MSM") and half were injecting drug users ("IDUs"). Respondents were classified as MSM if they reported ever having had sex with a man, and as IDUs if they reported

---

╬ This article was supported by Grant/Cooperative Agreement Number RO6/CCR118660-01 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC. The authors would like to acknowledge the wonderful help and support of Matt Cook, David Gregorio, Kristina Arvanitis, Joel Houkom and Sarah Bray.

† James E. Beasley Professor, Temple University Beasley School of Law; Associate Director, Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities. J.D., Yale Law School, 1987; A.B., Washington University in St. Louis, 1980.

†† Senior Research Associate, Temple University Beasley School of Law. M.P.H., Brown Unviversity Medical School, 2004; A.B., Vassar College, 2000.

* Assistant Professor, Department of Community Medicine & Health Care, University of Connecticut Medical School. Ph.D., University of Texas at Austin, 1982; M.A., California State University, Long Beach, 1976; A.B., Cornell University, 1969.

** Senior Research Scientist, The Fenway Institute, Fenway Community Health. Sc.D. Harvard School of Public Health, 1997; MPH University of California, Berkeley, 1991; BA San Francisco State University, 1987.

\+ University of Connecticut Medical School and Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities. M.P.H., Harvard School of Public Health., 1991; J.D, University of California, Hastings College of the Law, 1983; M.P.H.; A.B., University of California, Berkeley, 1979.

having injected drugs at least twice in the last three months. One-hundred sixty two subjects reported known HIV infection (Chicago 58; New York City 104). Three-hundred twenty-eight reported being HIV negative or not knowing their HIV status. Indicators of the law were 1) residence in the state, and 2) belief that it is a crime for a person with HIV to have sex with another person without disclosing his or her serostatus. Using stepwise logistic regression, we examined independent predictors of unprotected sex, adjusting for factors including age, race/ethnicity, disclosure, biological sex at birth, sexual orientation and number of partners.

People who lived in a state with a criminal law explicitly regulating sexual behavior of the HIV-infected were little different in their self-reported sexual behavior from people in a state without such a law. People who believed the law required the infected to practice safer sex or disclose their status reported being just as risky in their sexual behavior as those who did not. Our data do not support the proposition that passing a law prohibiting unsafe sex or requiring disclosure of infection influences people's normative beliefs about risky sex. Most people in our study believed that it was wrong to expose others to the virus and right to disclose infection to their sexual partners. These convictions were not influenced by the respondents' beliefs about the law or whether they lived in a state with such a law or not. Because law was not significantly influencing sexual behavior, our results also undermine the claim that such laws drive people with and or at risk of HIV away from health services and interventions.

We failed to refute the null hypothesis that criminal law has no influence on sexual risk behavior. Criminal law is not a clearly useful intervention for promoting disclosure by HIV+ people to their sex partners. Given concerns about possible negative effects of criminal law, such as stigmatization or reluctance to cooperate with health authorities, our findings suggest caution in deploying criminal law as a behavior change intervention for seropositives.

I. INTRODUCTION

Lawyers have been debating the role criminal law should play in regulating the sexual behavior of people with HIV for twenty years, and for twenty years the debate has revolved around the same sort of story: two people meet, have sex and then one finds out the other has HIV. The sex was more or less safe. A condom may or may not have been used. There may have been an outright lie about infection, or just silence. Sometimes the person exposed is one of many. Sometimes he or she is not just exposed

and scared but infected with the virus. On a few occasions, the person with HIV is the epicenter of a mini-epidemic.[1]

The same story, and yet different. For some commentators, the moral is quite simple. Exposing others to a significant risk of infection with a lethal disease is indefensible conduct for one who knows of his or her infection, negligent at best and homicidal at worst. Prosecuting sexual wrong-doers under existing or HIV-specific criminal statutes appropriately punishes bad behavior and will deter others from endangering others in the future.[2] Other observers see a world of ambiguity: sex is a complex behavior, psychologically and morally; disclosure and safe sex are negotiated non-verbally and contextually; risks vary according to the behavior, and are often not as significant as they are portrayed in lurid news reports; a person who practices safe sex or disclosure most or even some of the time represents a public health success, not a worrisome failure. Commentators adopting this view have usually posited that criminal law will not deter people with HIV from having unsafe sex, and may do more harm than good by creating a false sense of security among the uninfected or interfering in public health efforts to reach out to people with and at high risk of infection.[3] Indeed, given the potential harm criminalization could do, some commentators have argued that passing HIV-specific criminal exposure laws is unethical and a violation of human rights.[4]

---

1. *See, e.g.*, Harlon L. Dalton, *Criminal Law*, *in* AIDS LAW TODAY: A NEW GUIDE FOR THE PUBLIC 242, 254–55 (Scott Burris et al. eds., 1993); Matthew Weait, *Knowledge, Autonomy and Consent:* R. v. Konzani, 2005 CRIM. L. REV. 763, 765–68 (2005); Leslie E. Wolf & Richard Vezina, *Crime and Punishment: Is There a Role for Criminal Law in HIV Prevention Policy?*, 25 WHITTIER L. REV. 821, 822–25 (2004); Amy M. Decker, Comment, *Criminalizing the Intentional or Reckless Exposure to HIV: A Wake-Up Call to Kansas*, 46 U. KAN. L. REV. 333, 333–35 (1998); *see also* Karen E. Lahey, Comment, *The New Line of Defense: Criminal HIV Transmission Laws*, 1 SYRACUSE J. LEGIS. & POL'Y 85, 85 (1995).

2. *See* Donald H.J. Hermann, *Criminalizing Conduct Related to HIV Transmission*, 9 ST. LOUIS U. PUB. L. REV. 351, 352–53 (1990); Decker, *supra* note 1, at 363–64. In this article, we use the term "criminalization" to denominate the practice of applying general criminal law or HIV-specific statutes to punish sexual behavior by people with HIV. Several kinds of criminal laws are available in the United States for this purpose. These include HIV-specific exposure and transmission laws—i.e., laws that explicitly mention and exclusively apply to conduct by people with HIV, public health statutes prohibiting conduct that would expose others to communicable or sexually transmitted diseases, and general criminal law stating such offenses as assault or attempted murder. *See* Zita Lazzarini et al., *Evaluating the Impact of Criminal Laws on HIV Risk Behavior*, 30 J.L. MED. & ETHICS 239, 239 (2002).

3. *See, e.g.*, Carol L. Galletly & Steven D. Pinkerton, *Toward Rational Criminal HIV Exposure Laws*, 32 J.L. MED. & ETHICS 327, 335–36 (2004); Lawrence O. Gostin & James G. Hodge, Jr., *Piercing the Veil of Secrecy in HIV/AIDS and Other Sexually Transmitted Diseases: Theories of Privacy and Disclosure in Partner Notification*, 5 DUKE J. GENDER L. & POL'Y 9, 72–82 (1998); Lazzarini et al., *supra* note 2, 251–52; Wolf & Vezina, *supra* note 1, at 885–86.

4. RICHARD ELLIOTT, CANADIAN HIV/AIDS LEGAL NETWORK, CRIMINAL LAW AND HIV/AIDS: FINAL REPORT 69–79 (1996), *available at* http://www.aidslaw.ca/publications/

There has been no shortage of individual stories, often sensationally announced in large-font tabloid headlines.[5] Apart from some data on the frequency and distribution of prosecutions,[6] however, there have never been empirical data on the actual effect of criminal law on the behavior of those with HIV or at risk of HIV infection. In this article, we present the results of a study comparing the attitudes and behavior of people at elevated risk of HIV infection in two states, one that has enacted a criminal law to explicitly regulate the sexual behavior of people with HIV, and one that has not. Our study is an empirical test of how beliefs about the law influence people's decisions about unsafe sex, and whether the effect of criminal law is at all affected by the use of an HIV-specific provision.[7] By examining how law influences behavior at a point of intersection with personal morality and social norms, our study offers some important insights into the much-debated question of how social norms and criminal laws complement, or conflict with, each other.[8]

Part II offers essential background information. We describe briefly the HIV epidemic in the US and the public health interventions that have brought it under control. For purposes of understanding the role of criminalization, two well-established facts are key: most people who test positive for HIV substantially reduce their risk behavior, and most people who transmit HIV are not aware that they are infected. We also summarize the legal literature on HIV and criminal law, including earlier US and international research on the use of these laws. In Part III, we describe the

---

interfaces/downloadfile.php?ref=30.

5. *See, e.g.*, Wolf & Vezina, *supra* note 1, at 822–825 (describing news coverage of a high-profile criminal law case involving HIV).

6. *See* Lazzarini et al., *supra* note 2, at 244–46; GLOBAL NETWORK OF PEOPLE LIVING WITH HIV/AIDS EUROPE & TERRENCE HIGGINS TRUST, CRIMINALISATION OF HIV TRANSMISSION IN EUROPE pt. 4 (2005).

7. A forthcoming article will report a different analysis using disclosure of HIV to sex partners as the main outcome measure.

8. For a decade or more, the "law and social norms" movement has been one of the most vibrant strands of legal scholarship in the United States. *See generally* Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943 (1995); ERIC A. POSNER, LAW AND SOCIAL NORMS (2000). In criminal law, some of these scholars have been promoting a shift in focus from investigation and punishment to improving social norms. *See, e.g.*, Dan M. Kahan, *Reciprocity, Collective Action, and Community Policing*, 90 CAL. L. REV. 1513, 1538–39 (2002); Tracy L. Meares & Dan M. Kahan, *Law and (Norms of) Order in the Inner City*, 32 LAW & SOC'Y REV. 805, 816–30 (1998). This work has been criticized as insufficiently grounded in social science theory and vague in its use of key concepts. *See* Robert Weisberg, *Norms and Criminal Law, and the Norms of Criminal Law Scholarship*, 93 J. CRIM. L. & CRIMINOLOGY 467, 470 (2003) ("The law-and-norms school finds a deceptively useful level of generalization about social behavior to coordinate our understanding of individual and group conduct. But it does so with little distinct theory other than a few general concepts like conformity and esteem-seeking and a sense of fairness, and some borrowings from behavioral cognitive theory and game theory."). As we report below, our study finds that norms of partner protection strongly influence sexual behavior, but have no clear connection to legal rules.

methods of our study. Part IV presents the results. In short, we find little empirical support for most of the claims made about criminal law in the last twenty-five years. People who lived in a state with a criminal law explicitly regulating sexual behavior of the HIV-infected reported behaving in a way that was little different from people in a state without such a law. People who believed the law required the infected to practice safer sex or disclose their status reported being just as risky in their sexual behavior as those who did not. Our data do not support the proposition that passing a law prohibiting unsafe sex or requiring disclosure of infection has a normative effect, for the simple reason that the overwhelming majority of people in our study already believed that it was wrong to expose others, and right to disclose infection to their sexual partners. These attitudes were not influenced by the respondents' beliefs about the law or whether they lived in a state with such a law or not.

We discuss the implications of our findings in Part V. Criminalization does not make a meaningful contribution to the control of HIV. As behavioral scientists have long posited, and as our study confirms, the problem with sexual transmission of the virus is not getting people to adopt the right behavioral goals. Rather, as with smoking, dieting, and exercising, the real challenge is to help people achieve their goals and maintain safe behavior over a life-time. Testing, counseling and a variety of supportive public health interventions have been successful in doing this for quite some time. Threats of punishment evidently are not effective. In individual cases, criminal law does provide a tool for incapacitating people whose behavior is dangerous or socially unacceptable, but that purpose can also be achieved through the use of less punitive control mechanisms often found in state public health law. Criminal law can be used to punish people who have knowingly or intentionally harmed others, but the experience with HIV prosecutions hardly makes the case for HIV-specific laws as they stand now: as other writers have made plain, current HIV-specific laws are poorly drafted and overbroad, failing to tie prohibition and punishment to real risk.[9] There are, moreover, any number of instances in that literature of stories suggesting that prosecutors, judges and juries may not always be very good at distinguishing truly dangerous behavior from behavior that carries little risk of disease transmission.[10]

The question of whether criminalization makes things worse for public health is more complicated. We see no sign in our data of the phenomenon

---

9. *See, e.g.*, Wolf & Vezina, *supra* note 1, at 859–61.

10. *See, e.g.*, Mathonican v. State, 194 S.W.3d 59, 67–68 (Tex. App. 2006) (holding that receptive anal and oral sex and insertive oral sex by a HIV-positive person is sufficient to support conviction of assault with a deadly weapon).

of "moral hazard"—the uninfected taking more chances in the belief that the infected are following legal rules of condom use or disclosure. The fact that criminal law was not influencing sexual behavior does not disprove an effect on testing or stigma, but neither does it make it appear more likely. Our study was not designed to test whether high-profile prosecutions or rancorous legislative debates, rather than the existence of law on the books, heightens stigma or fear of being tested.[11] On the whole, though, we doubt that the relationship is so straightforward. In the United States at least, the stigmas of HIV, homosexuality and sexual "promiscuity" are all contested: the culture is full of both positive and negative messages, and the literature on testing suggests that there are far more compelling drivers than whatever "messages" the legal system manages to extrude. Given the lack of a positive effect, however, we worry that any negative effect, even if rather small, is a pointless waste. And perhaps the effect is more indirect: framing the transmission of HIV as a matter of individual moral choice and culpability hardly seems likely to generate a supportive social atmosphere for those who have HIV, let alone a robust investment of public resources in proven interventions that help people get tested and sustain safe behavior. We know how to stop HIV. We thus come to the conclusion that the role for criminal law in controlling sexual risk behavior is the same role one might reasonably assign to a politician visiting a battlefront: shut up and stay out of the way.

II. BACKGROUND

A. HIV and Its Prevention

HIV is a fatal blood-borne pathogen, transmitted primarily through unprotected sexual intercourse and sharing of equipment among injection drug users.[12] Although more than a million people in the United States are

---

11. For a study on this question, see C. Dodds & P. Keogh, *Criminal Prosecutions for HIV Transmission: People Living with HIV Respond*, 17 INT'L J. STD & AIDS 315, 316–18 (2006) (finding that people living with HIV in the United Kingdom felt criminalization there was exacerbating stigma and undermining HIV prevention). *Cf.* Mary K. Casey et al., *When a Celebrity Contracts a Disease: The Example of Earvin "Magic" Johnson's Announcement That He Was HIV Positive*, 8 J. HEALTH COMM. 249, 260–63 (2003) (positing that coverage of a celebrity's infection led to increased testing).

12. *See* CENTERS FOR DISEASE CONTROL AND PREVENTION, HIV/AIDS SURVEILLANCE REP. 2004, VOL. 16, at 7 (2004) [hereinafter CDC HIV SURVEILLANCE REP.], *available at* http://www.cdc.gov/hiv/stats/hasrlink.htm.

now infected with HIV,[13] the United States may be said to have "controlled" its HIV epidemic.[14] The number of new cases each year has been stable at about 40,000 for the past fourteen years.[15] With the widespread deployment of antiretroviral therapy, AIDS deaths have plummeted.[16] Stabilization of the epidemic is a public health success, but hardly a complete one. The CDC's 2001 strategic plan for HIV prevention set a goal of reducing new infections each year to 20,000,[17] a goal there is no prospect of reaching.[18] Within the stable 40,000, moreover, lurk serious racial and other disparities,[19] indicating that "control" in one population may mask worsening rates of infection in others.[20]

---

13. *See* CENTERS FOR DISEASE CONTROL AND PREVENTION, A GLANCE AT THE HIV/AIDS EPIDEMIC 1 (2006), http://www.cdc.gov/hiv/resources/factsheets/At-A-Glance.htm [hereinafter CDC HIV/AIDS AT A GLANCE]; David R. Holtgrave, *Estimation of Annual HIV Transmission Rates in the United States, 1978–2000*, 35 J. AIDS 89, 90–91 (2004).

14. *See* Ronald O. Valdiserri et al*., Accomplishments in HIV Prevention Science: Implications for Stemming the Epidemic*, 9 NATURE MED. 881, 881 (2003); CDC HIV SURVEILLANCE REP., *supra* note 12, at 6.

15. *See* CDC HIV/AIDS AT A GLANCE, *supra* note 13, at 2; David R. Holtgrave & James W. Curran, *What Works, and What Remains to be Done, in HIV Prevention in the United States*, 27 ANN. REV. PUB. HEALTH 261, 262–64 (2006) (noting that HIV incidence estimates are based on piecemeal state-reported data, as there is no national measure for surveillance of new infections); CDC HIV SURVEILLANCE REP., *supra* note 12, at 5–38; John M. Karon et al., *HIV in the United States at the Turn of the Century: An Epidemic in Transition*, 91 AM. J. PUB. HEALTH 1060, 1064–67 (2001)

16. CDC HIV SURVEILLANCE REP., *supra* note 12, at 7; Robert S. Janssen & Ronald O. Valdiserri, *HIV Prevention in the United States: Increasing Emphasis on Working with Those Living with HIV*, 37 J. AIDS (SUPP.) 119, 119–21 (2001).

17. CENTERS FOR DISEASE CONTROL AND PREVENTION, HIV PREVENTION STRATEGIC PLAN THROUGH 2005, at 2 (2001) [hereinafter CDC HIV STRATEGIC PLAN].

18. Holtgrave & Curran, *supra* note 15, at 264–65; Holtgrave, *supra* note 13, at 91–92.

19. *See* J. Prejean et al., *Racial/Ethnic Disparities in Diagnoses of HIV/AIDS—33 States, 2001–2004*, 55 MORBIDITY & MORTALITY WKLY. REP. 121, 121–25 (2006). The report notes that:

> In 2004, among males, the rate of HIV/AIDS diagnosis for blacks (131.6 per 100,000) was 7.0 times higher than that for whites (18.7 per 100,000), 2.2 times higher than that for Hispanics (60.2 per 100,000), 9.5 times higher than that for A/PIs [Asian/Pacific Islanders] (13.9 per 100,000), and 6.3 times higher than that for AI/ANs [American Indians/Alaska Natives] (20.8 per 100,000). Among females, the HIV/AIDS diagnosis rate for blacks (67.0 per 100,000) was 20.9 times higher than the rate for whites (3.2 per 100,000), 4.1 times higher than the rate for Hispanics (16.3 per 100,000), 16.3 times higher than for A/PIs (4.1 per 100,000), and 8.7 times higher than for AI/ANs (7.7 per 100,000). The rate among black females was higher than rates among males in any other racial/ethnic population.

Id. at 123.

20. *See* Holtgrave & Curran, *supra* note 15, at 263–64 (noting that transmission trends have shifted); INST. OF MED., NO TIME TO LOSE: GETTING MORE FROM HIV PREVENTION 14–25, 140–45 (Monica S. Ruiz et al. eds., 2001) (noting the shifts in trends of HIV infection since the beginning of the epidemic).

The problem is not ignorance about how to control HIV, but problematic implementation of effective measures.[21] Transmission among injecting drug users is directly or indirectly responsible for about one-third of new infections each year.[22] Extensive research and experience demonstrates that infection through injection can be substantially reduced by programs promoting access to sterile syringes,[23] but these interventions remain underutilized for political reasons.[24] Other effective public health interventions are hobbled by insufficient funding[25] and political inhibitions against frank and effective educational messages.[26]

---

21. *See* Holtgrave*, supra* note 13, at 91–92; Steven D. Pinkerton et al., *Secondary HIV Transmission Rates in a Mixed-Gender Sample,* 11 INT'L J. STD & AIDS 38, 38–39 (2000); Jeffrey A. Kelly et al., *Bridging the Gap Between the Science and Service of HIV Prevention: Transferring Effective Research-Based HIV Prevention Interventions to Community AIDS Service Providers*, 90 AM. J. PUB. HEALTH 1082, 1087 (2000) ("Research articles describing the effectiveness of HIV preventions rarely include enough procedural detail to permit replication of the intervention by service providers."); Holtgrave & Curran, *supra* note 15, at 264–70; Valdiserri et al., *supra* note 14, at 881–82; John E. Anderson et al., *HIV Testing in the United States*, 363 ADVANCE DATA 2002 (2005).

22. *See* CENTERS FOR DISEASE CONTROL AND PREVENTION, DRUG-ASSOCIATED HIV TRANSMISSION CONTINUES IN THE UNITED STATES (2002), http://www.cdc.gov/hiv/resources/factsheets/PDF/idu.pdf.

23. *See, e.g.*, Naomi Braine et al*., Long-Term Effects of Syringe Exchange on Risk Behavior and HIV Prevention,* 16 AIDS EDUC. PREVENTION 264, 271–73 (2004); Wilson M. Compton et al., *A Multistate Trial of Pharmacy Syringe Purchase,* 81 J. URB. HEALTH 661, 661–62 (2004); Dan C. Des Jarlais et al., *Public Funding of U.S. Syringe Exchange Programs*, 81 J. URB. HEALTH 118, 118 (2004); Thomas Kerr et al., *Safer Injection Facility Use and Syringe Sharing in Injection Drug Users*, 366 LANCET 316, 316 (2005); C.A. McKnight et al., Centers for Disease Control and Prevention, *Update: Syringe Exchange Programs—United States, 2002*, 54 MORBIDITY & MORTALITY WKLY. REP. 673, 674 (2005); Richard H. Needle et al., *Effectiveness of Community-Based Outreach in Preventing HIV/AIDS Among Injecting Drug Users*, 16 INT'L J. DRUG POL'Y (SUPP.) S45, S45–46 (2005); Josiah D. Rich et al*., A Syringe Prescription Program to Prevent Infectious Disease and Improve Health of Injection Drug Users,* 81 J. URB. HEALTH 122, 123 (2004); Alex Wodak & Annie Cooney, *Effectiveness of Sterile Needle and Syringe Programmes*, 16 INT'L J. DRUG POL'Y (SUPP.) S31, S31–32 (2005).

24. *See, e.g.*, Susan J. Shaw*, Public Citizens, Marginalized Communities: The Struggle for Syringe Exchange in Springfield, Massachusetts*, 25 MED. ANTHROPOLOGY 31, 31–33 (2006) (describing political and social divisions over syringe exchange in one town); David W. Chen, *No Compromise in Sight on Plan to Fight H.I.V.*, N.Y. TIMES, June 4, 2006, at 37 (describing more than a decade of political battles over syringe exchange in New Jersey).

25. Holtgrave & Curran, *supra* note 15, at 265 (finding that "generally from the beginning of the epidemic until 2000, as funding increased, HIV incidence decreased; as funding levels flattened, so too did the decline in new infections."); *see* David R. Holtgrave & Steven D. Pinkerton*, Implications of Economic Evaluations for National HIV Prevention Policy Makers*, *in* QUANTITATIVE EVALUATION OF HIV PREVENTION PROGRAMS 32, 49 (Edward H. Kaplan & Ron Brookmeyer eds., 2002).

26. *See* David Holtgrave, *Science, Values and the Public Health Agencies*, 15 AIDS EDUC. & PREVENTION 203, 203–04 (2003) (discussing the role of political climate in removal of messages about condoms from federal agency websites and the use of non evidence-based concepts).

Reaching the goal of a steadily declining epidemic requires a sustained and well-funded effort to implement evidence-based prevention measures.[27] Meta-analyses of extensive public health research suggest that effective prevention depends upon bundling some form of counseling with tailored social marketing campaigns and fostering the appropriate social, cultural, and economic environment to promote behavioral change.[28] Data show that the participation and partnership of affected communities is crucial to mounting an effective response,[29] and underscore the importance of minimizing stigma and demonization of sero-positive individuals to encourage testing and other voluntary public health measures.[30] Protecting people with HIV from unwarranted prosecution, surveillance, and discrimination is important to creating a supportive environment, but so is the example of tolerance and support set by political leaders and the legal system generally.[31]

---

27. *See* U.N. G.A. Special Session on HIV/AIDS, Final Draft Political Declaration 2006, http://www.ungasshiv.org/index.php/en/content/download/3486/36709/file/060602DraftPoliticalDeclaration.pdf (last visited Feb. 28, 2007) (calling on countries to utilize evidence-based prevention strategies, including access to condoms and clean needles; and provide universal access to HIV prevention programs to their populations); Holtgrave & Curran, *supra* note 15, at 270–71; Kelly et al., *supra* note 21, at 1082–87; Valdiserri et al., *supra* note 14, at 883–85; Janssen &Valdiserri, *supra* note 16, at 120–21.

28. Nicole Crepaz et al., *Do Prevention Interventions Reduce HIV Risk Behaviours Among People Living with HIV? A Meta-Analytic Review of Controlled Trials*, 20 AIDS 143, 144–45 (2006). This article identifies characteristics of intervention design that proved the most effective in a meta-analysis of twelve intensive, controlled studies:

> (1) based on behavioural theory; 2) designed to change specifically HIV transmission risk behaviours; 3) delivered by health-care providers or counsellors; 4) delivered to individuals; 5) delivered in an intensive manner; 6) delivered in settings where [people living with HIV] receive routine services or medical care; 7) provided skills building, or 8) addressed [peripheral] issues related to mental health, medication adherence, and HIV risk behaviour.

Id. at 143. *See also* Gary Marks et al., *Meta-Analysis of High-Risk Sexual Behavior in Persons Aware and Unaware They Are Infected with HIV in the United States: Implications for HIV Prevention Programs*, 39 J. AIDS 446, 451 (2005).

29. *See generally* Ronald O. Valdiserri*, HIV/AIDS' Contribution to Community Mobilization and Health Planning Efforts*, *in* DAWNING ANSWERS: HOW THE HIV/AIDS EPIDEMIC HAS HELPED TO STRENGTHEN PUBLIC HEALTH 56 (Ronald O. Valdiserri ed., 2003) [hereinafter DAWNING ANSWERS] (describing community participation in HIV prevention and its importance).

30. *See generally* Nicole Crepaz & Gary Marks, *Towards an Understanding of Sexual Risk Behavior in People Living with HIV: A Review of Social, Psychological, and Medical Findings*, 16 AIDS 135, 143–47 (2002); Christopher M. Gordon et al., *Prevention Interventions with Persons Living with HIV/AIDS: State of the Science and Future Directions*, 17 AIDS EDUC. & PREVENTION 6, 15–18 (2005).

31. *See* Scott Burris & Lawrence O. Gostin, *The Impact of HIV/AIDS on the Development of Public Health Law*, *in* DAWNING ANSWERS, *supra* note 29, at 96, 110–12; ELLIOTT, *supra* note 4, 88–90; *see also* Nicole Dedobbeleer et al., *Social Network Normative Influence and Sexual Risk-Taking Among Women Seeking a New Partner*, 41 WOMEN & HEALTH 63, 64–67 (2005); David C. Bell et al., *Motivations for Condom Use and Nonuse*, 16 CLINICAL LABORATORY SCI. 20, 20–22 (2003)

At this late stage in the HIV epidemic, the science of sexual transmission of the virus is well-understood. The risk of infection in particular sex acts varies enormously, and being the receptive partner is much riskier than being the insertive one. Unprotected anal intercourse is the most risky sexual behavior, with as high as a one in fifty chance of the inserter transmitting the virus to the receiving partner.[32] Vaginal intercourse is considerably less risky, ranging from about 1/1,000 to 1/2,000 without a condom, to 1/10,000 to 1/20,000 when a condom is used.[33] Biting, kissing, and other practices where bodily fluids other than blood may be exchanged carry a negligible risk of HIV transmission.[34] The risk of any mode of sexual exposure is significantly mediated by factors such as circumcision, the viral load of the infected person, and the health of the uninfected partner.[35] Evidence suggests that as many as two-thirds of all transmissions occur while the sero-positive partner has not yet learned of his status, with as many as twenty-five percent during the first six months of infection.[36] This is particularly relevant to a discussion of criminal law, in which culpability depends upon the perpetrator's knowledge of infection.

The campaign to prevent sexual transmission in the U.S. has evolved over time, but has exhibited three main, complementary elements: voluntary testing and counseling; behavior change interventions targeted at high-risk populations; and more generalized public education aimed both at prevention and promoting a supportive environment.[37] The elements are, ideally,synergistic: a supportive environment is thought to promote testing; knowing one's status improves the effect of behavioral intervention; behavioral interventions help people deal with stigma and the challenges of maintaining safe behavior over the long-term.[38]

(discussing social and structural factors that influence the transmission of HIV through sexual contact).

32. *See* Eric Vittinghoff et al., *Per-Contact Risk of Human Immunodeficiency Virus Transmission Between Male Sexual Partners*, 150 AM. J. EPIDEMIOLOGY 306, 310–311 (1999).

33. Angela M. Downs & Isabelle De Vincenzi, *Probability of Heterosexual Transmission of HIV: Relationship to the Number of Unprotected Sexual Contacts*, 11 J. AIDS 388, 390–92 (1996).

34. *See* J. Campo et al., *Oral Transmission of HIV, Reality or Fiction? An Update*, 12 ORAL DISEASES 219, 225 (2006); Galletly & Pinkerton, *supra* note 3, at 328; Rachel A. Royce et al., *Sexual Transmission of HIV*, 336 NEW ENG. J. MED. 1072, 1072–76 (1997).

35. *See* Royce et al., *supra* note 34, at 1074–75; Brian G. Williams et al., *The Potential Impact of Male Circumcision on HIV in Sub-Saharan Africa*, 3 PLOS MED. 1032, 1037 (2006).

36. James S. Koopman et al., *The Role of Early HIV Infection in the Spread of HIV Through Populations*, 14 J. AIDS & HUM. RETROVIROLOGY 249, 255 (1997) (suggesting that high proportion of HIV transmission occurs during the high veremia period when the infected individual is highly contagious, but before he exhibits symptoms of disease).

37. CDC HIV STRATEGIC PLAN, *supra* note 17, at 20–48.

38. *Id.*; *see also* Holtgrave & Curran, *supra* note 15, at 269–70.

Voluntary testing and counseling has been the cornerstone of the national prevention strategy since the HIV test was introduced in 1985.[39] Its premise, well-supported by behavioral research, is that people who know they are infected, understand what that means, and are equipped with tools to help them protect others, will be less likely to transmit the virus.[40] Getting those at risk to come in for testing has proven far from easy, however: more than one-third of people engaging in behaviors that put them at elevated risk of HIV have never been tested.[41] Some may be unaware of their risk or of how to get tested.[42] Many are probably afraid of finding out they have a dangerous and stigmatized disease.[43] Most importantly, about 25% of people living with HIV in the U.S. simply do not know they are infected; it is this segment of the HIV population that is thought to account for most viral transmission.[44] In an effort to increase testing, the CDC in late 2006 made major changes in its testing guidelines. After twenty years of advising test providers to offer individualized counseling and separate informed consent for an HIV test, the CDC now advocates a streamlined

---

39. In recent years, the positive behavioral effect of knowing one's status and the availability of effective treatment has led some to call for wider "routine" use of testing and screening. *See, e.g.*, A. David Paltiel et al., *Expanded Screening for HIV in the United States—An Analysis of Cost-Effectiveness*, 352 NEW ENG. J. MED. 586, 592–94 (2005). In practical terms, this means no longer requiring separate informed consent and counseling in all settings.

40. Marks et al., *supra* note 28, at 448 (noting that "meta-analysis shows that the prevalence of high-risk sexual behavior is markedly lower in HIV+ persons aware of their seropositive status than in HIV+ persons unaware of their status"); Gary Marks et al., *Reducing Sexual Transmission of HIV from Those who Know They are Infected: The Need for Personal and Collective Responsibility*, 13 AIDS 297, 297–308 (1999) (discussing "the roles of personal and collective responsibility for reducing transmission of HIV," particularly for those aware of their infection). Testing and treatment for other STDs is also very important to reducing HIV/AIDS transmission. Laura M. Bogart et al., *Sexual Risk Among Injection Drug Users Recruited from Syringe Exchange Programs in California*, 32 SEXUALLY TRANSMITTED DISEASES 27, 31–33 (2005); D. R. Holtgrave & Terje Anderson, *Utilizing HIV Transmission Rates to Assist in Prioritizing HIV Prevention Services*, 15 INT'L J. STD & AIDS 789, 790 (2004); Vadiserri et al., *supra* note 14, at 883–84.

41. Anderson et al., *supra* note 21, at 11–12. Even though "testing for HIV was strongly associated with measures of sex- and drug-related HIV behavioral risk . . . [only] 66.4 percent of persons who had risk of HIV from sexual behavior, or drug use, or had been treated for an STD in the past year had ever been tested." By contrast, "48.8 percent of respondents who were not at elevated risk of HIV" had been tested. *Id.* at 6.

42. *Id.* at 11–12.

43. Burris & Gostin, *supra* note 31, at 106; *see also* Scott Burris, *Law and the Social Risk of Health Care: Lessons from HIV Testing*, 61 ALB. L. REV. 831, 862–77 (1998) [hereinafter Burris, *Lessons from HIV Testing*]; Scott Burris, *Surveillance, Social Risk, and Symbolism: Framing the Analysis for Research and Policy*, 25 J. AIDS (SUPP.) 120, 121–23 (2000).

44. Gary Marks et al., *Estimating Sexual Transmission of HIV From Persons Aware and Unaware that They Are Infected with the Virus in the USA*, 20 AIDS 1447, 1448–49 (2006) (estimating that as many as 70% of all new infections are caused by persons unaware of their HIV status); *see also* Holtgrave & Anderson, *supra* note 40, at 790 (estimating that in the year 2000, there were approximately 12,285 new HIV infections transmitted from people who were aware of their HIV status, and 25,515 infections from those who were unaware).

"opt-out screening" process: patients in all health care settings should be tested with no requirement of prevention counseling and an inference that a patient who has consented to general care has consented to testing unless the patient affirmatively opts out.[45]

Once people have learned their infection status, the challenge becomes to maintain behavior that will prevent transmission, such as reducing the number of partners, having safer sex, and disclosing their status.[46] Testing and counseling encourages individuals to be safer, but both uninfected and infected people may continue to take some risks.[47] Research shows that rates of unsafe sex among infected individuals range from relatively low to frequent and may vary over time, but most individuals do remain sexually active, with as many as forty percent continuing to engage in risky behavior at least occasionally.[48] Meanwhile, many HIV-positive people fail to disclose their status to their primary sexual partners—only about one-half of these individuals inform casual partners that they may be at risk.[49]

A great deal of research and practice has gone into understanding why people take risks and how to help them stop. Not surprisingly, data show that the motivations for unsafe sexual behavior are complicated.[50] Factors

---

45. CENTERS FOR DISEASE CONTROL & PREVENTION DEP'T OF HEALTH & HUMAN SERVS., MMWR NO. RR-14, REVISED RECOMMENDATIONS FOR HIV TESTING OF ADULTS, ADOLESCENTS, AND PREGNANT WOMEN IN HEALTH-CARE SETTINGS, MMWR - MORBIDITY & MORTALITY WEEKLY REPORT 7 (2006), *available at* http://www.cdc.gov/mmwr/pdf/rr/rr5514.pdf.

46. *See* Holtgrave & Anderson, *supra* note 40, at 791.

47. Marks et al., *supra* note 28, at 446.

48. Marks et al., *supra* note 40, at 298 (reviewing a number of studies, all of which found that substantial proportions of HIV-positive individuals continue to have unprotected intercourse). *See generally* Angela A. Aidala et al., *Sexual Behaviors and Sexual Risk in a Prospective Cohort of HIV-Positive Men and Women in New York City*, *1994–2002: Implications for Prevention*, 18 AIDS EDU. & PREVENTION 12 (2006) (suggesting that periods of safe behavior can alternate with periods of unsafe behavior depending on an array of factors, including access to housing); Michele L. Crossley, *Making Sense of 'Barebacking': Gay Men's Narratives, Unsafe Sex, and the 'Resistance Habitus*,*'* 43 BRIT. J. SOC. PSYCHOL. 225 (2004) (discussing the reasons some gay men continue to practice unsafe sex despite the risk of HIV); Christian Grov, *"Make Me Your Death Slave": Men Who Have Sex with Men and Use the Internet to Intentionally Spread HIV*, 25 DEVIANT BEHAV. 329 (2004) (discussing a range of individual, social, and structural factors that may influence risk-taking behavior); Gordon Mansergh et al., *'Barebacking' in a Diverse Sample of Men Who Have Sex with Men*, 16 AIDS 653 (2002) (noting that it may take substantial time for newly-infected individuals to become used to practicing safe sex).

49. Kathleen M. Sullivan, *Male Self-Disclosure of HIV-Positive Serostatus to Sex Partners: A Review of the Literature*, J. ASS'N NURSES AIDS CARE, Nov.–Dec. 2005, at 33, 42 (noting that as many as thirty-three percent of primary partners of HIV-infected individuals may not be aware of their risk, and that only slightly more than half of HIV-infected individuals in another study reported disclosing their status to all sexual partners).

50. *See* Marks et al., *supra* note 40, at 297–98. *See generally* HEALTH BEHAVIOR AND HEALTH EDUCATION: THEORY, RESEARCH, AND PRACTICE (Karen Glanz et al. eds., Jossey-Bass 3d ed. 2002) (discussing various models of health behavior). Behavioral scientists have struggled to systematically organize the web of factors that govern health behavior, including sexuality and risk-

influencing the choice of whether to engage in dangerous practices include individual-level factors (such as depression, self-efficacy, substance abuse, and comprehension of risk),[51] partner- and group-level (such as norms of condom use)[52] and societal-level—or structural—factors (including stigma, social marginalization, and availability of services).[53] The confluence of these many influences in any given individual means that any prevention or intervention measures have to be rooted in sound behavioral theory and individually tailored to maximize effectiveness.[54]

Being safer is also complicated by the many non-verbal ways people "negotiate" sex. Is suggesting condom use an admission of infection or a question about the partner's status? Does seeking sex in a bath house equal

---

taking actions in the realm of HIV/AIDS transmission. Karen Glantz et al., *The Scope of Health Behavior and Health Education*, in HEALTH BEHAVIOR AND HEALTH EDUCATION: THEORY, RESEARCH, AND PRACTICE, *supra* at 3–17. They have developed a number of models to explain the influences on people's health choices, including those stressing individual-level factors (e.g. the Health Belief Model, Theory of Reasoned Action); those placing more significance on various forms of interpersonal communication (e.g. Social Cognitive Theory, Social Networks Theory, Social Influence and Interpersonal Communication Theory); and frameworks taking a broader, community-level view of factors influencing health behaviors (e.g. Theory of Organizational Change, Communication Theory, Innovation Diffusion Theory). See HEALTH BEHAVIOR AND HEALTH EDUCATION: THEORY, RESEARCH, AND PRACTICE, *supra*, at 45–389. One thing that these varied theories share is the understanding that an individual's choices exist in an environment of interacting influences, where no one factor can be understood to eclipse all others in guiding the individual's choices. *Id.*

51. Crossley, *supra* note 48, at 225–26, 242; Stevenson Fergus et al., *HIV Risk and Protection Among Gay Male Couples: The Role of Gay Community Integration*, HEALTH EDUC. & BEHAV., Apr. 2005, at 151, 152–59; Perry N. Halkitis et al., *Sexual Behavior Patterns of Methamphetamine-Using Gay and Bisexual Men*, 40 SUBSTANCE USE & MISUSE 703, 708, 713 (2005); Holtgrave & Anderson, *supra* note 40, at 789, 791; Gordon Mansergh et al., *The Circuit Party Men's Health Survey: Findings and Implications for Gay and Bisexual Men*, 91 AM. J. PUB. HEALTH 953, 954–58 (2001); Jane M. Simoni & David W. Pantalone, *Secrets and Safety in the Age of AIDS: Does HIV Disclosure Lead to Safer Sex?*, TOPICS HIV MED., Oct.–Nov. 2004, at 109, 113–17.

52. Vimla L. Patel et al., *Shaping Understanding of HIV Through Negotiation and Conflict Resolution During Peer Group Discussion*, 11 ADVANCES HEALTH SCI. EDUC. 185, 185 (2006).

53. *See generally* Holtgrave & Curran, *supra* note 15 (discussing HIV prevention programs); Julie Solomon et al., *Adapting Efficacious Interventions: Advancing Translational Research in HIV Prevention*, EVALUATION & HEALTH PROFS., June 2006, at 162; Peter A. Vanable et al., *Impact of HIV-Related Stigma on Health Behaviors and Psychological Adjustment Among HIV-Positive Men and Women*, 10 AIDS & BEHAVIOR 473, 480 (2006) (noting that disclosure of serostatus may actually increase stigma: "findings from the global measure of serostatus disclosure showed that disclosure to people other than sexual partners was *more* rather than less common among participants reporting frequent stigma-related experiences. Although contrary to our original hypothesis, a plausible explanation is simply that frequent disclosure of HIV serostatus increases the likelihood that a person will eventually experience mistreatment and discrimination by allowing a broader range of people to be aware of a person's serostatus. Thus, avoiding serostatus disclosure may limit illness-related social support . . . but may also lessen the likelihood that an HIV-positive person experiences overt acts of discrimination." (citation omitted)).

54. Jeffrey H. Herbst et al., *A Meta-Analytic Review of HIV Behavioral Interventions for Reducing Sexual Risk Behavior of Men Who Have Sex with Men*, 39 J. AIDS 228, 237 (2005) (noting that tailoring of interventions has been shown to be highly effective).

consent to HIV exposure? If one's HIV medications are in plain sight in the bedroom, is verbal disclosure required? If you don't ask, does that mean I don't have to tell? People may rely on contextual signals, assuming that a partner in a public sex venue who does not insist on safer sex has assumed the risk,[55] or consented to the possibility of infection by engaging in risky behavior without inquiring about a partner's HIV serostatus.[56]

Interventions to support behavior change have been effectively introduced at the individual and small group level, but there have also been important successes in the use of "community-level" interventions. These "aim to influence behaviors both by changing social norms regarding risk behaviors, and by increasing the social acceptability and support for safer behaviors."[57] Successful individual-level interventions include individual or small-group counseling, tailored social marketing materials, and peer-to-peer information diffusion schemes.[58] At the community level, successful social marketing and education campaigns, information diffusion programs, and schemes taking a broader approach to address structural problems such as housing have been effective.[59] In recent years, the CDC has directed more of its behavior change efforts at those who are infected, in what it has called the "Serostatus Approach to Prevention."[60] Public health research and practice in the realm of HIV prevention has essentially ignored criminal law as a means of controlling the epidemic.

---

55. Marks et al., *supra* note 40, at 298–300; A.M. Somlai et al., *HIV Risk Behaviour Among Men Who Have Sex with Men in Public Sex Environments: An Ecological Evaluation*, 13 AIDS CARE 503, 503–13 (2001).

56. Paul D. Cleary et al., *Behavior Changes After Notification of HIV Infection*, 81 AM. J. PUB. HEALTH 1586, 1586–90 (1991); Fergus et al., *supra* note 51, at 157–67; Halkitis et al., *supra* note 51, at 707–16; Blair T. Johnson et al., *Sexual Risk Reduction for Persons Living With HIV, Research Synthesis of Randomized Controlled Trials, 1993 to 2004*, 41 J. AIDS 642, 644–49 (2006).

57. Valdiserri et al., *supra* note 14, at 882.

58. Kelly et al., *supra* note 21, at 1082–87; *see also* Herbst et al., *supra* note 54, at 237 ("Not only do behavioral interventions reduce rates of [unprotected anal intercourse], decrease numbers of sexual partners, and increase condom use during anal sex; they also support behavioral risk reductions up to 12 months after interventions.").

59. Kelly et al., *supra* note 21, at 1082, 1087 (discussing the ability to adopt community-level interventions such as community organizing and outreach to various settings); *see also* Angela Aidala et al., *Housing Status and HIV Risk Behaviors: Implications for Prevention and Policy,* 9 AIDS & BEHAV. 251, 251 (2005) (discussing the role of housing in promoting reduction in risk behavior); Bell et al., *supra* note 31, at 20–22 (discussing the various effective approaches to motivating safer behavior); Dedobbeleer et al., *supra* note 31, at 63 (describing the influence of peers and structural factors on behavior change).

60. Robert S. Janssen et al., *The Serostatus Approach to Fighting the HIV Epidemic: Prevention Strategies for Infected Individuals*, 91 AM. J. PUB. HEALTH 1019, 1019–20 (2001).

B. Criminal Law and HIV

The application of criminal law to HIV-related behavior has been controversial since the earliest days of the epidemic.[61] At first, the argument was largely about whether criminal law should be used at all.[62] About half the states had on their books antique public health laws that purported to criminalize deliberate behavior that exposed others to disease.[63] These tended to be misdemeanors or minor felonies; they had rarely been invoked at any time and certainly had never been used in modern times in relation to a disease like HIV.[64] General criminal provisions, such as assault and attempted murder, were also available in every state.[65] As prosecutions began to arise under existing general criminal statutes, the debate turned to whether or not new provisions, written explicitly to govern HIV exposure or transmission, were required to make prosecution easier or fairer.[66] By 1990, twenty-four states had enacted such legislation, and fifteen states had sentencing provisions that increased the punishment for existing general crimes (e.g., rape, prostitution) when committed by a person who knew he was HIV-positive.[67] In the past few years, legislatures have not been active in this area, and scholarly commentary in the United States has largely focused on the more glaring defects in the existing HIV-specific laws, particularly their breadth and inattention to significant variation in the risks of prohibited acts.[68] In this section, we canvass the main points in the legal debate, and review data on prosecutions from an earlier phase of our research.

---

61. *See* Wolf & Vezina, *supra* note 1, at 837–45 (offering a detailed description of the debate). *See generally* ELLIOTT, *supra* note 4 (including an annotated review of the legal and socio-behavioral literature).

62. Dalton, *supra* note 1; Larry Gostin, *Traditional Public Health Strategies*, *in* AIDS LAW TODAY: A NEW GUIDE FOR THE PUBLIC 59, 62–67 (Scott Burris et al. eds., 1993).

63. *See* Lazzarini et al., *supra* note 2, at 241.

64. *See id.*

65. *See, e.g.*, Dalton, *supra* note 1, at 242–46.

66. *See, e.g.*, Kathleen M. Sullivan & Martha A. Field, *AIDS and the Coercive Power of the State*, 23 HARV. C.R.-C.L. L. REV. 139, 156–62 (1988).

67. *See* Lazzarini et al., *supra* note 2, at 241–44. Another factor was a provision in the federal Ryan White Comprehensive AISA Resources Emergency Care Act of 1990 that required provided states to certify that a person who intentionally infected another with HIV could be criminally prosecuted under state law. The Act did not require that state to have an HIV-specific law, but many states passed them at this time. *See* Jodi Mosiello, Note, *Why the Intentional Sexual Transmission of Human Immunodeficiency Virus (HIV) Should Be Criminalized Through the Use of Specific HIV Criminal Statutes*, 15 N.Y.L. SCH. J. HUM. RTS. 595, 599 (1999).

68. *See generally* Galletly & Pinkerton, *supra* note 3; Wolf & Vezina, *supra* note 1.

1. The Criminal Law Debate

The claim that criminal law, and particularly HIV-specific laws, could actually help control an HIV epidemic at the population level has not figured prominently, or at least rigorously, in the legal debate. Proponents of criminalization have either taken its impact for granted or essentially ignored the point,[69] while it has been taken as self-evident by most opponents that the law would not influence sexual risk behavior any more effectively in this area than it has in others, like homosexuality or prostitution.[70] In much of the legal literature, the possibility of influencing population behavior for good or ill was a point of policy argument, but the emphasis was on defining culpable behavior and dealing fairly with individual wrong-doers. In any event, the use of criminal law very quickly became a fact to be dealt with, not an option to be considered.

There has always been virtual unanimity that a person who knows he is HIV infected and deliberately tries to or does infect another has done wrong.[71] Opponents of specifically criminalizing HIV-related behavior have argued that these rare "HIV as a weapon" scenarios can be dealt with under general criminal law.[72] Proponents of criminalizing HIV have pointed out some difficulties with general statutes (for example, given the long course of the disease, does one try a deliberate infector for attempted murder or postpone prosecution until the victim's death?),[73] but in

---

69. *See, e.g.*, Wolf & Vezina, *supra* note 1, at 837–38, 843; Simon Bronitt, *Spreading Disease and the Criminal Law*, 1994 CRIM L. REV. 21, 22–34 (1994); Mosiello, *supra* note 67, at 599–623. *See generally* André A. Panossian et al., *Criminalization of Perinatal HIV Transmission*, 19 J. LEGAL MED. 223 (1998) (considering the application of criminal law to mothers who transmit HIV to their offspring).

70. *See, e.g.*, Zita Lazzarini & Robert Klitzman, *HIV and the Law: Integrating Law, Policy, and Social Epidemiology*, 30 J.L. MED. & ETHICS 533, 537, 541–42 (2002); Arianne Stein, Note, *Should HIV Be Jailed? HIV Criminal Exposure Statutes and Their Effects in the United States and South Africa*, 3 WASH. U. GLOBAL. STUD. L. REV. 177, 189–92 (2004).

71. Some take the argument for retribution further than others. *See generally* Stefanie S. Wepner, Note, *The Death Penalty: A Solution to the Problem of Intentional AIDS Transmission Through Rape*, 26 J. MARSHALL L. REV. 941 (1993) (arguing for capital punishment as the only suitable sentence for transmitting AIDS to a rape victim).

72. *See, e.g.*, Michael L. Closen, *The Arkansas Criminal HIV Exposure Law: Statutory Issues, Public Policy Concerns, and Constitutional Objections*, 1993 ARK. L. NOTES 47, 54–56 (1993); Jean R. Sternlight, *Mandatory Non-Anonymous Testing of Newborns for HIV: Should It Ever Be Allowed?*, 27 J. MARSHALL L. REV. 373, 379–81 (1994); Sullivan & Field, *supra* note 66, at 156–62.

73. *See, e.g.*, Bronitt, *supra* note 69, at 22–23 (discussing effect of traditional rule that murder will not lie unless the victim dies within a year and a day of the *actus reus*); *see also* Lori A. David, *The Legal Ramifications in Criminal Law of Knowingly Transmitting AIDS*, 19 LAW & PSYCHOL. REV. 259, 262–69 (1995) (same).

legislative practice only California's HIV-specific law is limited to intentional exposure or transmission.[74]

The real focus of the criminalization debate has been on what to do about people who know they are infected and have no wish to infect others, but for one reason or another have sex without disclosing their status or taking precautions against transmission.[75] For some, criminalization of such negligence or recklessness is a necessary and appropriate response to self-evidently dangerous behavior.[76] Criminalization serves to incapacitate individuals who would otherwise continue to endanger others,[77] and may also lead to rehabilitation.[78] Claims of deterrence are also made.[79]

At least one critic of criminalization has directly questioned whether this sort of everyday failure of sexual probity is even properly understood as wrongful,[80] but for the most part objectors have not disputed that people ought to be protecting their partners. The objection has had more to do with whether it makes sense to think of this sort of undesirable behavior as a

---

74. *See* CAL. HEALTH & SAFETY CODE § 120291(a) (West 2006).

75. In technical terms, this issue has turned first on the appropriate *mens rea*. Should criminal sanctions be limited to people who are aware of their infection, or include also those who engage in enough high risk sexual behavior that they "should know?" If actual knowledge of HIV infection is required, what must the individual know or understand about the risk implications? *See, e.g.*, Bronitt, *supra* note 69, at 29–30 (discussing problems with a "recklessness" standard).

76. *See generally id.* at 26–27; David, *supra* note 73; Decker, *supra* note 1; Hermann, *supra* note 2; Jacob A. Heth, *Dangerous Liaisons: Criminalizing Conduct Related to HIV Transmission*, 29 WILLAMETTE L. REV. 843 (1993); David Kromm, Note, *HIV-Specific Knowing Transmission Statutes: A Proposal to Help Fight an Epidemic*, 14 ST. JOHN'S J. LEGAL COMMENT. 253 (1999); Mona Markus, *A Treatment for the Disease: Criminal HIV Transmission/Exposure Laws*, 23 NOVA L. REV. 847 (1999); Lahey, *supra* note 1; Mosiello, *supra* note 67; Panossian, *supra* note 69; Stein, *supra* note 70; Wepner, *supra* note 71.

77. Winifred H. Holland, *HIV/AIDS and the Criminal Law*, 36 CRIM. L.Q. 279, 288–89 (1994); Stephen V. Kenney, Comment, *Criminalizing HIV Transmission: Lessons from History and a Model for the Future*, 8 J. CONTEMP. HEALTH L. & POL'Y 245, 252–57 (1992).

78. Bronitt, *supra* note 69, at 33; Stein, *supra* note 70, at 194 (noting that such rehabilitation is difficult to archive).

79. *See, e.g.*, Decker, *supra* note 1, at 357 ("[F]or those defendants who are not already in prison at the time of their acts, the thought of spending their last months or years in prison could be a very effective deterrent. Facing death is far more comfortable when surrounded by the love and support of family and friends, rather than being surrounded by strangers and criminals in a penal institution. Additionally, the medical treatment in prison is far less adequate than what one could receive on the outside world."). Not that commentators fail to hedge their bets. Hermann, for example, writes:

> Criminal statutes are effective to deter individuals from engaging in HIV transmitting behavior to the extent statutes specify proscribed behavior which is likely to spread the virus, to the extent violations of such statutes will be reported and prosecuted, and to the extent such statutes have explicit penalties established for their breach.

Hermann, *supra* note 2, at 353.

80. J. Chalmers, *The Criminalisation of HIV Transmission*, 78 SEXUALLY TRANSMITTED INFECTIONS 448, 449–50 (2002).

crime. Harlon Dalton questioned the very "impulse to criminalize," observing how "sex cases tap into an incredibly deep and murky reservoir of worry, fear, excitement and dread."[81] In practical terms, it was argued that criminal law may simply be too blunt a tool for achieving change in peoples' sexual risk behavior, the sources of which are many and deep.[82] When it comes to sex, few people seem to be rational actors.[83] Some critics pointed in particular to the "structural factors" affecting sexual behavior (such as racism, poverty and homophobia) and contended that legal interventions ignoring these factors were bound to fail.[84] Critics were also concerned that these laws would not or could not be applied fairly to defendants in already marginalized and stigmatized groups.[85]

The dispute has consistently depended on assumptions about risks and judgments about their acceptability. From an epidemiological perspective, unsafe sex is not uncommon, and may even with scrupulous objectivity be described as normal, which is why we have an HIV epidemic in the first place.[86] Millions of people are apparently prepared to take some sexual risks, and increasingly critics have challenged the premise that sexual behavior is extremely dangerous as just factually incorrect.[87] Many kinds of sexual behavior involving some exchange of bodily fluids are, in fact, not particularly dangerous at all.[88] Even vaginal or anal sex with an HIV-infected partner is not like playing Russian roulette.[89] To some critics, proponents of criminalization were pushing what amounted to a demand for abstinence, not likely to be effective and not even desirable in light of the positive value of human sexual expression.[90] Given inflated risk and homophobia, some questioned the justification for state intrusion into private matters.[91] Opponents invoked studies showing that unfair law enforcement practices can actually make people *less* likely to obey.[92]

---

81. Dalton, *supra* note 1, at 244.

82. *See generally* Gostin & Hodge, *supra* note 3; Lazzarini et al., *supra* note 2; J. Kelly Strader, *Criminalization as a Policy Response to a Public Health Crisis,* 27 J. MARSHALL L. REV. 435 (1994).

83. Dalton, *supra* note 1, at 252–53. *But see* Hermann, *supra* note 2, at 355–56 (arguing that criminal law has been effective in deterring sex crimes such as incest).

84. *See generally* Gostin & Hodge, *supra* note 3, 68–71; Wolf & Vezina, *supra* note 1, at 861.

85. Dalton, *supra* note 1, at 256–60; Lazzarini & Klitzman, *supra* note 70, at 537; Wolf & Vezina, *supra* note 1, at 828–31. *See generally* ELLIOTT, *supra* note 4; Gostin & Hodge, *supra* note 3.

86. *See supra* notes 46–54 and accompanying text.

87. *See, e.g.*, Galletly & Pinkerton, *supra* note 3, at 327–32.

88. *See, e.g.*, Lazzarini et al., *supra* note 2, at 239, 244.

89. For a discussion of the statistical risks, see *supra* notes 32–34 and accompanying text.

90. *See* Wolf & Vezina, *supra* note 1, at 859; *see also* Dalton, *supra* note 1, at 244.

91. *See generally* Joseph W. Rose, *To Tell or Not to Tell: Legislative Imposition of Partner Notification Duties for HIV Patients*, 22 J. LEGAL MED. 107 (2001); Sullivan & Field, *supra* note 66,

Supporters of criminalization have argued that an HIV-specific statute is the best way to specify what combination of acts and mental states constitute wrong-doing.[93] A specific law, it is argued, will send a clear message to people with HIV about what is right and wrong, at least putting them on notice and at best producing behavioral change.[94] Even if convictions can be readily secured in serious cases without HIV-specific statutes,[95] a well-drafted criminal law could reduce the chances of arbitrary or unfair prosecution by setting risk-based behavioral standards and proportional punishments for violators.[96]

In fact, by and large the statutes that were passed failed to link culpability and punishment to risk. The most trenchant criticism of the criminalization of HIV has come from writers demonstrating that existing laws use wildly overbroad and risk-insensitive definitions of culpable behavior.[97] Some of the statutes impose the same penalty for unprotected insertive anal intercourse (risk of HIV transmission: about one in fifty), protected receptive vaginal intercourse (approximate risk: one in twenty thousand), and "insertive" sexual intercourse using uncontaminated sex toys (virtually no risk of transmission).[98] At least in some instances, the application of these overly-broad statutes can lead to unjust, absurd

---

at 161; Wolf & Vezina, *supra* note 1; Amy L. McGuire, Comment, *AIDS as a Weapon: Criminal Prosecution of HIV Exposure*, 36 HOUS. L. REV. 1787 (1999).

92. *See generally* Kahan, *supra* note 8.

93. *See generally* Bronitt, *supra* note 69, at 21–32 (discussing technical problems of prosecuting HIV exposure and transmission cases under Australian and United Kingdom criminal law); Larry Gostin, *The Politics of AIDS: Compulsory State Powers, Public Health, and Civil Liberties*, 49 OHIO ST. L.J. 1017, 1041–43 (1989); Kenney, *supra* note 77 (explaining that laws criminalizing acts by a person who knows of his or her HIV infection discourages participation in HIV testing and treatment programs); Kromm*, supra* note 76, at 260–71. It should be noted that these statutes typically cover more than just sexual behavior, applying either explicitly or by their general terms to other behavior involving HIV, such as donating blood or sharing needles. *See, e.g.*, GA. CODE ANN. § 16-5-60 (2003); MD. CODE ANN., HEALTH–GEN. § 18-601.1(a) (LexisNexis 2005).

94. Hermann, *supra* note 2, at 370 (citing a 1988 report by the Presidential Commission on the Human Immunodeficiency Virus Epidemic, which stated that HIV-specific criminal statutes "provide clear notice of socially unacceptable standards of behavior specific to the HIV epidemic and can . . . tailor[] punishment to the specific crime of HIV transmitting behavior").

95. *See* Lazzarini et al., *supra* note 2, at 244–49; Weait*, supra* note 1, at 763–66.

96. *See, e.g.*, Sullivan & Field, *supra* note 66, at 156–65 (noting that an examination of traditional criminal laws reveals doubtful and troubling applications to crimes of AIDS transmission). This position came out of cases in which people were convicted for attempted murder for spitting or biting, where the impossibility of transmission was not a defense and conviction could be based solely on the jury's determination that the defendant believed it was possible to and intended to transmit the virus. *See, e.g.*, Scroggins v. State, 401 S.E.2d 13 (Ga. Ct. App. 1990); Weeks v. State, 834 S.W.2d 559 (Tex. Crim. App. 1992); Hermann, *supra* note 2, at 366.

97. *See* Galletly & Pinkerton, *supra* note 3, at 329–31; Weait*, supra* note 1, at 771–72.

98. Galletly & Pinkerton, *supra* note 3, at 328 (cataloging the hierarchy of risk and explaining the failure of criminal laws to address its variation).

results.[99] In one illustrative case, an HIV-positive individual was convicted of attempted murder for spitting on a prison guard[100]—an act that carries virtually no risk of disease transmission.[101]

Leaving aside the question of whether they do any good, the most consistent objection to the use of general or HIV-specific laws has been that they will harm the effort to control the disease.[102] One claim has been that HIV-specific criminal laws promote stigma, undermining the supportive environment necessary for effective HIV prevention.[103] On this view,

> [C]riminalizing otherwise legal acts (consensual sex) by a person with HIV . . . could cast all persons with HIV as criminals in the eyes of the general public. Or, from the perspective of the person with HIV, criminalizing a normal and pleasurable part of life could alienate that individual from the rest of society.[104]

Proponents of criminalization note the lack of evidence for this effect, and argue that requiring people to take individual responsibility for preventing disease transmission is perfectly consistent with a sound public health policy.[105]

More or less related variants of the hostile environment argument focus on specific counterproductive consequences. One line of criticism points to the fact that criminalization may put law enforcement and public health aims at odds in addressing HIV risk and counteracting effective public health measures.[106] Because the laws only apply to people who know their status, the statutes may be powerful disincentives for voluntary testing.[107]

---

99. *See, e.g.*, Christina M. Shriver, *State Approaches to Criminalizing the Exposure of HIV: Problems in Statutory Construction, Constitutionality and Implications*, 21 N. ILL. U. L. REV. 319, 342 (2001); *see also* Lazzarini et al., *supra* note 2, at 240, 247–51; Wolf & Vezina, *supra* note 1, 846–61, 870–71.

100. *Weeks*, 834 S.W.2d at 561.

101. *See, e.g.*, Closen, supra note 72, at 50; Galletly & Pinkerton, *supra* note 3, at 329; Lazzarini et al., *supra* note 2, at 245.

102. *See generally* ELLIOTT, *supra* note 4; Closen, *supra* note 72; Galletly & Pinkerton, *supra* note 3; Gostin, *supra* note 93; Lazzarini et al., *supra* note 2; McGuire, *supra* note 91; Shriver, *supra* note 98; Strader, *supra* note 82; Sullivan & Field, *supra* note 66; Weait, *supra* note 1; Wolf & Vezina, *supra* note 1.

103. *See supra* note 85 and accompanying text.

104. Lazzarini & Klitzman, *supra* note 70, at 537.

105. *See, e.g.*, Bronitt, *supra* note 69, at 27.

106. *See, e.g.*, Gostin & Hodge, *supra* note 3, at 51–61; Wolf & Vezina, *supra* note 1, at 836–38.

107. Hermann, *supra* note 2, at 375. *But see* Bronitt, *supra* note 69, at 30 (describing the effect as "doubtful"); Hermann, *supra* note 2, at 357, 375 (arguing that any such effect can be minimized by access to effective treatment and strict protection of the privacy of diagnostic test results).

In the same vein, the possibility of being charged with a crime may discourage infected individuals from disclosing and notifying their prior contacts, creating an adversarial, rather than cooperative relationship between public health officials and patients.[108] Thus criminal laws may actually impede evidence-based public health interventions that have been proven to curb disease transmission.[109] Finally, there has been concern about a "moral hazard" effect: if uninfected people are aware of the law, and indeed believe it to be effective, they will assume wrongly that people with HIV are obeying it and feel free to have unprotected sex with any partner that does not disclose HIV or insist on condom use.[110]

2. What Our Earlier Study Told Us

In the first phase of our study we set out to identify all prosecutions of people from HIV-related crimes brought under general criminal law or HIV-specific statutes.[111] Using newspaper accounts and reported cases, we found 316 discrete prosecutions between 1986 and 2001.[112] The outcome could be determined in 228 cases, of which 164 resulted in convictions on HIV-related charges.[113] In twenty other cases, HIV status was the basis for a penalty enhancement at sentencing.[114] In all, there was a conviction in more than 80 percent of the cases in which the outcome could be determined.[115] None were brought under the old public health criminal statutes.[116] The prosecutions showed no evident pattern in time or severity of the local HIV epidemic:

> We found no evidence of systematic enforcement of HIV exposure laws. What seems to determine who gets prosecuted is the accident of being caught and brought to the attention of a willing prosecutor. The most prominent shared characteristic of those charged with HIV-related crimes is that their alleged behavior was already criminal without regard to their HIV status. More than 70 percent had

108. *See, e.g.*, Galletly & Pinkerton, *supra* note 3, at 333–36; Gostin, *supra* note 93, at 1052; Lazzarini et al., *supra* note 2, at 250–51; Weait, *supra* note 1.

109. Galletly & Pinkerton, *supra* note 3, at 331–36; Sullivan & Field, *supra* note 66, at 156–97.

110. *See, e.g.*, Gostin, *supra* note 93, at 1043–45; Dalton, *supra* note 1, at 244, 255–56..

111. *See generally* Lazzarini et al., *supra* note 2.

112. *Id.* at 244–45.

113. *Id.* at 244. Information was not always available on whether the charges were based on an HIV-specific statute or general criminal law. *Id.*

114. *Id.*

115. *Id.* at 244–45.

116. *Id.* at 244.

> committed their HIV-related illegal act in the course of a sex crime, an assault, or an act of prostitution.[117]

International researchers have identified similar prosecution patterns in other countries.[118]

This data tended to rule out a major influence on the epidemic through incapacitation: quite apart from the fact that people in jail can still have sex or use needles (and with less of a chance of doing so safely), far too few people were being imprisoned to have a serious impact on transmission.[119] Criminal laws might also influence behavior and HIV transmission through deterrence, or by reinforcing norms of safe behavior. Although such a small and apparently random set of prosecutions was not, on its face, strong support for the occurrence of such effects, the often widespread and lurid media coverage of the cases that were brought conceivably "sent a message" about good behavior or left an impression in the minds of people at risk that detection and punishment were real possibilities.[120] A study of prosecutions could not ultimately determine these issues, or shed light on whether the use of law was hurting public health, which brings us to the current study of the behavior and beliefs about the law of people at elevated risk of HIV.

III. SUMMARY OF METHODS AND ANALYSIS

This section briefly summarizes our data collection processes and our analytic approach. More detailed methodological information is to be found in the footnotes.

---

117. *Id.* at 247.

118. GLOBAL NETWORK OF PEOPLE LIVING WITH HIV/AIDS EUROPE & TERRENCE HIGGINS TRUST, *supra* note 6, § 4.1. For a global review of criminal law and HIV, see generally Heather Worth et al., *Legislating the Pandemic: A Global Survey of HIV/AIDS in Criminal Law*, SEXUALITY RES. & SOC. POL'Y: J. NSCR, June 2005, at 15.

119. Surveillance data suggest that every year there are over 12,000 instances of HIV transmission during sexual intercourse between an individual who knows his or her status and an uninfected partner. *See* Holtgrave & Anderson, *supra* note 40, at 790. Lazzarini, Bray and Burris found only 211 prosecutions involving sexual exposure between 1986 and 2001, with 138 convictions. Lazzarini et al., *supra* note 2, at 245. Over the fifteen year period, this amounts to a prosecution rate of only one in 853 cases, and a conviction rate of one in 1,304.

120. *See* Lazzarini et al., *supra* note 2, at 246–52; Wolf & Vezina, *supra* note 1, at 843–44, 874–75.

A. Data Collection and Study Sample

The study was designed to determine whether people's self-reported behavior was influenced by the criminalization of risky sexual behavior by persons infected with HIV, and whether the influence was different depending upon whether a state had passed an HIV-specific criminal statute. We conducted surveys in two cities, Chicago and New York. Illinois has a statute regulating sexual behavior by people who know they have HIV.[121] The State of New York has no such law, but like other states without HIV-specific legislation, general criminal law has been used to prosecute unsafe behavior by people with HIV in the past.[122] The survey was administered in a one- to two-hour interview by teams of trained data collectors.

Participants were people who reported behavior associated with an elevated risk of HIV, either men reporting sex with men or people of either

---

121. 720 ILL. COMP. STAT. 5/12-16.2 (2006). The Criminal Transmission of HIV statute states:

> (a) A person commits criminal transmission of HIV when he or she, knowing that he or she is infected with HIV:
>
> (1) engages in intimate contact with another;
>
> (2) transfers, donates, or provides his or her blood, tissue, semen, organs, or other potentially infectious body fluids for transfusion, transplantation, insemination, or other administration to another; or
>
> (3) dispenses, delivers, exchanges, sells, or in any other way transfers to another any nonsterile intravenous or intramuscular drug paraphernalia.
>
> (b) For purposes of this Section:
>
> "HIV" means the human immunodeficiency virus or any other identified causative agent of acquired immunodeficiency syndrome.
>
> "Intimate contact with another" means the exposure of the body of one person to a bodily fluid of another person in a manner that could result in the transmission of HIV.
>
> "Intravenous or intramuscular drug paraphernalia" means any equipment, product, or material of any kind which is peculiar to and marketed for use in injecting a substance into the human body.
>
> (c) Nothing in this Section shall be construed to require that an infection with HIV has occurred in order for a person to have committed criminal transmission of HIV.
>
> (d) It shall be an affirmative defense that the person exposed knew that the infected person was infected with HIV, knew that the action could result in infection with HIV, and consented to the action with that knowledge.
>
> (e) A person who commits criminal transmission of HIV commits a Class 2 felony.

Id. The law went into effect in September of 1989. *See id.*; *see also* Ill. Legis. Serv. P.A. 86-897 (West). Our earlier study found that there had been at least twenty-six prosecutions for HIV-related risk behavior between 1986 and 2001 in Illinois, nearly all of which had been brought under the HIV-specific provision. *See* Lazzarini et al., *supra* note 2, at 248.

122. There were at least twelve prosecutions in New York between 1986 and 2001, including the highly publicized case of NuShawn Williams. *See* Lazzarini et al., *supra* note 2, at 246, 248; *see also* Wolf & Vezina, *supra* note 1, at 824 (discussing New York law).

gender reporting injection drug use.[123] Respondents were recruited outside venues where men who have sex with men ("MSMs") and injection drug users ("IDUs") were known to congregate, including clubs, bars, HIV/AIDS service organization sites, needle exchange programs and places where people sell drugs.[124]

B. Data Analysis

We designed the analysis to test the null hypotheses that there would be no difference in self-reported sex risk behavior between (1) people who believe the law requires HIV-positive people to practice safe sex and those who do not, or (2) between people living in a state with an HIV-specific statute and those in a state without one.[125] We used a logistic regression

---

123. Men who had sex with men were included if they reported ever having engaged in the behavior. Injection drug users were included if they reported having injected drugs in the past three months.

124. Purposeful, targeted sampling methods were used to construct a sample of high risk MSM and IDUs in each city. *See generally* John K. Watters & Patrick Biernacki, *Targeted Sampling: Options for the Study of Hidden Populations*, 36 SOC. PROBS. 416 (1989). Efforts were made to recruit female IDUs and HIV-positive individuals for variability in the sample. Interviewers initially identified potential subjects from conversation, by referral, or by behavior. Interviewers identified themselves to potential subjects and briefly explained the purpose of the study. If the potential subject was interested, the interviewer explained the study more fully using the informed consent form and materials. If informed consent was given, the interviewer administered three screening questions. If the subject met the inclusion criteria he or she proceeded to the survey, which was administered and recorded by the interviewer. Subjects who were eligible and completed the survey received twenty dollars. Subjects who were not eligible or who did not complete the survey received safe sex or safe injection materials (not including syringes).

This means that ours is a convenience sample of people reporting risky sexual and/or drug use behavior, not a random sample of the entire state or city population. We choose this approach because people who engage in high risk sexual or drug use behavior are, arguably, the most important group to influence for HIV prevention. The question of how law might influence the sexual or drug using behavior of people who are not at risk of these behaviors is, of course, not pressing.

As direct observation studies in this realm are not feasible, sexual behavior information such as presented in this article is commonly based on retrospective self-reports. This makes the data susceptible to a number of serious reporting biases that limit its reliability. For example, the respondents may misrepresent their behavior under influence of perceptions of behavioral norms or inaccurately recall their actions because of time lapse between data collection and the behavior in question. *See generally* Joseph A. Catania, *A Framework for Conceptualizing Reporting Bias and Its Antecedents in Interviews Assessing Human Sexuality*, J. SEX RES., Feb. 1999, at 25. Moreover, individuals' perceptions of their partners' risk behavior are often inconsistent with the partners' self-reported behavior, which presumably is closer to fact. *See* B.P. Stoner et al., *Avoiding Risky Sex Partners: Perception of Partners' Risks v Partners' Self Reported Risks*, 79 SEXUALLY TRANSMITTED INFECTIONS 197, 199–200 (2003).

125. The null hypothesis tests the proposition that an intervention has no effect (that is, that there will be no true differences in the results between those who receive an intervention versus those who do not). In statistical terms, the hypothesis would be disproved if there were a statistically significant difference between the outcomes experienced by the control and intervention groups. Disproving the null hypothesis does not prove that the intervention caused the effect, only that the

model to identify major influences on behavior and to test for interaction effects among multiple variables and the reported sexual behavior. The dependent (or outcome) variables we used were self-reported anal or vaginal intercourse without a condom during the respondent's last sexual encounter.[126] We used two independent variables to answer our primary

---

experiment could not rule out such an effect. It is therefore a conservative test of the effects of an intervention. In this study, we have in essence two matched sets of intervention and control subjects: those who believe the law requires safer sex versus those who do not or do not know, and those from Illinois (with a law), see *supra* note 121 and accompanying text, versus those from New York (without a law), see *supra* note 122 and accompanying text.

126. Since the dependent variables are discrete, a hierarchical logistic regression model was used to estimate the factors that influence practices of each unprotected sex behavior. For each outcome, the logistic regression model included seventeen independent variables:

(1) age in years at time of interview;

(2) perceptions of procedural justice;

(3) moral agreement with rules against exposing others to the risk of HIV;

(4) beliefs about the legitimacy of government regulation of intimate behavior;

(5) whether the respondent had a belief about whether the law prohibits HIV+ people from engaging in sex without a condom (i.e., belief one way or the other versus no opinion on the law);

(6) given a belief one way or the other about the law, whether or not the respondent believed the law prohibited HIV+ people from engaging in sexual behavior without a condom;

(7) an attitude scale testing the degree to which the respondent feared being "caught" by the authorities if he or she engaged in behaviors including sex without a condom or having sex, sharing needles or engaging in prostitution without disclosure of HIV status (i.e., deterrence in terms of perceived likelihood of detection);

(8) an attitudinal scale concerning the respondent's attitudes towards possible punishment for unsafe sex or drug use (i.e., deterrence in terms of fear of sanctions);

(9) gender at birth (thus coding transgendered people according to birth gender);

(10) race;

(11) sexual orientation;

(12) self-reported HIV seropositive status;

(13) state of residence;

(14) whether the respondent reported eligible sexual behavior with a regular partner;

(15) whether the respondent reported eligible sexual behavior with a non-regular partner;

(16) given a regular partner, whether respondent disclosed HIV status to the partner;

(17) given a non-regular partner, whether respondent disclosed HIV status to that partner.

For more on the theory behind the deterrence, moral agreement and legitimacy variables, see *infra* notes 127–130. Six of the independent variables were treated as continuums: (1) age in years at time of interview; (2) procedural justice; (3) moral agreement; (4) legitimacy; and two measures of deterrence: (7) the degree to which the respondent would feel deterred from engaging in illegal behaviors concerning risky sexual and illegal drug behavior; and (8) an attitudinal scale concerning the respondent's concern with complying with the law as it addressed these behaviors.

Five of the predictor variables were treated as nominal: (9) gender at birth, (10) race, (11) sexual orientation, (12) self-reported HIV seropositive status, (13) state of residence. All binary predictor variables were coded using effects coding (i.e., -0.5 and 0.5), with the positively coded categories for these nominal variables as: male, white, non-heterosexual, HIV-positive individual, New York resident.

questions about the effect of HIV-related law: state of residence, and the individual's belief about what the law was. State of residence is an ecological test, investigating whether people in a state with an HIV-specific criminal law tend to behave differently than those living in a state without one. State of residence is thus a proxy for a broad range of possible direct and indirect ways law might influence behavior. Finding different behavior with this test would not prove that law caused the difference, but it would tend to disprove the null hypothesis and therefore suggest that law could be contributing to safer sexual behavior. The more direct test of the effect of law on behavior was the respondent's stated belief about whether the law required condom use. This is not a test of the actual law applicable to the respondent, but rather what the person believed it to be. By testing for interaction between belief about the law and state of residence, we could also determine whether people who lived in Illinois were more likely to believe that the law required condom use than people in New York. We also constructed variables to test important theoretical predictors of compliance with the law, including a sense of procedural justice,[127] deterrence,[128] "moral agreement" with the norms of behavior set out in

---

Three sets of variables also had discrete responses but were more complex: the first set, (5) and (6), was comprised of two constructed variables measuring belief about laws prohibiting HIV+ individuals from engaging in sex without a condom (i.e., "[i]n this state it is a crime for a person with HIV to have sex without a condom"): the first constructed variable was (5), whether the respondent had a belief (coded -.33) versus having no opinion (coded +.67); while the second constructed variable was (6), given a belief, whether or not the respondent believed the laws existed (coded +.5) versus not existed (coded -.5). The second set (14) and (15), was comprised of two constructed variables measuring disclosure to a regular partner: (14), whether the respondent had a regular partner to disclose to (coded -.33) (versus coded +.67 for not having one), and (15) having disclosed to regular partner (coded +.5) versus not having disclosed (coded -.5). The third set has the same restructuring for disclosure to other partner: (16) opportunity for disclosure to other partner (i.e., respondent reported having had an "other partner") (coded -.33) (versus coded +.67 for not having an opportunity), and (17), having disclosed to other partner (coded +.5) versus not having disclosed (coded -.5). This was done in order to allow for computed interaction variables to be as orthogonal to their antecedent main effects as possible in the final regression equation, such that the Wald tests of each coefficient will accurately reflect the cumulative model. The variables were entered into the equation sequentially beginning with the most proximal and ending with the most distal in the order listed.

127. A large literature on the positive effects of procedural fairness on litigation and people's compliance with the law has emerged in the past twenty years. *See generally* Robert J. MacCoun, *Voice, Control, and Belonging: The Double-Edged Sword of Procedural Fairness*, 1 ANN. REV. L. & SOC. SCI. 171 (2005) (reviewing the literature). The theory, which has strong empirical support, is that people's compliance with the law is significantly influenced by their experience and beliefs about the fairness of the system. *See generally* TOM R. TYLER, WHY PEOPLE OBEY THE LAW (1990).

128. "Instrumentalist" theories of compliance hold that criminal law works primarily by deterrence, increasing the costs of illegal behavior sufficiently to prevent the rational actor from transgressing. *See* FRANKLIN E. ZIMRING & GORDON J. HAWKINS, DETERRENCE: THE LEGAL THREAT IN CRIME CONTROL 75–77 (1973). The two key elements in the actor's assessment of the cost are the likelihood of detection and the severity of punishment. *See id. See generally* Gary S. Becker, *Crime*

law,[129] and beliefs in the legitimacy of state regulation of private behavior like sex.[130]

IV. STUDY FINDINGS

A. Summary of Results

Four hundred ninety-nine surveys were administered. Nine had significant missing data and were discarded, leaving a study population of 490, 242 from New York and 248 from Chicago.[131] The analysis in this paper includes 482 subjects with valid data on one or both of the two dependent variables and the seventeen independent variables in the model described below.

---

and Punishment: An Economic Approach, 76 J. POL. ECON. 169 (1968). Our study looked at both elements. The perceived likelihood of being caught was measured by the scale used in variable (7), which consisted of Likert-scaled items about the likelihood of being caught for activities such as unprotected sex. The perceived severity of the sanction was measured relatively in the scale used in variable (8), which included Likert-scaled items such as "I'm not worrying about jail when I have sex or shoot drugs."

129. Compliance is also, naturally enough, influenced by people's views about whether the behavior required is morally right. *See generally* TYLER, *supra* note 127 (reporting exhaustive empirical investigation of the roots of compliance).

130. "Legitimacy" was sociologist Max Weber's concept, naming the citizen's belief that laws should be obeyed because they are the commands of an authority that is entitled to regulate the conduct at issue. *See* MacCoun, *supra* note 127, at 180. Tyler's work has also found support for its influence on compliance, though that has been disputed. *See generally* Tom R. Tyler, *Procedural Justice, Legitimacy, and the Effective Rule of Law*, *in* 30 CRIME & JUSTICE: A REVIEW OF RESEARCH 283 (Michael Tonry ed., 2003); Tom R. Tyler, *Public Trust and Confidence in Legal Authorities: What Do Majority and Minority Group Members Want from the Law and Legal Institutions?*, 19 BEHAV. SCI. & L. 215, 233–34 (2001). We tested legitimacy with a scale composed of items such as "[t]he government has no business making laws about what people do in their sexual relationships."

131. *See infra* for Table 1.

TABLE 1: DEMOGRAPHIC CHARACTERISTICS OF SURVEY RESPONDENTS

	Chicago, IL (n=248)	New York, NY (n=242)	Total (n=490)
Sex at Birth			
Male	172 (69%)	183 (76%)	355 (72%)
Female	76 (31%)	59 (24%)	135 (28%)
Exposure Category			
Male-to-Male Sexual Contact (MSM)*	53 (21%)	101 (42%)	154 (31%)
MSM and IDU	65 (26%)	40 (17%)	105 (22%)
Exchanged sex for money	64 (26%)	34 (14%)	98 (20%)
Race/ethnicity			
African-American	114 (46%)	84 (35%)	197 (40%)
Hispanic	17 (7%)	61 (25%)	78 (16%)
White	102 (41%)	83 (34%)	185 (38%)
Other	16 (7%)	14 (6%)	30 (6%)
HIV status			
HIV +	58 (23%)	104 (43%)	328 (67%)
HIV- /unknown	190 (77%)	138 (57%)	162 (33%)
Sexual Orientation			
Heterosexual	121 (49%)	94 (39%)	215 (44%)
Homo/bi/queer	127 (51%)	146 (61%)	273 (56%)

* Includes transgendered people born male
+ Includes transgendered people born female

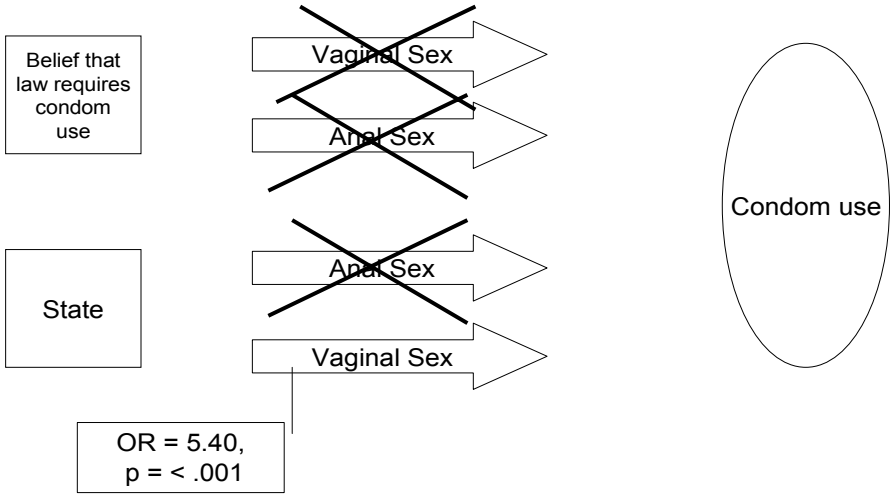
Descriptive statistics are reported in Table 2 (in the Appendix to this Article). Most people reported using a condom during their last anal or vaginal sexual encounter.[132] Slight majorities had disclosed their HIV

132. The epidemiological evidence indicates that oral sex, even without a condom, presents minimal transmission risk. *See generally* Galletly & Pinkerton, *supra* note 3, at 328. From a public health point of view, it could therefore be seen as a desirable substitute for anal or vaginal sex. Most

status to their regular partner or most recent other partner, but it should be recalled that only a third of the sample knew they were HIV-positive, so most had no *positive* status to disclose.[133] As a group, the respondents strongly agreed that it was morally right for people with HIV to use condoms and disclose their status to partners.

The group did not have strong feelings on measures theoretically relevant to compliance with law. Their responses clumped around the middle of the agreement scale (neither agree nor disagree) on matters such as fear of punishment for engaging in unsafe sex, their sense that the legal system treated people like them fairly (procedural justice), and the legitimacy of government regulation of private sexual behavior.

FIGURE 1. ASSOCIATION OF LEGAL VARIABLES WITH CONDOM USE



of our respondents (316 or 66%) did report oral sex without a condom during their last sexual encounter. Because the risks of oral sex are so different from anal and vaginal sex (which influences both the legal issues and people's attitudes), we do not report findings on oral sex in this paper.

133. *See* Sullivan, *supra* note 49, at 42 (noting that substantial minorities of primary sexual partners of HIV positive individuals and almost half of casual partners may not be aware of their partners' status).

The logistic regression models for anal and vaginal sex without a condom are shown in Tables 3 and 4 (in the Appendix to this Article). As depicted in Figure 1, our two variables testing the effect of law on sexual behavior had a significant effect in only one of four possible combinations. Neither anal nor vaginal sex without a condom was significantly associated with beliefs about whether law requires condom use.[134] Likewise, state of residence—i.e., living in a state with an explicit statute regulating the sexual behavior of people with HIV versus one without—was not associated with differences in anal sex without a condom. Being a resident of Illinois *was* associated with significantly greater likelihood of having used a condom during vaginal sex during the last reported sexual encounter. There was a very significant effect for state of residence both at step entry and in the final Wald test. New York residents reported engaging in unprotected vaginal sex 5.4 times more than Illinois residents. With all variables in the equation, the predicted percentage ("PP") was 36.5% for New York and 9.6% for Illinois.[135]

HIV status was not a significant predictor of anal sex behavior. Being positive or negative did not influence significantly the likelihood of reporting unsafe sex with a regular or a non-regular (or "other") partner.

---

134. This was our most direct test of the effect of law on behavior. Law would "fail" this test as to sex without a condom if the respondent either (1) believed condom use was required by law but did not use a condom, or (2) used a condom but did not believe it was required by law.

135. The "predicted percentage" statistic is an alternative to the more familiar odds ratio. It is the percentage of people in this sample we would predict would engage in a certain behavior given a certain set of beliefs or other characteristics (in this instance, the percentage of HIV-positive people in, respectively, New York and Illinois, who we would predict would engage in unprotected vaginal sex). There were a number of statistically significant associations having to do with generic differences in sexual behavior between men and women and heterosexual men and MSMs that we explain as artifacts of our analytic methods.

Male sex at birth was a significant predictor of anal sex without a condom because men were more likely than women to be having anal sex at all. Similarly, there was a significant interaction effect between sex at birth and sexual orientation: for females, there was no appreciable difference in condom use in anal sex between heterosexual (PP = 6.0%) and non-heterosexuals (PP = 4.3%), while for males there was a significant difference in condom use in anal sex between heterosexual (PP = 6.7%) and non-heterosexuals (PP = 27.2%).

For vaginal sex, there was a significant effect for sex at birth both at the step entry as well as in the final Wald test. The model estimates females are 3.5 times more likely than males to report unprotected vaginal risk behavior. With all the variables in the equation, the PP for each gender is influenced cumulatively by both main and interactive effects for sex at birth, such that the PP equals 39.7% for females and the PP equals 14.3% for males. Similarly, there was a significant effect for orientation both at the step entry and in the final Wald test, such that the model estimates heterosexuals are ten times more likely than non-heterosexuals to report unprotected vaginal risk behavior. There was a significant interaction between sex at birth and orientation: while for heterosexuals there was no appreciable difference in vaginal risk between males (PP = 53.5%) and females (PP = 56.3%), for non-heterosexuals there was a significant difference in vaginal risk between males (PP = 3.5%) and females (PP = 27.8%). We account for this by the fact that the males in our sample were, for the most part, non-heterosexuals.

HIV status was, however, significant in the final Wald test as a predictor of unprotected vaginal sex: HIV-negative respondents reported engaging in unprotected vaginal sex 2.9 times more than HIV-positive respondents. With all variables in the equation, the PP was 27.5% for HIV-negative respondents and 9.3% for HIV-positive respondents.[136]

Disclosure to the partner is an important variable because, as a legal matter, it is a substitute for condom use as a form of compliance.[137] Disclosure to either a regular or another partner was not significantly associated with unsafe sex as a main effect. There was, however, a significant interaction between state of residence and disclosure to a regular partner: among Illinois residents, those who disclosed were significantly more likely to report anal sex without a condom (PP = 20.3%) than those who did not (PP = 3.7%); New Yorkers who disclosed, by contrast, were significantly less likely to report unsafe anal sex (PP = 8.7%) than those who did not (PP = 19.2%). For vaginal sex, disclosure was not significantly associated with condom use with either kind of partner.[138]

For anal sex, three measures derived from the literature on compliance with law were significant. Those who agreed that it was morally right to

---

136. For vaginal sex, there was a significant interaction between HIV status and race. For whites, there was no appreciable difference in engaging in unprotected vaginal sex between HIV-positive (PP = 19.0%) and HIV-negative (PP = 19.4%) individuals. For non-whites, in contrast, there was a significant difference in between those with (PP = 5.8%) and those without (PP = 33.2%) HIV. For some reason, non-whites with HIV in our sample who engaged in vaginal sex were far more likely to use a condom than whites.

137. In Illinois, "[i]t shall be an affirmative defense that the person exposed knew that the infected person was infected with HIV, knew that the action could result in infection with HIV, and consented to the action with that knowledge." 720 ILL. COMP. STAT. 5/12-16.2(d) (2006). In New York, consent would be a potential defense to most criminal offenses that might be charged. *See* Wolf & Vezina, *supra* note 1, at 842. By including disclosure in our logistic regression model, we were partially adjusting for this alternative mode of compliance. For both anal and vaginal sex, there were significant effects for having a partner to disclose to, of course, such that those who had partners were more likely to have disclosed to those partners than people who did not.

138. The kind of partners people had also seemed to make a difference to sexual behavior. We defined two categories of partner, regular and other (or non-regular). Those with regular partners were much more likely than those without regular partners to report unprotected anal intercourse. With all the variables in the equation, the model predicted that 16.4% of those with regular partners would report unprotected anal intercourse compared to 6.3% of those without. Similarly, those who reported having a regular partner were 9.1 times more likely than those without to report unprotected vaginal risk behavior. Including all the variables, the model predicted that 36.9% of those with a regular partner would report the behavior compared to 6.5% for those without. Those who reported having one or more other partners were 2.7 times more likely than those who did not to report unprotected vaginal risk behavior.

There was also a significant interaction between sexual orientation and having a regular partner, such that while for heterosexuals, there was an appreciable difference in vaginal risk between those with regular partners (PP = 74.8%) versus those without (PP = 11.7%), for non-heterosexuals, there was no significant difference between those with (PP = 13.8%) and those without (PP = 3.9%) a regular partner.

practice safe sex and disclose HIV status to partners were slightly more likely to report condom use,[139] as were those who believed government regulation of sex was legitimate[140] and those who were more concerned about possible punishment for unsafe sex.[141] For vaginal sex, only concern for punishment was significant among the compliance predicting variables.[142]

B. Interpretation

We tested the effect of law in two ways. The first test, belief that the law required condom use, would capture the effect on people in Illinois who were aware of and understood the state statute,[143] but also on New Yorkers who were aware that general criminal law could reasonably be applied against people who had unsafe sex under some circumstances.[144] It would also attribute to law the safer behavior of people who had an accidentally correct belief about the law—i.e., one that was not based on having seen or been accurately informed of the law. So, for example, someone who

---

139. With all the variables in the equation, the PP was 6.8% for subjects one standard deviation ("SD") higher than average moral agreement (5 out of 5), 11.3% for subjects with the mean moral agreement (4.5 out of 5), and 18.1% for subjects one SD lower than average moral agreement (3.8 out of 5).

140. There was a significant effect for legitimacy both at the step entry and in the final Wald test, such that for each one unit decrease in legitimacy from strongly agree (5) to strongly disagree (1), there was a 1.4 times higher likelihood of engaging in anal sex without a condom. With all the variables in the equation, the PP was 8.4% for subjects one SD higher than average legitimacy (3.9 out of 5), 11.3% for subjects with the mean legitimacy score (2.9 out of 5), and 15.0% for subjects one SD lower than average legitimacy (1.8 out of 5).

141. There was a significant effect for fear of sanctions deterrence (variable (8)) both at the step entry and in the final Wald test. For each one unit increase in fear of sanctions—for example, "[h]ow strongly do you agree or disagree with: 'I'm not worrying about jail when I have sex or shoot drugs'" from strongly agree (5) to strongly disagree (1)—there was a 1.4 times lower likelihood of engaging in anal sex. With all the variables in the equation, the PP for subjects one SD higher than the mean response (4.4 out of 5) was 8.1%, 11.3% for subjects with the mean score (3.3 out of 5), and 15.5% for subjects one SD lower than average (2.2 out of 5).

One measure showed a trend toward significance: those who had a belief about whether the law prohibits HIV-positive individuals from having sex without condoms (variable (5)) were twice as likely as those who did not have a belief to report condom use in their last encounter. As with legitimacy and deterrence, a conservative conclusion would be that law does have a generalized effect: that those who think more about the law, like those who regard legal institutions and interventions in this area as legitimate, are more likely to use a condom. It is weak, but not inconsistent with the hypothesis that law influences condom use.

142. The effect was significant both at the step entry and in the final Wald test, such that for each one unit decrease in fear of sanctions there was a 1.6 times higher likelihood of engaging in vaginal sex without a condom. With all the variables in the equation, the PP was 12.4% for subjects one SD higher than the mean, 19.7% for subjects with the mean score, and 29.7% for subjects one SD lower than the mean.

143. *See supra* note 121 and accompanying text.

144. *See supra* note 122 and accompanying text.

assumed the law required condom use only because he or she believed that condom use was morally required would appear in this analysis as a person being influenced by the law. On the other hand, the test would not attribute to law the safer behavior of people from Illinois who incorrectly believed that condom use was not required[145] and people from New York who interpreted case law not to require condom use. In both states, the test would not credit to law the safer sex behavior of those who had no belief about the law's requirements.

The null hypothesis that law has no effect on sexual behavior withstood our most direct test: people who believed that the law required condom use were no more likely than those who did not to report condom use (or its substitute, disclosure) during their most recent vaginal or anal sex. This is relevant both as to HIV-positive and uninfected people: those with HIV were not more likely to practice safe sex because of their beliefs in law, but it is equally important that people who were uninfected did not report being less safe in reliance on disclosure or the initiation of condom use by an infected partner.[146]

Our second test, state of residence, was indirect or ecological. It looked broadly for a difference between the self-reported behavior of people in a state with an HIV-specific statute and people in a state without. Any difference in behavior cannot be positively attributed to law because innumerable other unmeasured differences between the two states could account for it. Nevertheless, a difference by state would be inconsistent with the null hypothesis that having a law makes no difference: it allows for the possibility that in some way the existence of a law in Illinois has filtered through the culture and influenced sexual behavior.[147] The state of residence test did not challenge the null hypothesis as far as anal sex was concerned. New Yorkers who reported anal sex were no more likely than people from Illinois to report condom use in their last encounter.

State of residence was significant for vaginal sex: people from Illinois were more likely than people in New York to report condom use during their most recent episode of vaginal sex. Illinois residents with HIV were

---

145. Because there was an extremely high correlation among Illinois respondents between believing that the law required disclosure and believing that the law required condom use, we did not include belief that disclosure was required by law as a variable in our model.

146. This goes to the concern that criminalization of sexual behavior of people with HIV promotes unsafe behavior among the uninfected. *See* ELLIOTT, *supra* note 4, summary 4 ("[I]n general, both partners engaging in sexual or drug injecting activity have a responsibility to adopt precautions to prevent transmission of HIV . . . the responsibility does not lie only with the person who knows him/herself to be living with HIV.").

147. Of course, it is equally plausible that even were there a relationship between sexual culture and the law that the direction of causation goes the other way; that is, it may be that Illinois has an explicit law because it has a more conservative sexual culture.

significantly more likely to use a condom in vaginal sex than Illinois residents who were HIV-negative. In the abstract, more condom use by HIV-positive people would be consistent with a "success" of law, while more condom use by HIV-negative people would undermine the suggestion of "moral hazard" in HIV criminal law—that HIV-negative people would become less safe because they would assume that HIV-positive people were complying with the law by disclosing or insisting upon condom use —but only if one assumed that it was law that was driving these behavioral differences.

Because we also found that beliefs about the law were not influencing behavior, the state-of-residence test of the law's effect offers only a weak refutation of the null hypothesis. State of residence is an extremely broad proxy for effect of law. If people in Illinois are having safer vaginal sex because of the law, they are doing so without knowing that the law requires it. Moreover, the theory that people in Illinois might somehow be unconsciously or indirectly influenced by the law is not supported by our findings on disclosure: disclosure was not a significant predictor of unsafe vaginal sex in Illinois, despite the fact that HIV-positive people there could obey the law either by disclosure or using a condom. Given racial, gender and sexual orientation differences in our sample, not to mention possible cultural differences between New York City and Chicago, it would be incautious to conclude that law is "working" from this association.[148]

For anal sex, the significant interaction between state of residence and disclosure could also be deemed inconsistent with the hypothesis that law has no effect. Illinois residents having anal sex were much less likely to use a condom if they disclosed, whereas New Yorkers who disclosed were more likely than those who did not to have safer anal sex. People from Illinois could be seen as following the course set by the law, which forbids exposing another to HIV but sets up disclosure and consent as an affirmative defense. The law-abiding Illinois resident wishing to have anal sex without a condom would be careful to discharge his or her legal duty by

148. We considered the possibility that the sample in Illinois might contain more female sex workers than in New York, and that these sex workers might be more aware of the law than others because of their possibly greater exposure to arrest and prosecution. A significantly higher proportion of respondents in Illinois reported exchanging sex for money (64/232, 27.6%) than in New York (34/240, 14.2%), chi-squared(1) = 12.91, $p < .001$. To test this, we re-ran the model with an eighteenth variable: having been paid cash for sex in the previous three months. Twelve respondents that did not answer were treated as "no." This variable was not significant at step entry or in the final Wald test, nor did it appreciably change any of the previously significant main effects. For vaginal sex, it cancelled all four previously significant interactions. Hence the association between safer vaginal sex and Illinois law could not be explained by the presence of a cohort of commercial sex workers rigorously adhering to safe sex rules out of greater than average fear of detection and punishment.

disclosing HIV status first. New Yorkers by contrast, without an explicit guide to legal behavior, could optimally reduce their legal risk by both disclosing and using a condom.

If Illinois behavior were an effect of law, it would be a paradoxical one from a public health point of view: safe sex, not disclosure followed by risky sex, is the optimal outcome, and the one we see in the state without a law. As with the effect of state on vaginal sex, however, any positive attribution to law of the behavioral difference between New Yorkers and people from Illinois founders on the finding that belief about the law has no effect on behavior. While our findings in this respect do refute our null hypothesis that law has no effect, they provide no serious support for the conclusion that law is influencing sexual behavior.

Most people in our sample believed that being safe or disclosing was morally required. It has been argued that HIV-specific criminal laws are a good way to "send a message" about social norms and thereby to establish a healthy sexual morality in the population.[149] We found that moral beliefs requiring disclosure and regard for partner safety are widespread, but that those living in a state with a law were no more likely to have them than people living in a state without the official message. Having these beliefs was significantly associated with safer anal sex, but, interestingly, not with safer vaginal sex.

Other mediators of legal compliance were also significant. For both vaginal and anal sex, condom use was associated with fears of punishment. For anal sex only, greater condom use was associated with more positive beliefs about the legitimacy of government regulation of private, consensual behavior. These findings might help explain compliance, had we found strong evidence of compliance. Without a main effect of law, these are best understood as cultural artifacts of law-abidingness or orientation towards social control. The notion that one can get in trouble for deceiving or endangering others does seem to matter to behavior, but does not depend at all upon the existence of HIV-specific laws or the belief that the law requires specific acts by people with HIV.

The null-hypothesis approach is an extremely conservative way to test the effect of an HIV-specific criminal law on the sexual behavior of people at elevated risk of becoming infected or infecting others. While our findings do not rule out the possibility that Illinois' HIV-specific criminal law has been good for public health or morals, they offer very weak support for such a conclusion. There are so many obvious reasons why such a law

149. *See, e.g.*, Marks et al., *supra* note 40, at 302.

would not have an effect. Public knowledge of law is generally low.[150] The experience of drug laws, Prohibition and sodomy restrictions suggests a general unwillingness of people to trade pleasure for compliance, at least in the absence of significant levels of detection and punishment.[151] The general moral norm of respecting and caring for others is already very widely shared.

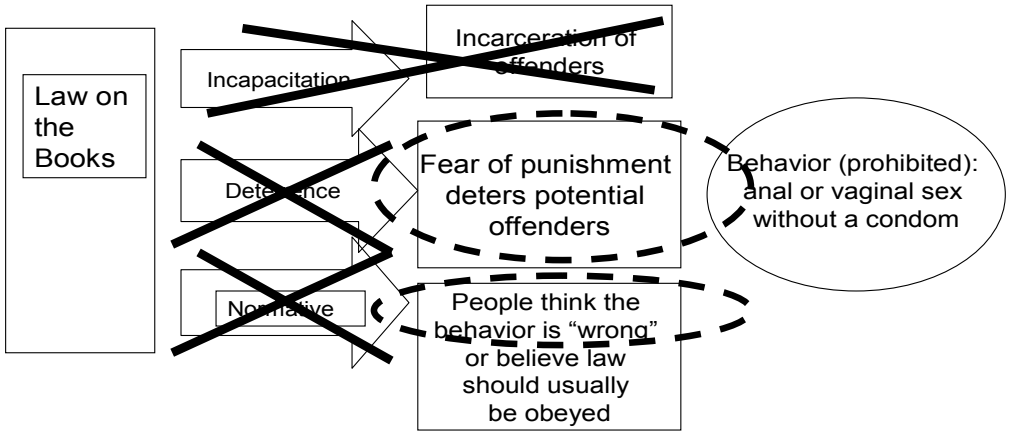
At the same time, and for at least some of the same reasons, our study did not turn up strong evidence that law is having a harmful effect on public health. Thus, while we found that people who regarded government regulation of sexual behavior as illegitimate were more likely to report unsafe anal sex, there was no evidence that these beliefs or behaviors had been influenced by law. Although we saw signs that people were substituting disclosure for safer sex, there was no evidence that they were doing so *because of the law.*

---

150. *See* Robert C. Ellickson, *A Critique of Economic and Sociological Theories of Social Control*, 16 J. LEGAL STUD. 67, 87–88 (1987) (describing the "scantiness" of people's knowledge of the law); Paul H. Robinson, *Are Criminal Codes Irrelevant?*, 68 S. CAL. L. REV. 159, 163–65 (1994) (citing empirical evidence). In the area of HIV, see Frederick M. Hecht et al., *Does HIV Reporting by Name Deter Testing?*, 14 AIDS 1801, 1804–05 (2000) (reporting that most people being tested were unaware of public health reporting rules).

151. In our earlier study, we identified twenty-six distinct prosecutions for HIV-related behavior in Illinois between 1986 and 2001, versus twelve in New York. Lazzarini et al., *supra* note 2, at 248 fig.2. Given the small numbers of cases, and confounding elements like the extent of press coverage, we did not control for differences in prosecution in our model.

FIGURE 2. THEORIES AND FINDINGS OF CRIMINAL LAW'S EFFECT ON UNSAFE SEXUAL BEHAVIOR



All in all, then, our findings suggest that passing HIV-specific criminal laws will neither directly promote public health nor directly harm it. As we depict in Figure 2, our research effort as a whole has shown that law is unlikely to be influencing unsafe sexual behavior under any one of the three leading theories of how criminal law works. Incapacitation would seem to require far more people being prosecuted and jailed than current practice exhibits.[152] We did find that aversion to punishment influences behavior, but also that fear of punishment was not significantly predicted by either of our measures of law. This suggests a deterrent effect from law in general that is not influenced by whether or not the law specifically regulates sexual behavior of people with HIV. Likewise, there is a relationship between safer anal sex and moral beliefs, but no indication that these beliefs themselves have been influenced by law. If there are reasons to pass these

152. *See* Lazzarini et al., *supra* note 2, at 249.

laws, they must be other than that they are effective public health measures. Conversely, if the rationale for criminalization is to influence sexual behavior, we should try a very different approach if we want to be effective. The evidence that criminal law hurts public health is weak, but given the weak evidence of benefit, does the precautionary principle militate against its use? We turn to these issues next.[153]

V. IMPLICATIONS FOR THE CRIMINALIZATION DEBATE

Our findings failed to convincingly refute the null hypothesis that HIV-specific criminal laws do not influence the behavior of those with or at risk of infection. Our strongest test—belief that the law requires disclosure or condom use—did not predict actual sexual behavior among either the infected or the uninfected. Liberally interpreted, our ecological test —state of residence—suggests that there could be something about law that influences slightly the behavior of people from Illinois who have vaginal sex, but whatever that effect is does not involve people being consciously motivated by the law and does not affect people having anal sex. Most people thought that safe behavior was the right behavior in moral terms, but their beliefs in this respect were not associated with their beliefs about law or the kind of legal environment they lived in. These findings also cast doubt on a public health benefit arising from prosecutions for HIV-related behavior under general criminal law.

No one should be surprised. No serious effort is made to enforce these laws, and a serious and sustained effort would be unlikely to survive the controversy it engendered. Sex, like drug use, is a highly concealable, gratifying behavior that serves many deep psychological and physiological needs. The chances of being caught are low, and consideration of future consequences of all kinds may play a relatively small role in sexual decision-making.[154] Morality can influence sexual behavior, but morals have many sources aside from law.[155] Veterans of AIDS legislative battles will say that these laws are passed largely for symbolic purposes—to show

153. Our conclusions are subject to the limitations of our study methods. Ours was a convenience sample of people at high risk of HIV, reporting on their own sexual activity. Their reports may not be fully accurate, and, in any event, the findings are not generalizable either to all people at high-risk or to the population in general. So, for example, HIV-negative people who are less sexually active, or are exclusively heterosexual, may be different in their reliance on others' compliance with the law than the higher-risk respondents in our study. We studied the effect of law at a given, low level of enforcement. Presumably, at some higher dose of arrest, prosecution and punishment, there would be a response of behavior change that was an effect of law.

154. *See, e.g.*, Paul Robert Appleby et al., *Consideration of Future Consequences and Unprotected Anal Intercourse Among Men Who Have Sex with Men*, 50 HOMOSEXUALITY 119 (2005).

155. *See supra* note 8 (citing leading articles on norms and criminal law).

that the legislature is taking action—or more broadly, in the sense of a symbolic crusade, to give one faction in a culture war a little victory.[156] So the question we are left with is: what would a rational legislator interested in maximizing public health benefits and minimizing harms do in the realm of criminal law?

A. Rationales for Using Criminal Law in the Response to HIV

We may usefully begin by identifying the several rationales for using criminal law to do something about HIV. Our study was primarily aimed at assessing whether criminal law could be said to serve the *disease control* function of reducing the incidence of HIV at the population level. As we discussed in Part II, this rationale has been mentioned in the academic and political debate about criminal law and HIV. For the most part, however, lawyers writing about this issue have either treated a disease control effect as a secondary issue, or assumed that such an effect would depend upon the extent to which the law fulfilled two other possible roles: deterring, detecting and incapacitating individuals who endanger others (which we specify as the *individual protection* function);[157] and the *moral/retributive* purpose of validating a social norm and condemning and punishing individuals who deviate from it.[158] Lawyers have also argued about a *fairness* function for HIV-specific criminal laws that specify prohibited conduct based on actual risk and set punishment proportionally. Finally, some commentators have argued that criminal law may have a useful *public health management* function: periodically throughout the epidemic, there have been cases of egregious or otherwise newsworthy behavior that have unfolded in the glare of intense public and legislative scrutiny. In these instances, criminal law may give health or law enforcement authorities the

156. *See generally* JOSEPH R. GUSFIELD, SYMBOLIC CRUSADE: STATUS POLITICS AND THE AMERICAN TEMPERANCE MOVEMENT (2d ed. 1986) (describing how struggles among competing social factions can express themselves in "crusades" for legislation that symbolizes victory for one group over another).

157. The distinction between what happens in individual cases and what happens at the population level helps explain how debates about criminal law can fail to reach consensus. Detecting and punishing (even deterring) a few individuals will not make a difference in the unfolding of the epidemic at the population level. It is therefore not the top priority for those concerned about public health. By contrast, those whose interest in statistical lives is slight tend to place a high value on measures that deal with unacceptable individual behavior that endangers specific people.

158. *See* ELLIOTT, *supra* note 4, at 59–79. Elliott treats these as two purposes, denunciation and retribution. As Elliott describes it, the retributive purpose consists in the view that "conduct that is deserving of punishment, in the sense of being morally blameworthy, should be subject to criminal sanctions." *Id.* at 61.

capacity to do something by invoking the criminal law and its processes of investigation, detention, adjudication and punishment.

Our findings indicate that criminal law does not have a disease control function, at least as these laws are now written and enforced.[159] Our failure to find that law influences sexual behavior may be read in the light of evidence that a substantial proportion of new infections come from people who do not, and in the case of the recently infected, could not, know they are infected,[160] and whose behavior would therefore not be a crime. The problem of HIV transmission through sexual behavior appears to be the result of small risks accumulating over a large population, rather than the product of a small number of reckless transmitters.[161] Whatever its effect on scattered individuals, there is no indication that criminal law steers enough people towards safety to reduce the rate of infection. If the prime task of prevention is to shift the at-risk population in the direction of having safer sex with fewer partners, detecting, punishing and incapacitating a handful of bad actors is not a wise use of prevention resources.

While criminal law will not contribute to the control of HIV, we cannot rule out the possibility that criminal law does, in individual cases, have a protective effect. It is possible that some people with HIV do know about the law and follow it in ways that prevent cases of exposure and transmission. Moreover, our earlier study of prosecutions showed that a small number of people are indeed detected and incapacitated, and that some of these people are dangerous.[162] Our finding that people in a state with an HIV-specific law were not behaving more safely than people from a state without such a law suggests that any effect on individuals does not depend on passing an HIV-specific law. Yet these individual instances of prevention or protection can occur without adding up to a meaningful reduction of HIV at the population level: one can say that criminal laws are a good thing because they allow the state to lock up a person who knowingly or intentionally exposes others to HIV; one cannot claim, based on the evidence, that this is a way to stop the HIV epidemic.

The moral rationale for HIV criminal law—the claim that law can productively promote a norm of partner-protection—is questionable on several grounds. Our findings indicate that the official statement of the norm against endangering others, let alone deliberately infecting a partner,

---

159. HIV criminal laws on the books today generally are not written in a way that encourages a shift towards safer sex. We have noted that the law may promote disclosure as a substitute for condom use or less risky sex. It could be argued that we have never actually tried to use criminal law as a public health tool. *See supra* note 69 and accompanying text.

160. *See supra* notes 39–44 and accompanying text.

161. *See* Galletly & Pinkerton, *supra* note 3, at 328 (reviewing the risks).

162. *See* Lazzarini et al., *supra* note 2, at 244–46.

is superfluous. People know that the behavior is "wrong" without being told so by the legislature.[163] Most of them are even comfortable with the government setting the norm in broad terms—but the devil is in the details. The academic debate alone is some evidence of the difficulty of defining widely acceptable rules of behavior for the sexual arena beyond the bright line of malign exposure or transmission. The moral debate turns to a considerable extent on the level of risk and value judgments about the risk/benefit trade-off. The consequences of infection are terrible, and not surprisingly, polls indicate that a majority of people rate the chance of infection in any single exposure to be far higher than it is.[164] As Wolf and Vezina put it, "[i]n the public's mind, the harm is almost certain, comparable to firing a gun at someone."[165] In fact, the risks are not just rather low in any one encounter, but also vary quite a bit among different acts. For an HIV-negative person, being the penetrative partner is less risky than being the receptive one, and for an HIV-positive person, being receptive is less dangerous to the partner than being penetrative. Penetrative oral sex in either role is far less risky than other kinds of penetrative sex. Much depends upon how much one values particular aspects of sex.[166] People can and do choose to run the various risks of infection in numbers too great to allow their decisions to be written-off as mad or even, all things considered, unreasonable.

Even the moral principle of consent does not provide a bright line in practice. Yes, choosing to run the risk with "informed consent"—disclosure—is morally different from being involuntarily exposed, but in real life disclosure and consent may look more like an avian mating ritual than the negotiation of a business contract: people "signal" their infection by suggesting condom use, or leaving their HIV drugs on the bedside table. At least for some people, *not* asking for condom use signals consent to exposure, as does cruising in a public sex venue.[167] In this environment, a

---

163. As Wolf and Vezina have noted, some of these HIV-specific laws are written so broadly that they could be taken to embody the norm that people with HIV should not have sex at all, under any circumstances. Wolf & Vezina, *supra* note 1, at 860. As they put it, "[t]here is no research that indicates that this message is either practical or sustainable." *Id.* at 859.

164. *Id.* at 860.

165. *Id.* Judges often, seem to have this reaction as well, but not always. *See, e.g.*, AA [accused], Hoge Raad der Nederlander [HR] [Supreme Court of the Netherlands], 18 januari 2005, no. 02659/03 (Neth.) (reversing conviction of HIV-infected person who had unprotected oral and receptive anal sex with another without disclosing on grounds that risk was not enough to constitute a crime).

166. *See, e.g.*, ROBERT KLITZMAN, BEING POSITIVE: THE LIVES OF MEN AND WOMEN WITH HIV 199–208 (1997) (reporting results of interviews with HIV-positive people discussing sex).

167. *See* Wolf & Vezina, *supra* note 1, at 874 (noting that law on disclosure "places people at risk for failing to meet a standard of behavior that most people cannot achieve"); *see also supra* notes 55–56 and accompanying text.

morality based on negligence or even recklessness is problematic: what is unreasonable behavior or unusual risk in one setting or sub-population may not be in another. A jury of sexually active gay men might see a case differently than a jury of straight married people.

Finally, the moral analysis is complicated, at least for some, by the presence of psychosocial complications. "Voluntary" drug use is a poor excuse for endangering others, but seeing the actor as an addict makes it harder for some of us to frame the problem as one of criminal responsibility. Mental illness, drug use, and race were all at play in the NuShawn Williams case, for example: he did not believe the health officials who told him he had HIV, thinking they were trying to drive him out of town because they did not approve of a Black man having sex with White women.[168] Even a person inclined to write that sort of claim off as a moral makeweight may be swayed by the fact that Williams was later diagnosed with schizophrenia.[169] Power relations also figure in. For example, in prostitution cases, it is often asserted that it is the customer, rather than the provider, who determines whether condoms are used.[170] Why, then, is it right to hold the sex worker legally responsible for unsafe sex?

In short, the "moral" rationale for the law runs straight into the diversity and complexity of moral values concerning sex in American society.[171] While most of us would have no difficulty condemning a person who deliberately attempted to infect others, or exposed them to HIV in the course of rape, very few of the criminal laws on the books are that narrow. Rather, the laws create an ambiguous zone of condemnation that can potentially encompass everyone from deliberate exposers to "average" negligent non-disclosers. In theory at least, some of the nuances that escape the black-letter law can be added by prosecutors, but in the absence of evidence it is equally plausible to worry that prosecutors as a group pursue a rigid and draconian line. As we move to behavior that is more contextually "normal," and throw in the complexities of sexual norms, expectations, forms of disclosure, and gradations of risk, it gets harder to find consensus on what, precisely, is bad, and so harder for the criminal law to draw clear moral lines that make sense to all stakeholders.

The problems of defining wrongful behavior and second-guessing risk decisions have also compromised the effectiveness of HIV-specific statutes

---

168. Wolf & Vezina, *supra* note 1, at 824–25.

169. *Id.* at 825.

170. *See, e.g.*, L. Cusick, *Non-Use of Condoms by Prostitute Women*, 10 AIDS CARE 133, 140 (1998).

171. And here we see also the justice of "law and norms" critics who emphasize the complexity of social norms and behavior and question whether scholarship rooted only in social choice theory and economics can grasp it. *See* Weisberg, *supra* note 8, at 473–75 (summarizing critics).

in promoting fairness in prosecution. Most HIV-specific laws in the U.S. fail to tie culpability or punishment to real risk.[172] Given the difficulties of defining a realistic norm in legal terms, the task may be impossible. Ultimately, the reasonableness of an individual's behavior under specific conditions will have to be assessed by police officers, prosecutors, judges and juries. Unfairness can always burst through fragile fault lines of sexuality, risk, race and class.

None of these problems with criminal law eliminate the occasional need of the state to exercise coercive power over individuals behaving badly. There will be HIV-positive people who deliberately engage in risky behavior and become a threat to public order and even local public health. NuShawn Williams, whatever his motives and deficits, did significantly raise the number of HIV cases in one small town, and health authorities would have had to act even in the absence of media sensationalism.[173] There will also be people whose behavior does not pose a true risk of HIV transmission, but who come to the attention of the media and whose cases then gain at least local notoriety.[174] Even if the person is not more dangerous than others, one the case hits the news media, health officials will feel impelled to take action and need the legal tools to do so. Elliott disparages this as the "outlet" rationale,[175] but realistically local officials will be pressed to act and the harm and unfairness can be minimized if they have legal tools that allow them to act in a non-punitive fashion. Such cases have been handled effectively since the early days of the epidemic using public health law.[176] In dealing with behavior, a progressive "carrot" and "stick" approach has often been recommended: a progressive set of steps that begins with services and education but can escalate through behavioral orders up to civil commitment.[177]

---

172. Galletly & Pinkerton, *supra* note 3, at 327–29; Wolf & Vezina, *supra* note 1, at 859.

173. Wolf & Vezina, *supra* note 1, at 824 ("Williams was ultimately alleged to have exposed forty-eight young women in Jamestown, and an additional fifty to seventy-five young women in New York City.").

174. An example of this type was the matter of Philadelphian Edward Savitz, an HIV-positive man who for many years purchased sex (and, more avidly, feces and soiled underwear) from local teenagers. Sex was rare, and Savitz it seemed was mostly or completely interested in acting as the receptive partner in oral sex. Cindy Patton, *Outlaw Territory: Criminality, Neighborhoods, and the Edward Savitz Case*, 2 SEXUALITY RES. & SOC. POL'Y 63, 64–65 (2005).

175. ELLIOTT, *supra* note 4, at 64.

176. These powers are rarely used in HIV control, and so should be seen not as mainstays of public health but as tools needed in unusual cases. Ronald Bayer & Amy Fairchild-Carrino, *AIDS and the Limits of Control: Public Health Orders, Quarantine, and Recalcitrant Behavior*, 83 AM. J. PUB. HEALTH 1471, 1472 (1993).

177. *See, e.g.*, Lawrence O. Gostin et al., *The Law and the Public's Health: A Study of Infectious Disease Law in the United States*, 99 COLUM. L. REV. 59, 118–27 (1999); Wolf & Vezina, *supra* note 1, at 875–76.

B. Negative Consequences of Criminalization?

Our data also challenge at least some of the arguments against criminalization offered in the legal debate. These include a "moral hazard" effect on non-infected individuals, who behave more dangerously on the assumption the law-abiding infected people are abstaining, initiating precautions or disclosing; discouraging people with or at risk of HIV infection from seeking testing, health or risk reduction services ("driving the epidemic underground"); and creating a hostile environment for HIV, increasing stigma and prejudice against people with HIV and making it more difficult to enact and implement evidence-based health measures.

The sample in this study included both infected and uninfected people, and therefore tested not just whether people who knew they were infected and directly subject to the law changed their behavior, but also whether those who believed themselves to be uninfected did so. Although we did find that HIV-negative status predicted far greater likelihood of vaginal sex without a condom, nothing in our findings suggest that the uninfected in our sample were relying on the belief that infected people would be disclosing or using condoms in obedience to statute.[178] On the other hand, we did find that people in Illinois were more likely to have unsafe sex after disclosure, a form of compliance with HIV-specific law that would be bad for public health.

Our analysis does not directly test the proposition that criminal law deters people from getting an HIV test or other services. The logical arguments for the effect are hard to fault: criminal laws create a good reason not to know one's status if one wishes to continue having unsafe sex; they create a hostile environment that makes people afraid to be identified as HIV-positive.[179] Since criminal prosecutions and the enactment of specific laws have been going on since the early 1980s, it is certainly possible that they are factors in the reluctance of so many people to be tested.

---

178. Had this effect been present, we would have seen associations between riskier behavior, HIV-negative status and beliefs about the law or state of residence.

179. LAWRENCE O. GOSTIN, THE AIDS PANDEMIC: COMPLACENCY, INJUSTICE, AND UNFULFILLED EXPECTATIONS 9 (2004); *see also* ELLIOTT, *supra* note 4, at 72 (quoting the AIDS Committee of Toronto ("ACT"): "To the extent that criminal sanctions involve isolation and stigmatization, ACT believes that they will frustrate public health initiatives aimed at controlling HIV. For example, testing for HIV is desirable from a public health perspective because it is the starting point for treatment and health promotion purposes. However, if knowledge of a positive HIV diagnosis entails greater exposure to criminal liability, it will discourage testing."). But this is one of those propositions for which each citation is to another piece citing another piece, never getting to actual evidence. Wolf and Vezina note that reviewing the cases anecdotally certainly provides the opportunity to believe that there is race and class discrimination, and that these are enactments of underlying stigmas. Wolf & Vezina, *supra* note 1, at 871.

Yet our finding that law did not influence sexual behavior must at least give one pause. Beliefs about the law were not associated with differences in behavior between our self-reported HIV-positives and HIV-negatives, which is inconsistent with the theory that there is a large number of people averse to law and intent on high-risk sex who avoid testing to remain "legally negative." Given that state of residence was unassociated with significant behavioral differences among those who believed the law criminalized HIV exposure, our findings also fail to support the narrower claim that HIV-specific criminal laws deter testing.

More generally, how plausible is it that people who do not let the prospect of criminal liability influence their sexual behavior would be affected by criminal law in their health-seeking behavior? There is little in the data on why people delay or avoid testing that suggests that fear of criminal or other legal consequences is a major factor,[180] and studies of people who show up for testing find that most are unaware of the rules on reporting the result to the state.[181] This is not to say that law may not be a small factor for many, and even a decisive factor for a few, but the decision to test seems to have other, more immediate drivers that probably swamp any effect of law in most instances.

Our data are also not particularly supportive of a stigmatization effect of criminal laws on people with HIV.[182] Most of our respondents reported general agreement with the concept that intentionally engaging in risky practices was wrong. The strong moral agreement with the norms embodied in the law, and the lack of a powerful sense that these laws are illegitimate or unfair, sheds doubt on the proposition that these laws are in and of themselves stigmatizing in the strict sense of enforcing an

---

180. *See* Burris, *Lessons from HIV Testing*, *supra* note 43, 842–56 (reviewing evidence that law is not a major determinant of the decision to get HIV testing).

181. Hecht et al., *supra* note 150, at 1804 (reporting that most people being tested were unaware of public health reporting rules); Amy Lansky et al., *Changes in HIV Testing after Implementation of Name-Based HIV Case Surveillance in New Mexico*, 92 AM. J. PUB. HEALTH 1757, 1757 (2002) (reporting no difference in testing rates between those who knew and did not know results were reportable to health department by name). There are some contrary studies, but they are methodologically weaker than those that find no effect. Typically, these studies tell people what the law is, or offer alternative scenarios of what it might be, and then ask people whether they would be more or less likely to be tested. *See, e.g.*, Edwin D. Charlebois et al., *Potential Deterrent Effect of Name-Based HIV Infection Surveillance*, 39 J. AIDS 219, 220 (2005). For a review of this literature, see Burris, *Lessons from HIV Testing*, *supra* note 43, at 853–54.

182. When we refer to stigma in this discussion, we use the classic Goffman definition of a shared sense of spoiled identity. *See generally* ERVING GOFFMAN, STIGMA: NOTES ON THE MANAGEMENT OF SPOILED IDENTITY (1963). Stigma so defined is quite distinct from prejudice or other forms of social antagonism, which involve a sense of spoiled identity that is not shared by those to whom it is sought to be applied.

internalized sense of spoiled identity.[183] If our findings support skepticism about the behavioral impact of law as far as sex is concerned, it seems prudent to apply the same conservative skepticism to the capacity of law to influence stigma.

Of course, the problem may not be the law written in the books, but the kind of statements made in legislative debates, or the news stories associated with high-profile prosecutions.[184] In their work on the social psychology of stigma, Bruce Link and Jo Phelan emphasize the importance in propagating stigma of processes that link people who have a stigmatized trait to negative stereotypes, and then "place[] [them] in distinct categories so as to accomplish some degree of separation of 'us' from 'them.'"[185] The enactment of laws would seem to fit the bill -- a great moment of public sorting. It has to be admitted, however, that in other areas of HIV prevention, proponents of evidence based methods argue that law is terrible at sending messages; that is why advocates so readily dismiss the argument that allowing drug users to get clean needles at needle exchanges or pharmacies will encourage children to start injecting.[186] And even if the passage of an HIV criminalization statute were "sending a message" about HIV or homosexuality, why wouldn't it be cancelled out by the message sent by supportive messages sent by the Ryan White Care Act[187] or *Lawrence v. Texas*?[188]

Although our findings, and those of others, leave us unconvinced that criminal law has a significant effect in reducing testing or increasing stigma, we still come down against the enactment of HIV-specific statutes or the widespread use of criminal law in cases of exposure. For one thing, the dubious possibility that criminal law is doing any good at all means that any possible harm in the coin of stigma, social marginalization or deferred testing is not worth paying. For another, we are concerned with the effect of criminalization on HIV policy-makers and policy making. Framing the problem of HIV prevention in terms of criminal law is paradoxical: it

---

183. *Id.* Of course, the belief that the state may legitimately regulate behavior among people with or at risk of HIV may reflect stigma, in the form of a belief that MSMs or drug users or others at risk of HIV "deserve" to be told what to do.

184. Wolf & Vezina, *supra* note 1, at 825 (quoting Mark Tatge, *Bill Would Require HIV Disclosure*, PLAIN DEALER, Feb. 10, 1999, at 5B); 142 CONG. REC. E1446, E1447 (daily ed. Aug. 1, 1996).

185. Bruce G. Link & Jo C. Phelan, *Conceptualizing Stigma*, 27 ANN. REV. SOC. 363, 367 (2001).

186. To be sure, there is also empirical evidence that syringe access programs do not encourage new use. Melissa A. Marx et al., *Impact of Needle Exchange Programs on Adolescent Perceptions About Illicit Drug Use*, 5 AIDS & BEHAV. 379, 383 (2001).

187. 42 U.S.C. § 300 (2000).

188. 539 U.S. 558 (2003).

suggests both that behaving safely is primarily a matter of personal choice, and also that the state is right to and capable of telling people what to do in the bedroom. The day-to-day task of practicing safe sex is much like sticking to a diet or kicking a harmful, risky, but pleasurable habit like smoking or gambling. Individual choice is mediated by genetic, psychological and social factors. The state is generally unable to coerce the behavior it desires, at least without taking steps that undermine other basic values.[189]

The sad irony of criminalization and public health is that there is another way, a way that demonstrably works: the combination of education, persuasion and social support pursued in traditional public health interventions. We don't *need* criminal law, and to the extent criminalization in any manner detracts from the attention to or funding for measures that do work, it hurts HIV control.[190]

VI. CONCLUSIONS

Much ink has been spilled over the question of whether there is a role for criminal law in curbing the HIV epidemic, and more generally in setting or reinforcing social norms of behavior. In this article, we have reviewed the theoretical arguments on both sides of this debate and have presented a portion of the findings of a study that was conceived to finally ground the decision in empirical data.

---

189. In this sense, many of the libertarian arguments against intensive public health regulation around obesity are applicable. *See generally* Richard A. Epstein, *What (Not) to Do About Obesity: A Moderate Aristotelian Answer*, 93 GEO. L.J. 1361 (2005).

190. This is not to say there is no role for criminal law in the prevention of sexually transmitted infections. Ayres and Baker have proposed a law mandating the use of a condom during any first sexual encounter. Ian Ayres & Katharine K. Baker, *A Separate Crime of Reckless Sex*, 72 U. CHI. L. REV. 599, 630–31 (2005). They argue that such a law not only establishes the norm, but, if deployed in concert with a major social marketing campaign, might also help people follow the norm by changing the social meaning of asking for a condom. *Id.* at 650–51. In the context of such a law, instead of being a confession of infection or an accusation of promiscuity, condom use would simply be an expectation, an accepted norm. *Id.* at 652. This is a creative approach to the problem of HIV transmission and the law. Whether it is feasible, or even desirable, is another question. It still faces the general problems associated with regulating sex through criminal law.

Another possibility for new norm-creation is to encourage clients of sex workers to use condoms. In some places, where commercial sex workers are implicated in HIV transmission, one effective response has been the promotion of "100% condom" policies in the trade. Alexa E. Albert et al., *Condom Use Among Female Commercial Sex Workers in Nevada's Legal Brothels*, 85 AM. J. PUB. HEALTH 1514, 1514 (1995). Indeed, this has been the successful policy in the one U.S. jurisdiction that regulates, rather than prohibits, prostitution: Nevada. *Id.*; *see also* Alexa E. Albert et al., *Facilitating Condom Use with Clients During Commercial Sex in Nevada's Legal Brothels*, 88 AM. J. PUB. HEALTH 643, 644–45 (1998). While prostitution is not a significant factor in the spread of HIV in the United States, the example of these 100% condom campaigns does offer lessons about when law can make a difference in HIV prevention.

People accept the general idea that they should protect themselves and others in their sexual behavior. The norm is out there, and probably caused rather than resulted from criminal law. The problem for people with HIV lies in knowing what to do and consistently doing it. Criminalization of sexual behavior does not help people in these two tasks. There is no good public health reason to treat sexual behavior involving HIV exposure as a crime, and we think it is very difficult or impossible to do so fairly. People who use HIV as a weapon can be dealt with under general criminal law, albeit with occasional technical difficulties, but in those cases HIV status is incidental. Public health officials can deal with the occasional extreme case of dangerous behavior as a public health problem under public health laws. There is no need to single out HIV for specific legal sanctions.

New criminalization statutes should not be passed, and states that have them should repeal them. Barring that, these laws should be amended to regulate only behavior that is actually dangerous, and to make the penalties prescribed by criminal laws for exposing others to a chance of HIV transmission proportionate to the actual risks.[191] If in a particular state the public health law is not sufficient to facilitate action in cases of significant risk, it should be amended.

The criminalization of HIV has been a strange, pointless exercise in the long fight to control HIV. It has done no good; if it has done even a little harm the price has been too high. Until the day comes when the stigma of HIV, unconventional sexuality and drug use are gone, the best course for criminal law is to follow the old Hippocratic maxim, "first, do no harm."

---

191. Galletly & Pinkerton, *supra* note 3, at 328–29 (reviewing the risks and categorizing types of sexual activity according to level of risk); Wolf & Vezina, *supra* note 1, at 882 (suggesting that penalties be decreased to be proportionate to crimes of similar activity).

Appendix of Tables

TABLE 2. DESCRIPTIVE STATISTICS OF MEASURES PREDICTING MODEL PREDICTING ANAL OR VAGINAL SEX WITHOUT A CONDOM (N=482)

	Minimum (Negative coding)	Maximum (Positive coding)	Mean	Standard Deviation	n (yes)	% (yes)
Dependent Measures:						
Anal Sex without a Condom	0	1	0.22	.41	104	21.6
Vaginal Sex without a Condom	0	1	0.31	.46	150	31.1
Independent Measures:						
Age in years at Time of Interview	18.5	75.9	37.1	11.2	-	-
Belief About Laws Prohibiting HIV+ Person from Having Sex Without a Condom: True versus False	False = -.5	True = .5	0.07	0.43	219/ 370	59.2
Belief About Laws Prohibiting HIV+ Person from Having Sex Without a Condom: Opinion Versus No Opinion	Opinion = -.33	No Opinion = .67	-0.10	0.42	112	23.2
Procedural Justice	1.0	5.0	2.4	0.8	-	-
Moral Agreement	1.5	5.0	4.5	0.7	-	-
Legitimacy	1.0	5.0	2.9	1.0	-	-
Deterrence: Detection	1.0	5.0	2.2	1.2	-	-
Deterrence: Sanctions	1.0	5.0	3.3	1.1	-	-
Regular Partner	Had = -.33	Did not have =.67	0.07	0.49	196	40.7
Other Partner	Had = -.33	Did not have =.67	0.24	0.50	277	57.5
Disclosure: Regular Partner	No Disclosure = -.5	Disclosure = .5	0.09	0.38	185/ 286	64.7
Disclosure: Other Partner	No Disclosure = -.5	Disclosure = .5	0.01	0.33	107/ 205	52.2

TABLE 3. LOGISTIC REGRESSION MODEL PREDICTING ANAL SEX WITHOUT A CONDOM

	Step			Final Equation					
Variables	χ^2	Df	p	B	SE	Wald	Df	p	Odds
Sex at Birth	13.41	1	<.001	1.11	0.41	7.52	1	.006	3.04
Age at Time of Interview	9.72	1	.002	-0.03	0.02	3.81	1	.051	0.97
Race	3.40	1	.065	-0.36	0.34	1.16	1	.28	0.69
Sexual Orientation	14.25	1	<.001	0.66	0.41	2.63	1	.11	1.93
HIV Seropositive Status	0.14	1	.71	-0.12	0.33	0.14	1	.71	0.88
State of Residence	0.26	1	.61	0.42	0.33	1.60	1	.21	1.51
Belief about Law Requiring Condom	9.73	2	.008	-	-	-	-	-	-
False v. True (1)	-	-	-	-0.22	0.33	0.46	1	.50	0.80
Opinion v. No Opinion (2)	-	-	-	-0.72	0.38	3.57	1	.059	0.49
Compliance Predictors	40.88	3	<.001	-	-	-	-	-	-
Procedural Justice	-	-	-	-0.05	0.20	0.06	1	.80	0.95
Moral Agreement	-	-	-	-0.85	0.21	16.00	1	<.001	0.43
Legitimacy	-	-	-	-0.32	0.15	4.36	1	.037	0.73
Deterrence	8.54	2	.014	-	-	-	-	-	-
Perceived % of detection	-	-	-	0.05	0.12	0.14	1	.71	1.05
Fear of sanctions	-	-	-	-0.33	0.15	4.87	1	.027	0.72
Type(s) of Partner Reported	12.33	2	.002	-	-	-	-	-	-
Regular Partner	-	-	-	-1.07	0.34	9.98	1	.002	0.34
Other Partner	-	-	-	-0.41	0.30	1.82	1	.18	0.67
Disclosure: Yes vs. No	1.54	2	.46	-	-	-	-	-	-
Regular Partner	-	-	-	0.48	0.39	1.51	1	.22	1.62
Other Partner	-	-	-	0.44	0.42	1.10	1	.29	1.55
Significant Interaction Effects	-	-	-	-	-	-	-	-	-
Sex at Birth X Orientation	7.25	1	.007	1.99	0.77	6.65	1	.010	7.34
Race X Belief: Opinion vs. None	12.49	1	<.001	2.67	0.76	12.17	1	<.001	14.42
Disclosure: Regular X State	14.65	1	<.001	-2.79	0.76	13.49	1	<.001	0.06
Constant	-	-	-	-2.39	0.27	80.38	1	<.001	0.09

TABLE 4. LOGISTIC REGRESSION MODEL PREDICTING VAGINAL SEX WITHOUT A CONDOM

	Step			Final Equation					
Variables	χ^2	df	p	B	S.E.	Wald	df	p	Odds
Sex at Birth	44.15	1	<.001	-1.24	0.31	15.76	1	<.001	0.29
Age at Time of Interview	0.02	1	.89	-0.04	0.07	6.40	1	.011	0.96
Race	0.01	1	.92	0.30	0.38	0.65	1	.42	1.36
Sexual Orientation	75.93	1	<.001	-2.34	0.38	38.67	1	<.001	0.10
HIV Serostatus	3.33	1	.068	-1.05	0.42	6.34	1	.012	0.35
State of Residence	23.23	1	<.001	1.69	0.36	21.93	1	<.001	5.40
Belief about Law Requiring Condom	3.69	2	.16	-	-	-	-	-	-
False v. True	-	-	-	-0.30	0.37	0.69	1	.41	0.74
Opinion v. No Opinion	-	-	-	-0.32	0.40	0.66	1	.42	0.72
Compliance Predictors	11.77	3	.008	-	-	-	-	-	-
Procedural Justice	-	-	-	-0.19	0.23	0.68	1	.41	0.83
Moral Agreement	-	-	-	-0.37	0.26	2.07	1	.15	0.69
Legitimacy	-	-	-	0.04	0.17	0.06	1	.81	1.04
Deterrence	16.47	2	<.001	-	-	-	-	-	-
Perceived % of detection	-	-	-	0.18	0.14	1.67	1	.20	1.19
Fear of sanctions	-	-	-	-0.49	0.14	11.59	1	.001	0.61
Type(s) of Partner Reported	58.25	2	<.001	-	-	-	-	-	-
Regular Partner	-	-	-	-2.24	0.37	36.86	1	<.001	0.11
Other Partner	-	-	-	-0.99	0.34	8.34	1	.004	0.37
Disclosure: Yes vs. No	2.15	2	.34	-	-	-	-	-	-
Regular Partner	-	-	-	-0.10	0.37	0.07	1	.80	0.91
Other Partner	-	-	-	-0.65	0.48	1.80	1	.18	0.52
Significant Interaction Effects	-	-	-	-	-	-	-	-	-
Sex X Orientation	14.39	1	<.001	-2.27	0.62	13.60	1	<.001	0.10
Race X HIV Status	7.90	1	.005	2.06	0.74	7.71	1	.005	7.84
Orientation X Law Belief (Op. vs. No Opinion)	4.36	1	.037	-1.72	0.80	4.59	1	.032	0.18
Orientation X Regular Partner	6.85	1	.009	1.74	0.65	7.09	1	.008	5.67
Constant	-	-	-	-0.75	0.23	10.82	1	.001	0.47