PIERCING THE VEIL OF SECRECY IN HIV/AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES: THEORIES OF PRIVACY AND DISCLOSURE IN PARTNER NOTIFICATION

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The authors are grateful to Kathleen Maguire, R.N., J.D. (Georgetown/Johns Hopkins Program on Law and Public Health), Kathleen J. Lester, J.D./M.P.H. Candidate (Georgetown/Johns Hopkins Program on Law and Public Health), Ruqaiijah Yearby, J.D./M.P.H. Candidate (Georgetown/Johns Hopkins Program on Law and Public Health), Thaddeus Pope, J.D./Ph.D. Candidate (Georgetown University), Jennifer Phelps, J.D. Candidate (Georgetown University Law Center), Robert Vermylen, J.D. Candidate (Georgetown University Law Center), and Lisa G. Rothman, J.D. Candidate (Georgetown University Law Center), with special appreciation for the research of Mark Lowry, M.D., J.D. Candidate (Georgetown University Law Center), and Bill Tarantino, J.D. Candidate (Georgetown University Law Center), and Darren Hultman, J.D. Candidate (Georgetown University Law Center), and Darren Hultman, J.D. Candidate (Georgetown University Law Center) of the Edward Bennett Williams Law Library Faculty Services for their research assistance.

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I. INTRODUCTION

At least since their appearance in Western Europe in the late fifteenth century, sexually-transmitted diseases (STDs), or "venereal diseases" as they were once called, have been characterized by a remarkable paradox. Despite their endemic nature in Europe and North America, STDs were, and still are, a "secret malady." Persons have endeavored to keep their sexually-transmitted infections hidden from the social world—from their sexual partners, families, and communities. At the same time, prevailing social mores have kept STDs from

^{1.} Historians have postulated that sexually transmitted diseases, principally syphilis and gonorrhea, were transported from the New World to Europe in the late fifteenth century. See Susan P. Connor, The Pox in Eighteenth-Century France, in The Secret Malady: Venereal Disease in Eighteenth-Century Britain and France 15, 17 (Linda E. Merians ed., 1996); see also infra Part II.A.1.a (discussing the development of contact tracing in response to syphilis).

^{2.} The term "venereal" disease derives from Roman mythology and pertains to Venus, the goddess of sexual love and physical beauty. The Middle English *venerealle*, and the Latin *venereus* refer to sexual intercourse and the genitalia. *See* THEODOR ROSEBURY, MICROBES AND MORALS: THE STRANGE STORY OF VENEREAL DISEASE 6 (1971).

^{3.} Connor, *supra* note 1, at 1; *see also* Deborah L. Shelton, *STDs: Sex Turns Dangerous*, AM. MED. NEWS, Feb. 3, 1997, at 12 (noting that the epidemic nature of STDs is reflected in the United States, which has the world's highest rates of STDs, with rates of infection at ten to fifteen times that of other industrialized nations).

the public consciousness and consequently have prevented STDs from receiving public action and effective intervention.

Secrecy nurtures disease because it provides an environment conducive to the spread of infection. Where the social construction of sexuality and disease condones secrecy, sex partners are unaware of the risks,⁴ and public health authorities cannot track the epidemic in order to positively intervene. Not surprisingly, one of the earliest recorded public health strategies for STD prevention was to pierce the veil of secrecy surrounding these hidden diseases by notifying sexual partners ("contacts") of infected patients ("index" cases).⁵ Sexual "contact tracing" was supported by the moral theory that sexual partners could take precautions and seek medical treatment if the risk of infection was disclosed.⁶ Once the risks of infection were identified, the incidence of STD infection would decline suggestively as infected persons reduced behaviors that placed them at risk for disease.⁷

Sexual contact tracing probably was practiced years before it became a formal means of STD control. Originating from the reglementation of European prostitutes, the earliest reference to contact tracing in contagious disease law dates to the mid-nineteenth century in Europe and to the 1930s in the United States. Buttressed by federal financial support and a decade of state STD laws, contact epidemiology became a central public health strategy in America to combat the syphilis epidemic. The development of a cure for the disease, penicillin, in the early 1940s led, however, to significant reductions in the incidence

- 4. Women currently comprise the fastest-growing group of people with HIV/AIDS. *See infra* notes 302-03 and accompanying text.
- 5. The history of contact tracing is closely related to the regulation of prostitution in the early sixteenth century through the process known as reglementation. *See infra* Part II.A.1.a).i).
- 6. See COMMITTEE ON PREVENTION AND CONTROL OF SEXUALLY TRANSMITTED DISEASES, INSTITUTE OF MED., THE HIDDEN EPIDEMIC: CONFRONTING SEXUALLY TRANSMITTED DISEASES 151-52 (Thomas R. Eng & William T. Butler eds., 1997) [hereinafter The HIDDEN EPIDEMIC].
 - 7. See World Health Org., Control of Sexually Transmitted Diseases 47-51 (1985).
- 8. See Frances M. Cowan et al., The Role and Effectiveness of Partner Notification in STD Control: A Review, 72 GENITOURINARY MED. 247, 247 (1996).
 - 9. See infra notes 36-42 and accompanying text.
- 10. The Contagious Disease Acts of 1864 and 1866 adopted compulsory registration as a method of controlling STDs; the statutes also ordered confinement for prostitutes. *See* Michael W. Adler, *The Terrible Peril: A Historical Perspective on the Venereal Diseases*, 281 Brit. Med. J. 206, 206 (1980).
- 11. The National Venereal Disease Act of 1938 adopted STD control measures proposed by the anti-venereal disease campaigner, the former Surgeon General Thomas Parran. Dr. Parran supported screening, case finding, treatment, and contact tracing for persons with syphilis as the only effective method of breaking the chain of disease transmission. As Parran stated in support of his aggressive national partner notification campaign against syphilis, the once rampant STD: "In no other respect is the [medical] practice in this country more reprehensible than in the failure of physicians, and even of public health clinics, to make diligent inquiry as to sources of infection and to use all available methods to bring these persons under treatment." Thomas Parran, *The Eradication of Syphilis as a Practical Public Health Objective*, 97 JAMA 73, 75 (1931); *see also infra* Part II.A.1.a).iii) (discussing the influence of Thomas Parran).
- 12. See Allan M. Brandt, No Magic Bullet: A Social History of Venereal Disease in the United States Since 1880 150 (1985); see also infra Part II.A.1.a).iii) (discussing the use of "contact epidemiology" in syphilis treatment).
 - 13. See infra text accompanying notes 70-78.

of syphilis. The effectiveness of contact tracing as a public health practice therefore largely remained unknown despite moral support for the concept.

From its widespread use during the 1930s, the notification of sexual partners (with the assistance of public health authorities) remained an accepted part of the law and practice of STD control throughout this century. ¹⁴ This concept of tracking sexual contacts would later be called "partner notification." Recently, the concept of partner notification has expanded to formally include a range of services such as counseling and medical treatment, in addition to notification. Consequently, a preferred terminology has evolved—"partner notification support services" (PNSS). ¹⁵

In instances where contact tracing did not traditionally apply, legal reform, driven by moral justifications and based on theories of tort law, imposed duties on certain persons, generally infected persons and health care workers (HCWs), to notify others of the risk of contracting an STD. Often known collectively as the "duty to warn," these judicially-imposed, common law obligations subsequently have been codified by many state legislatures. ¹⁶ The affirmative "duty to warn" is comprised of two obligations based on distinct legal foundations: (1) the duty of infected persons to disclose to partners the risk of exposure; and (2) the duty of health care professionals to warn partners of harm resulting from exposure to infected patients.

The social construction of disease, particularly STDs, perceptively changed during the HIV/AIDS epidemic¹⁷ of the 1980s and 1990s. Infected persons (and, to a certain extent, public health authorities) questioned the theories of disclosure and protection that justified partner notification. During the AIDS epidemic, secrecy and individual privacy reemerged as the prevailing social construct of public health, much as it was in the early days of the syphilis epidemic. As Susan Sontag writes, "More than cancer, but rather like syphilis, AIDS seems to foster ominous fantasies about a disease that is a marker of both individual and social vulnerabilities." Within this context, partner notification has been challenged as an acceptable public health practice or legally-imposed duty, at

^{14.} See Jon K. Andrus et al., Partner Notification: Can it Control Epidemic Syphilis?, 112 Annals Internal Med. 539, 542 (1990).

^{15.} See infra text accompanying notes 101-02.

^{16.} See infra Part II.C. and Table B.

^{17.} Acquired immuno-deficiency syndrome (AIDS) is the most severe manifestation of HIV. The spread of HIV has been documented to occur through direct exposure to contaminated blood and bodily fluids, other than saliva. Exposure to bodily fluids may occur through unprotected sexual activity, the introduction of contaminated blood into the bloodstream through the use of contaminated syringes and needles primarily by intravenous drug users (IDUs), and through perinatal transmission from mother to child. See ASSOCIATION OF STATE & TERRITORIAL HEALTH OFFICIALS ET AL., GUIDE TO PUBLIC HEALTH PRACTICE: HIV PARTNER NOTIFICATION STRATEGIES 1 (1988) [hereinafter ASTHO]. Remote transmission of HIV also has been documented to occur through blood transfusions and kissing. See Lawrence K. Altman, Case of H.I.V. Transmission Is First to Be Linked to Kiss, N.Y. TIMES, July 11, 1997, at A14. Despite remote instances of non-sexual infections, HIV has been classified legally as a sexually-transmitted disease since 1988. See infra note 226.

^{18.} SUSAN SONTAG, ILLNESS AS METAPHOR AND AIDS AND ITS METAPHORS 153 (1990).

least as it relates to a disease like HIV/AIDS, which is deeply private, socially stigmatizing, and medically incurable.¹⁹

In truth, partner notification, whether applied to traditional STDs or to HIV/AIDS, is a highly complex concept that cannot be understood without careful consideration of related issues of public health, ethics, economics, and law. Partner notification has deep roots in the historical, legal, and philosophical heritage of America. To public health practitioners, the traditional practice of partner notification, with its widespread, persistent, and systematic use over time, justifies its continued implementation. Why then, it is often asked, does society refrain from fully utilizing one of the most well-established public health interventions in the HIV/AIDS epidemic?²⁰ Under this perspective, failure to pursue aggressively partner notification demonstrates how civil liberties have trumped privacy in HIV/AIDS policy. These arguments, however, assume that partner notification is effective and that syphilis and HIV/AIDS are truly analogous diseases.

Despite the use of partner notification in all of its forms, it has not been systematically examined from legal, ethical, empirical, and economic perspectives. Based on this analytical examination, it is apparent that although partner notification is well-grounded in the legal and moral traditions of America, there exists a scarcity of empirical and economic evidence demonstrating its cost-effectiveness. Consequently, alternative models are needed for STD prevention and control that are both effective and protective of individual liberties and privacy. In particular, a model of "social network analysis" that promises to inform those at risk of HIV through focused counseling and education may be warranted.

Part I explores the various meanings of partner notification within their historical and legal foundations. Because partner notification has been used to describe quite different kinds of intervention, the concept has created policy confusion. Contact tracing, the patient's duty to disclose, and the health care professional's duty to warn are described as a prerequisite to a more detailed ethical, economic, and public health analysis. Part II examines the legal interests involved with partner notification, particularly contact tracing. The governmental interests for contact tracing are discussed by framing the constitutional and statutory justifications for contact tracing from the state and federal perspectives. Arguments concerning an infected individual's constitutional, statutory, and common law interests in privacy are discussed along with anti-discrimination protections for persons infected with STDs—particularly those infected with HIV. These interests, while important, do not negate the power of government to implement partner notification. Part III broadens the systematic evaluation, exploring partner notification from normative and consequentialist perspectives. One of the powerful reasons to support partner notification may not necessarily be public health effectiveness, but simply an ethical claim that persons should be

^{19.} See generally Lawrence O. Gostin & Zita Lazzarini, Human Rights and Public Health in the AIDS Pandemic (1997).

^{20.} See, e.g., Chandler Burr, *The AIDS Exception: Privacy vs. Public Health*, ATLANTIC MONTHLY, June 1997, at 57, 57 (arguing that partner notification, or at least contact tracing, has been deemphasized in relation to the HIV/AIDS epidemic to "accommodate civil-rights concerns").

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informed about sexual risks despite infringements on the autonomy of infected persons. Principles of feminism suggest that women should be informed of demonstrable risks to their health and empowered to protect themselves. Part IV evaluates the accumulated empirical data about the efficacy of partner notification, looking at how successful this intervention has been, under what circumstances it is likely to be most effective, and whether its effectiveness in a particular setting supports its efficacy as a national practice. Partner notification also is evaluated from an economic perspective. The costs of partner notification in comparison with other public health interventions are analyzed, as well as the likelihood that the practice creates incentives or disincentives for avoidance of risk behavior, promotion of healthy behavior, and access to treatment. Finally, Part V proposes alternative models for partner notification. In conclusion, a "social network analysis" is supported as part of a comprehensive prevention strategy for STDs and HIV/AIDS. This alternative approach can achieve public health objectives with less intrusion on personal liberty and privacy.

II. THE THREE MEANINGS OF PARTNER NOTIFICATION: FROM CONTACT TRACING TO THE DUTIES TO DISCLOSE AND WARN

Partner notification is a highly complex concept. While often simplified to denote the notification of persons who are at risk of becoming infected with a disease, partner notification has at least three distinct, if at times overlapping, meanings: (1) contact tracing; (2) the duty of infected persons to disclose their infection to a sexual partner; and (3) the duty of health care providers to warn of sexual and other risks to the partners of their infected patients.

Contact tracing, whose origins can be traced to the reglementation of prostitutes in sixteenth century Europe, is characteristically a governmental responsibility undertaken by public health authorities. The health department typically interviews an infected patient, called the "index case," who voluntarily discloses the names and locations of past and present sexual partners. These contacts are then located—traced—when possible to notify them of their potential exposure to infection. The partner is not informed of the name of the index case by health authorities in an attempt to preserve the confidentiality of the index case. Medical treatment and personal counseling often are offered to contacts at the time of notification. For those persons who are infected, the process is regenerated to determine additional contacts. The principal objective of contact tracing is to reduce disease transmission by locating and containing the spread of a given STD within a certain population.21 It seeks to break the chain of transmission by identifying sources through which others in a given population have become infected. In addition, it should stem the tide of new infections by medically intervening to treat the disease and by counseling those infected with STDs to reduce the risk of transmission by disclosing their infection to partners and engaging in "protected" sexual activity (e.g., using a condom).

The second meaning of partner notification, what we term "the duty to disclose," is derived from the legal doctrine of the "right to know." This "right to know" developed from the social hygiene movement of the early 1900s and

likely was influenced by women's organizations and early principles of feminism. It developed under tort law that held that a person has a duty of care toward his sexual partner. This duty may entail an obligation to disclose an STD to a sexual partner or to reasonably protect the partner from avoidable health risks. In some instances, a health department or physician may ask a patient to disclose the STD to his partner, a concept often referred to as "patient referral" since the patient makes the disclosure.

The third meaning of partner notification is derived from a related legal doctrine known as a "duty to warn." Through conversations with an infected patient, a physician may conclude that certain persons are at risk of contracting the disease. Under the "duty to warn," physicians treating a patient for a sexually transmitted disease have a duty to inform fully foreseeable third parties of their exposure to the infection, regardless of whether the patient consented to such notification or the patient's identity was protected. This practice is sometimes known as "provider referral," as the health care professional (or public health counselor in contact tracing programs) makes the disclosure.

Similar to theories of tort law later enacted in statutory law, the duty to disclose and the duty to warn have as their principal objective the protection of unaware individuals from exposure to disease by others who know of their infectious conditions and are in control of their actions. The judicial imposition of these duties may have had the unintended result of decreasing the transmission of infectious disease among certain populations. The imposition of these duties thus shared a primary goal with contact tracing: the reduction of infectious disease transmission in society. In this Part, the broad concept of partner notification is developed further by examining the theories underlying these three meanings of partner notification.

^{22.} See infra Part II.C.; see generally Ronald Bayer & Kathleen E. Toomey, HIV Prevention and the Two Faces of Partner Notification, 82 Am. J. Pub. Health 1158 (1992) (discussing the two approaches—duty to warn and contact tracing—to notifying sexual and/or needle sharing partners of possible risk).

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A. Contact Tracing

1. An Historical Perspective

a) Development of Contact Tracing with a Focus on Syphilis

The historical origins of contact tracing date back to the syphilis epidemic beginning at the turn of the sixteenth century in Europe. The appearance of syphilis in Europe has been attributed to the transport of the disease from the New World by the crew of Christopher Columbus after his 1492 expedition, although this attribution has never been confirmed. The disease was spread quickly by the dispersion of the multinational mercenary army of the French ruler, Charles VIII, after they suffered an outbreak of what the English called "the Great Pox" during the siege of Naples in the Italian Campaign of 1495. Syphilis surfaced in Germany, France, and Switzerland in 1495, in Holland and Greece in 1496, in the British Isles in 1497, and in Russia in 1499.

By 1530, syphilis²⁸ was recognized as a sexually transmitted disease that could be controlled by regulating the sources of infection.²⁹ Early regulations focused on methods developed to control other epidemic diseases such as leprosy and the plague. Syphilitics were banished from the community;³⁰ other communities quarantined those infected in special hospitals created to house and treat

- 25. See ROSEN, supra note 23, at 72.
- 26. See Pusey, supra note 24, at 4-5.
- 27. See ROSEN, supra note 23, at 72.

^{23.} See GEORGE ROSEN, A HISTORY OF PUBLIC HEALTH 72 (1993) ("Among the new or apparently new diseases that characterize the sixteenth and seventeenth centuries, the one that loomed largest was syphilis."). Syphilis is a chronic infectious disease most commonly acquired by sexual contact with another infected individual. See Edmund C. Tramont, Treponema Pallidum (Syphilis), in PRINCIPLES AND PRACTICE OF INFECTIOUS DISEASES 2117, 2117-18 (Gerald L. Mandell et al. eds., 4th ed. 1995). Bacterial in nature, syphilis manifests through a variety of symptoms in several stages when untreated. See id. Initial symptoms include a relatively painless chancre (or lesions) on the sexual organs. See id. at 2121. Symptoms progress within weeks to include a severe skin rash of the palms and soles, oral lesions, fever, lymphadenopathy, headaches, and arthritis. See id. at 2122-23. Without treatment, the disease slowly progresses to the cardiovascular and central nervous system. See id. at 2118, 2125. Paralysis and mental disorders often occur as a result of the inflammation of the central nervous system. See id. at 2124-25. Death can result after years of build-up of scar tissue and tumor-like masses in vital bodily organs. See id. at 2121-25. The transmission of syphilis from mother to fetus, known as congenital syphilis, can result in miscarriage and stillbirths of infants, or permanent brain damage in surviving children who go untreated. See Susan Okie, Syphilis Cases in U.S. Near All-Time Low, WASH. POST, May 27, 1997, at H7.

^{24.} See WILLIAM ALLEN PUSEY, THE HISTORY AND EPIDEMIOLOGY OF SYPHILIS 12-13 (1933); Theodor Rosebury, *Columbus and the Indians*, MONTHLY REV., July-Aug. 1992, at 61, 68 (noting that "Columbus' crew probably did not bring syphilis to Europe").

^{28.} The term syphilis was adopted for the disease from the poem of Italian physician, Girolamo Frascatoro, published in 1530, about the legend of a young shepherd, Syphilus, who was cursed with the disease for insulting the Roman god Apollo. *See id.* at 72-73; *see also* Negib Ayachi, *The Cultural Origins of Disease*, WASH. TIMES, May 18, 1997, at B7 (reviewing JON ARRIZABALAGA ET AL., THE GREAT POX: THE FRENCH DISEASE IN RENAISSANCE EUROPE (1997)).

^{29.} See ROSEN, supra note 23, at 73.

^{30.} See *id.* at 73-74. A 1496 decree of the Parliament of Paris required all infected persons to leave the city within 24 hours. See PUSEY, supra note 24, at 5-6. The Scottish Privy Council banished all persons in Edinburgh afflicted with syphilis to the Island of Inchkeith. See *id.*

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them, $^{\rm 31}$ or simply prohibited them from entering public places or from associating with certain persons. $^{\rm 32}$

i) Reglementation

People saw prostitution as a "reservoir" of venereal diseases such as syphilis. Since prostitution was practiced widely in most of Europe at the inception of the syphilis epidemic, governments subsequently focused regulations on prostitutes in an attempt to thwart a known avenue of disease transmission. Prostitutes were expelled from Bologna, Ferrara, and other cities beginning in 1496. A proclamation of the town council of Aberdeen, Scotland in April 1497 ordered that in "protection from the disease which had come out of France and strange parts, all light women desist from their vice and sin of venery and work for their support . . . [or risk] . . . being branded with a hot iron on their cheek and banished."

Attempts to control syphilis in Europe also involved the medical inspection of prostitutes through regulations that came to be known as reglementation.³⁶ Although early medical treatment for syphilis was highly toxic and therefore largely ineffective,³⁷ reglementation was emphasized as a way to control the spread of the disease through the medical inspection and certification of prostitutes. It was implemented in conjunction with efforts to abolish prostitution completely.³⁸ While efforts to curb prostitution essentially failed, reglementation

- 33. See id. at 73.
- 34. See id.
- 35. PUSEY, supra note 24, at 6-7.

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^{31.} *See* ROSEN, *supra* note 23, at 74. Special hospitals or other treatment facilities were established in Wurzburg (1496), Freiburg (1497), and Hamburg (1505). *See id.* A Venetian ordinance in 1552 required all syphilitics to receive treatment at the Hospital of the Incurables. *See id.*

^{32.} See id. In 1497, Bamberg prohibited those infected with syphilis from entering churches and inns, or from having any contact with non-syphilitics; barbers in Rome were forbidden to serve known syphilitics. See id.

^{36.} See Verla L. Bullough, The History of Prostitution 166-72 (1964). In 1507, Faenza required that women desiring to be prostitutes first be examined to determine whether they were syphilitic. See Rosen, supra note 23, at 73.

^{37.} See Rudolph H. Kampmeier, The Introduction of Penicillin for the Treatment of Syphilis, 8 SEXUALLY TRANSMITTED DISEASES 260-65 (1981). Accepted treatment involved multiple administrations of heavy metal preparations (particularly mercury). See id. at 260. The use of mercurial compounds was an extension of the treatment administered for infectious diseases having skin manifestations and had been used since the days of the Crusades when the disease known as "temporary leprosy" was transported back to western Europe. See id.; see also Ayachi, supra note 28, at B7 (noting that a mercury-based ointment and a remedy made of the bark of the exotic guaiac tree from South America proved ineffective).

^{38.} Frederick III abolished houses of prostitution in 1690 by deporting the women to workhouses, only to have them re-open in 1700. Henry VIII of England attempted unsuccessfully to suppress prostitution. Maria Theresa of Austria created a morals police, known as the "Chastity Commission," which proved corrupt and eventually was dismantled. *See* Ludwig Weiss, *The Prostitution Problem in Its Relation to Law and Medicine*, 107 JAMA 2071, 2071-72 (1906).

was practiced until the nineteenth century in Europe.³⁹ Criticism of government-supported medical inspections of prostitutes, however, was prevalent. Many viewed the government-funded inspections as the countenance of prostitution.⁴⁰ Others questioned the validity of medical findings derived from the inspection process.⁴¹ Although the efficacy of condoms in blocking the transmission of STDs like syphilis was accepted medically, few physicians accepted their use due to opposition from religious and nationalist groups concerned about the concurrent prevention of pregnancy.⁴²

In the United States, the St. Louis Experiment of 1870-1874 established a government-sponsored program requiring the inspection of prostitutes.⁴³ The St. Louis City Council passed the "Social Evil Ordinance" on July 5, 1870, appointing six physicians to inspect all registered public women of the city. Prostitutes afflicted with venereal disease were committed to a special "Social Evil Hospital" until they were certified as cured. Despite the claim of the City Health Officer, William Barrett, that the program had "lessened disease, suffering, and death and reclaimed fallen women," the Missouri state legislature nullified it in 1874. In Illinois, the Board of Health had the authority to hospitalize any

- 40. See EDWARD B. VEDDER, SYPHILIS AND PUBLIC HEALTH 233-35 (1918).
- 41. See id. at 224-25. Abraham Flexner wrote in regard to the Paris examination:

All day long a dismal succession of groups of abandoned women file into the rudely equipped rooms, in which two physicians ply their repellent task perfunctorily. . . . Of the two physicians . . . one used a rubber glove, the other a rubber finger—in both cases the same for all; though wiped on a towel from time to time, neither was changed or cleansed. . . . I observed one of the physicians examine twenty-five to thirty girls without changing . . . and a number of those examined were adjudged "diseased."

Id. (internal quotations omitted).

Still others advocated abandoning reglementation while emphasizing the institution of marriage as an effective adjunct in the control of syphilis. *See* Rudolph Kampmeier, *Syphilis and Marriage by Alfred Fournier*, 8 SEXUALLY TRANSMITTED DISEASE 29, 30 (1981). Alfred Fournier, a renowned French professor of syphilology, wrote a treatise concerning the professional obligations of a physician to his patient and society in which he set forth numerous conditions in order to grant medical permission for one to marry. Fournier argued that when a physician assumes responsibility for giving medical permission to marry, his permission extends to the family "for behind that patient there is a young wife, there are children yet unborn, there is a family, there is society itself, to be shielded at the same time by [a physician's] prohibition." *Id.* at 29-30.

- 43. See Burnham, supra note 39, at 206.
- 44. Id. at 209.
- 45. See id. at 206.

^{39.} In Great Britain, the Contagious Diseases Acts of 1864 and 1866 required the compulsory registration, supervision, and examination of prostitutes and allowed for compulsory hospital detention of those deemed as diseased. *See* Adler, *supra* note 10, at 206. In 1858, William Sanger, a prominent New York physician, strongly advocated that the United States adopt the Parisian system of compulsory medical inspection of prostitutes. He argued that in Paris, "the number of cases of disease and the virulence of its form have materially abated." John C. Burnham, *Medical Inspection of Prostitutes in America in the Nineteenth Century: The St. Louis Experiment and its Sequel*, 45 BULL. HIST. MED. 203, 205 (1971) (citation omitted).

^{42.} But see Gerard Tilles et al., Marriage: A 19th Century French Method for the Prevention of Syphilis: Reflections on the Control of AIDS, 32 INT. J. DERMATOLOGY 767, 767 (1993) (citing P. DIDAY, EXPOSITION CRITIQUE ET PRATIQUE DES NOUVELLES DOCTRINES SUR LAS SYPHILIS: PARIS JB BAILLIERE ET FILS 501 (1858)). The French physician Diday proposed the mandatory free distribution of condoms in houses of prostitution. See id.

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woman suspected of being infected with syphilis and to place placards on her home stating "suspected VD." 46

Private industries also practiced reglementation. In 1899, the Minnesota Iron Company undertook reglementation in conjunction with their mining operations in the northern part of the state. A system of thorough and regular examinations was performed among prostitutes working in parlors located on company property. Infected women were treated and forbidden to solicit patrons. Male clients suspected of being infected with an STD were advised to consult a physician and were expelled from the house of prostitution until their STD status was ascertained. When suspected males consulted physicians, the men were questioned about the house where they had contracted their disease. They were asked to provide the names of the women who may have infected them. This crude form of contact tracing resulted in a complaint brought against company parlors and the medical examination of suspected women.

ii) The Progressive Era

At the turn of the twentieth century, societal and medical changes influenced the development of contact tracing. This was the Progressive Era, an age of social reform in which health care professionals and progressive social reformers described venereal disease as a destroyer of the family unit and a social evil. Three medical breakthroughs were crucial: (1) syphilis and gonorrhea were shown to be caused by infectious organisms transmitted through sexual contact; (2) a reliable diagnostic test for the diseases was developed by Dr. Adolph von Wassermann in 1907; and (3) a medication, Salvarsan, was identified as an effective, although still toxic, treatment for syphilis.

In the United States, dissidents challenged the traditional view of venereal disease as a "medical secret" between the patient and his physician. With enhanced knowledge of the cause and transmission of STDs like syphilis and gonorrhea, "innocent" victims (generally married women) of venereal disease became vocal. Patient confidentiality, primarily among male patients, was considered secondary to the perceived ethical obligation⁵¹ to warn unsuspecting

^{46.} Marvin S. Amstey, The Political History of Syphilis and Its Application to the AIDS Epidemic, 4 WOMEN'S HEALTH ISSUES 16, 17 (1994).

^{47.} See W.E. Harwood, A Practical Lesson In Reglementation, 47 JAMA 2076 (1906).

^{48.} *See id.* All expenses incurred by the women were borne by the keepers of the house, unless it was shown that the woman deliberately infected the man, in which case the costs of both the afflicted patron and her own bills would be paid by her. *See id.*

^{49.} See BRANDT, supra note 12, at 9.

^{50.} See Rudolph Kampmeier, The Continuous Treatment of Early Syphilis by Arsphenamine and Heavy Metals, 8 SEXUALLY TRANSMITTED DISEASE 224, 226 (1981) (citing J.E. Moore & A. Keidel, The Treatment of Early Syphilis, 39 BULL. JOHNS HOPKINS HOSP. 1 (1926)).

^{51.} The ethical conundrum was evident in the views expressed by Dr. Marion Potter, a female physician of the early twentieth century: "We have seen the wife murdered by syphilis contracted from an unfaithful husband, and an innocent woman its victim for life...." Marion Craig Potter, *Venereal Prophylaxis*, 7 Am. J. Nursing 340, 349 (1907). Yet surprisingly Dr. Potter endorsed the need for medical confidentiality, defining the attempt of a health care provider to warn an infected spouse as "gossip." *Id.* at 350.

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spouses or fiancées about an infected partner.⁵² Although the belief remained that "[p]rostitution is responsible to the greatest extent for the dissemination of venereal diseases,"⁵³ the concept of contact tracing, which arose from reglementation, was generating more interest, largely due to the perceived injustices suffered by sex partners who were unaware of their risk.⁵⁴

With the return of the United States troops after World War I and the relative failure of the military to stymie STDs among soldiers, 55 however, federal funding to combat venereal disease decreased significantly. Despite the lobbying efforts of numerous women's groups, by 1921 Congress had discontinued appropriations to the Interdepartmental Social Hygiene Board, which had been created three years earlier for the purpose of protecting troops from venereal disease. The fiscal ravages of the Great Depression further decreased funding for combating venereal disease. As incidence rates of syphilis infections rose, many social hygienists blamed the increased prevalence on the relaxed sexual morality of the 1920s, not on a pattern of decreased public health funding. Whether due to changes in sexual morality and behavior or a decrease in public health funding, the syphilis epidemic in the United States had worsened. 58

^{52.} See Elizabeth Temkin, Turn-of-the-Century Nursing Perspectives on Venereal Disease, 26 IMAGE: J. Nursing Scholarship 207, 207-11 (1994).

^{53.} George P. Dale, Moral Prophylaxis, 12 Am. J. NURSING 22, 25 (1911).

^{54.} In 1911, Dr. George Dale, a social hygienist, summarized the changing focus: "We must insist that the man who has gonorrhea shall not marry until he is cured and in extreme cases in which the patient refuses to take this advice, if possible the innocent person should be given warning." George P. Dale, *Moral Prophylaxis*, 11 Am. J. Nursing 782, 782 (1911).

^{55.} The efforts of the American Expeditionary Force during World War I to control venereal disease among service members again centered on the regulation of prostitution, as well as the use of prophylactic treatment after sexual intercourse. See GEORGE WALKER, VENEREAL DISEASE IN THE AMERICAN EXPEDITIONARY FORCES 100-01 (1922). While the British found success with contact tracing among troops during the war, see G. Thibierge, Syphilis and the Army 196-97 (C.F. Marshall ed., 1918), American soldiers were reluctant to reveal the names of their sexual partners, see WALKER, supra, at 58-74. Contact tracing in the United States military was abandoned in favor of the imposition of military penalties, including court-martial and loss of pay, on soldiers who contracted venereal disease or failed to take the required post-coitus prophylaxis. See id.

^{56.} See BRANDT, supra note 12, at 123 (citation omitted). The Interdepartmental Social Hygiene Board developed comprehensive programs on the transmission and treatment of venereal diseases. One of its programs, the Program of Protective Social Measures, had an anti-prostitution agenda that called for the detention of infected prostitutes. When the Board lost its federal funding, this Program was transferred to the Department of Justice. See id.

^{57.} See Maurice A. Bigelow, Youth and Morals, 14 J. Soc. HYGIENE 1, 1-5 (1928) (arguing that there is not convincing evidence to prove any decline in sexual morality among youth).

^{58.} By the 1930s, one out of every ten Americans was infected with syphilis. See Thomas Parran, Shadow on the Land: Syphilis 60 (1937). The cost of treating syphilis was greater than that of treating any other infectious disease, including tuberculosis, despite the fact that (1) the transmission route and agent for the disease were known (the organism, Treponema palladium, had previously been identified as the source of syphilis when transmitted through sexual encounters, see J.E. Moore & A. Keidel, The Treatment of Early Syphilis, 39 Bull. Johns Hopkins Hosp. 1 (1926)); (2) there existed a diagnostic means, the Wasserman test, to identify the infected; and (3) a treatment that restricted transmission was available (the treatment developed by Salvarsan was effective although it was expensive and time-consuming, requiring a year to complete). See id.

iii) The Influence of Thomas Parran, Surgeon General

By 1936, the New Deal was in full swing. In the spring of that year, President Franklin Delano Roosevelt appointed Thomas Parran as Surgeon General.⁵⁹ With a background in preventive medicine and epidemiology, Parran had as a primary public health goal the control and eradication of the syphilis epidemic. He advocated the reporting of STD infections to state health authorities, notification of the partners of infected persons, compulsory treatment, and isolation of sources of infection when necessary.⁶⁰ Recognizing that a major barrier to the identification and treatment of syphilitics had been the moralization of the disease, Parran explained the disease in terms of costs to the public. It was estimated that fifteen million dollars was spent annually on the ambulatory care of venereal patients, and three times that amount was spent on individuals institutionalized due to insanity, blindness, or paralysis from syphilis. ⁶¹ After securing substantial federal funding,62 Parran further educated the public about the syphilis threat, 63 organized mass screening programs for testing, 64 and began a national contact tracing program. His five-point program for controlling syphilis consisted of case finding, 65 prompt therapy at no cost to the patient, contact

[l]egal aspects should include (a) notification of cases, particularly the lapsed cases; (b) notification of sources of infection; (c) compulsory treatment after other efforts have failed, and (d) quarantine of irresponsible persons. . . . Every state in the union has a law requiring the notification of all or of certain of the venereal diseases. . . . [However] notification of sources of infection is at present almost an unexplored field and yet this is a method by which other communicable diseases are controlled.

Thomas Parran, *The Eradication of Syphilis as a Practical Public Health Objective*, 97 JAMA 73, 75 (1931) (emphasis added).

- 61. See Brandt, supra note 12, at 133 (citing Thomas Parran & Lida J. Usilton, The Extent of the Problem of Syphilis and Gonorrhea in the United States, 14 Am. J. Syphilis 152 (1930)).
- 62. See BRANDT, supra note 12, at 143-44. The Social Security Act of 1935 provided the Public Health Service with \$8 million for state health care, 10% of which was directed toward combating syphilis. Additional funding required to conduct Parran's national program was provided via the National Venereal Disease Control Act, passed in May 1938, which provided \$15 million over a three-year period for syphilis control. See id.
- 63. Parran used the press to communicate his message to the general public. His article, "The Next Great Plague to Go," illustrating the nature and extent of his projected program against syphilis, was published in the *Reader's Digest* and *Survey Graphic*. See Thomas Parran, The Next Great Plague to Go, 25 SURV. GRAPHIC 405, 405-11 (1936).
- 64. One of the most effective examples of a mass screening program in relation to contact tracing was known as the Chicago project. *See* BRANDT, *supra* note 12, at 151-52. The *Chicago Tribune* publicized the public health effort to administer free blood tests. *See id.* With federal funding under the Social Security Act of 1935 and the Works Progress Administration, one-third of the city's population was tested for syphilis, resulting in 56,000 cases being identified and treated. *See id.*
- 65. Case finding was conducted through mass screening programs—the so-called Wasserman dragnet. *See id.* at 152 (citing Paul de Kruif, *Chicago Against Syphilis*, READER'S DIG., Mar. 1941, at 23, 23-33).

^{59.} See Lynne Page Snyder, New York, the Nation, the World: The Career of Surgeon General Thomas J. Parran, Jr., MD, (1892-1968), 110 Pub. HEALTH REP. 630, 631 (1995).

^{60.} As the New York Health Commissioner, Parran had identified the legal measures necessary to combat the epidemic in conjunction with medical services. He wrote in a 1931 article championing the eradication of syphilis that

tracing and notification, premarital testing ⁶⁶ and prenatal testing for congenital syphilis, ⁶⁷ and public education.

Studies of the period sought to demonstrate that contact tracing was an important part of syphilis control programs when properly executed. Two doctors, Dudley C. Smith and William A. Brumfeld, described the essential qualities of a contact tracing program: (1) public health interviewers should emphasize the medical aspects of the disease rather than its moral implications; (2) confidentiality should be stressed throughout; (3) after the names of sex partners and close associates are elicited from the patient, the patient should be encouraged to notify the contacts; (4) public health departments should send a letter advising each contact to seek medical examination; and (5) legal measures to compel compliance should only be used as a last resort.

Parran's efforts in relation to the syphilis epidemic marked the first time in the United States that formal case finding and contact tracing were applied to a sexually transmitted disease on a national scale. Before the role of contact tracing in reducing infection rates could be explored effectively, the use of penicillin as a potential curative treatment for syphilis had been developed in 1943 and, by the end of World War II, it was available to treat the disease. The advent of penicillin had a remarkable effect on the treatment of syphilis. The inci-

^{66.} In 1935 Connecticut was the first state to pass a law requiring a blood test and physical examination for all prospective brides and grooms seeking a marriage license. See BRANDT, supra note 12, at 147-48. Many other states followed suit, but only required the groom to be tested. See id. Women's magazines at the time strongly endorsed these laws. See id. at 148 (citing Edward A. Macy, Marriages Insured Against Syphilis, 74 SURVEY 262, 262-63 (1938)).

^{67.} Legislation regarding prenatal testing was instituted to combat congenital syphilis with very positive results. *See* BRANDT, *supra* note 12, at 149-50. After enacting such legislation in California, the mortality rate for congenital syphilis fell from 6.50 cases per 1,000 to 0.15 cases per 1,000 from 1938 to 1945. *See id.*

^{68.} See Dudley C. Smith & William A. Brumfeld, Jr., Tracing the Transmission of Syphilis, 101 JAMA 1955, 1955-57 (1933); see also Dudley C. Smith, Practical Epidemiology of Syphilis, 107 JAMA 784, 784-86 (1936).

^{69.} See Smith & Brumfeld, supra note 68, at 1956. Parran strongly supported the requirements for contact tracing advocated by Dr. Smith and Dr. Brumfeld: "The authors have presented a new method in the control of syphilis, which to my mind is as important as the discovery of a new drug.... I am convinced that syphilis is kept alive by a series of local epidemics which can be traced and controlled." Thomas Parran, Abstract of Discussion to Tracing the Transmission of Syphilis, 101 JAMA 1957, 1957 (1933).

^{70.} See Allan M. Brandt, Editorial, Sexually Transmitted Disease: Shadow on the Land, Revisited, 112 Annals Internal Med. 481, 481 (1990); Parran, supra note 63, at 405-11.

^{71.} See Kampmeier, supra note 37, at 260-61. As early as 1943, three scientists demonstrated the use of penicillin as a cure in experimental rabbits and human patients. See id. Soon after, John Hopkins Hospital in Baltimore and the University of Pennsylvania in Philadelphia undertook studies to confirm the scientists' findings. See id. at 260. Due to the urgency presented by the ongoing world war, human testing was conducted at an accelerated pace and by June 1944 the Penicillin Panel of the National Research Council's Subcommittee on Venereal Disease had reported that penicillin was effective in a) eliminating surface treponemas from open lesions in 12-18 hours; b) healing lesions at least as rapidly as arsenic; and c) creating seronegativity at about the same rate as with metal chemotherapy. See id. at 261.

^{72.} See id. at 261-65; see generally Syphilis Study Section, U.S. Pub. Health Serv., The Status of Penicillin in the Treatment of Syphilis, 136 JAMA 873 (1948) (discussing the uses of penicillin to treat syphilis).

dence of syphilis infections⁷³ and death rates⁷⁴ dropped significantly over time. Syphilis, one of the greatest epidemics in history, finally had been brought under control due in part to an aggressive public health campaign, including contact tracing, and in part to the timely availability of penicillin treatment. To Currently, new cases of syphilis in the United States have fallen to a forty-year low. Although prevalence rates remain unacceptably high in the southeast and among African-Americans, the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services is hopeful that transmission of the disease can be eliminated in the United States in the near future.

b) Development of Contact Tracing with a Focus on HIV/AIDS

Of course, syphilis would not be the last STD epidemic of the century. In June 1981, the CDC's *Morbidity and Mortality Weekly Report* documented an unusual pneumonia in five homosexual men from Los Angeles.⁷⁹ Later identified as the human immunodeficiency virus (HIV), the HIV/AIDS epidemic has presented new challenges for public health officials.⁸⁰ It also has presented chal-

^{73.} In 1947 the rate of syphilis was 270 new cases per 100,000 persons. *See* BRANDT, *supra* note 12, at 171. By 1957, the incidence rate had plummeted to 3.9 new cases per 100,000 persons. *See id.*

^{74.} In 1940 the death rate from syphilis was 10.7 deaths per 100,000 persons; by 1950 it was 5 deaths per 100,000 persons; and by 1970 it was 0.2 deaths per 100,000 persons. *See id.* Deaths from congenital syphilis plummeted from 5.3 deaths per 10,000 births in 1940 to 0.57 deaths per 10,000 births in 1950. *See id.*

^{75.} See Brandt, supra note 70, at 481 ("Parran's program met with considerable success, breaking the conspiracy of silence associated with [STDs] and attracting much needed attention and resources.").

^{76.} See Susan Okie, Syphilis Cases Hit 40-Year Low Across Nation: Area's Infection Rate Remains Among Highest, WASH. POST, May 25, 1997, at A1 (noting that the incident rate of reported syphilis cases across the United States was 4.4 cases per 100,000 persons in 1996, only slightly higher than the historic low of 3.9 cases per 100,000 persons that occurred in 1956 and 1957).

^{77.} See id. While 73% of U.S. counties reported no new cases of syphilis during 1996, half of the 11,624 cases reported in 1996 occurred in just 37 counties in the nation. See id. In addition, the CDC reports that the syphilis rate among African-Americans is approximately 60 times the rate of white Americans. See id.

^{78.} See id. ("'We are now sitting... with a [sic] historic opportunity to move to eliminate transmission of this disease within the United States'" (quoting Judith N. Wasserheit, director of the Division of Sexually Transmitted Diseases at the CDC)).

^{79.} See Centers for Disease Control & Prevention, U.S. Dep't of Health & Human Servs., Pneumocystic Pneumonia—Los Angeles, 30 MORBIDITY & MORALITY WKLY. REP. 250, 250 (1981).

^{80.} HIV presents new challenges because it is different from many traditional STDs. One important difference between HIV and most STDs is HIV's long latency period between infection and the onset of symptoms. See Centers for Disease Control & Prevention, Dep't of Health & Human Servs., Partner Notification for Preventing Human Immunodeficiency Virus (HIV) Infection—Colorado, Idaho, South Carolina, Virginia, 260 JAMA 613, 615 (1988). For the purposes of partner notification, individuals who agree to participate in contact tracing and notification programs may have to provide names and relevant information of past sexual and IDU contacts. See id. at 613. Even if a person can recall these contacts, finding the contacts can be difficult. See id. at 615. In addition, HIV/AIDS tracing and notification is plagued by anonymous contacts. See id. Partner notification programs for hepatitis B, which epidemiologically is similar to HIV infection, suffer because of the large number of anonymous sex partners, as well as the inaccessibility of the IDU population. See id.

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lenges similar to those of earlier STDs like syphilis.⁸¹ One obvious similarity between the modern AIDS epidemic and the syphilis epidemic of the twentieth century is the societal response to the two diseases. Fear and stigmatization of those infected initially prevailed during both epidemics.⁸² The societal response to homosexuals, prostitutes, and injection drug users (IDUs) infected with HIV strangely is similar to the treatment of sex syphilitics and prostitutes during the syphilis epidemic. In contrast, the response to children, hemophiliacs, and heterosexually-infected persons with HIV is significantly more tolerant, like society's response to "innocently" infected wives, mothers, and children with syphilis a century earlier.⁸³

Regardless of the similarities between the syphilis and HIV epidemics, medical evidence also has shown that they are intertwined. Common STDs like syphilis, gonorrhea, chlamydia, and genital herpes are known to increase the risk of HIV infection. The association between STD infection and HIV may be due as much to risky behaviors, including drug use, of persons likely to become infected with multiple STDs, in addition to the immune suppressed state of those infected with common STDs. It only can be guessed as to the course of HIV policy had these findings been known earlier. Almost from the inception of the HIV/AIDS epidemic, issues of patient confidentiality and funding in the context of contact tracing reemerged. "HIV exceptionalism," suggesting that public health activities for HIV were markedly less aggressive than for other STDs, became hotly debated.

- 83. See id. at 709.
- 84. See The Hidden Epidemic, supra note 6, at 49.

^{81.} See Peter G. Pappas, Syphilis 100 Years Ago: Parallels with the AIDS Pandemic, 32 INT'L J. DERMATOLOGY 708, 708 (1993) ("The similarities between the two illnesses are striking in many respects. Both diseases are transmitted sexually.... Congenital infection is common to both illnesses.... Neither organism is routinely cultureable and the diagnosis of both diseases is based on clinical and serologic data."). In the beginning of the twentieth century the only reasonable therapy for syphilis was toxic mercurial compounds; likewise there is no curative therapy for HIV and the antiretroviral compounds are limited by toxicity. See id.; see also Brandt, supra note 70, at 482 ("[C]ontrolling HIV infection presents problems that are common to other sexually transmitted diseases such as syphilis....").

^{82.} See Pappas, supra note 81, at 708-09.

^{85.} See Lawrence O. Gostin & Zita Lazzarini, Prevention of HIV/AIDS Among Injection Drug Users: The Theory and Science of Public Health and Criminal Justice Approaches to Disease Prevention, 46 EMORY L.J. 587, 650-51 (1997); see also Susan N. Blank et al., New Approaches to Syphilis Control: Finding Opportunities for Syphilis Treatment and Congenital Syphilis Prevention in a Women's Correctional Setting, 24 Sexually Transmitted Diseases 218, 218 (1997) ("The nationwide epidemics of syphilis and (subsequently) congenital syphilis of the mid-1980s were fueled primarily by the emergence of crack cocaine use and the barter of sex in exchange for drugs or money." (citations omitted)).

^{86.} See THE HIDDEN EPIDEMIC, supra note 6, at 51-54.

^{87.} See John Potterat et al., *Partner Notification in the Control of Human Immunodeficiency Virus Infection*, 79 AM. J. Pub. Health 874, 875 (1989) (estimating the costs of a nationwide HIV contact tracing program, assuming 100,000 new cases annually, at \$20 million in 1989).

^{88.} See, e.g., Ronald Bayer, Public Health Policy and the AIDS Epidemic: An End to HIV Exceptionalism?, 324 NEW ENG. J. MED. 1500, 1501 (1991); Burr, supra note 20, at 58. But see Gabriel Rotello, Editorial, AIDS Is Still an Exceptional Disease, N.Y. TIMES, Aug. 22, 1997, at A23.

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The public health response to AIDS focused on individual responsibility.⁸⁹ The use of contact tracing enraged gay rights organizations,⁹⁰ civil rights groups,⁹¹ and even some public health officials.⁹² Although some states tried to establish mandatory partner notification programs,⁹³ most programs and state educational initiatives centered on individuals protecting themselves from infection.⁹⁴ Public health officials struck a balance between maintaining patient confidentiality and ensuring that known parties were informed of possible exposure to HIV.⁹⁵ As a result, officials attempting to control the epidemic emphasized the personal obligation of the infected to notify their past and future partners.⁹⁶

2. The Contemporary Practice of Contact Tracing

Contact tracing is primarily the responsibility of state health departments. Differing needs of individual communities render contact tracing suitable to

^{89.} See Burr, supra note 20, at 59 (noting that first efforts to combat AIDS relied on the volunteerism of the infected individual).

^{90.} See Bayer & Toomey, supra note 22, at 1159. As members of a stigmatized group, gays were highly suspicious of the true intentions of public health officials attempting to institute contact tracing and partner notification programs. See id. In 1985, San Francisco tried to institute a pilot program in which the health department would ask bisexual men to provide the names of their sexual partners so that they could be notified of their exposure. See RONALD BAYER, PRIVATE ACTS, SOCIAL CONSEQUENCES: AIDS AND THE POLITICS OF PUBLIC HEALTH 124 (1990). The gay community strongly opposed the plan it labeled "Orwellian." See id.

^{91.} The Northern California branch of the American Civil Liberties Union favored programs focusing on self-protection measures as opposed to voluntary notification. *See* BAYER, *supra* note 90, at 128.

^{92.} See, e.g., Burr, supra note 20, at 58-59; Nat Hentoff, Editorial, The AIDS Establishment's Conspiracy of Silence, WASH. POST, Oct. 1, 1994, at A23.

^{93.} See BAYER, supra note 90, at 129. Minnesota attempted to require notification of all partners of HIV-infected patients. See id. at 129-31. Opposition from the gay community, however, defeated the measure and ushered in a program of patient-initiated notification. See id.

^{94.} See ASTHO, supra note 17, at 9; Centers for Disease Control & Prevention, 1993 Sexually Transmitted Diseases Treatment Guidelines: Partner Notification and Management of Sex Partners (Sept. 24, 1993) http://wonder.cdc.gov/rchtml/Convert/STD/STDG3408.PCW.html [hereinafter 1993 Treatment Guidelines].

^{95.} See Lawrence O. Gostin & William Curran, AIDS Screening, Confidentiality and the Duty to Warn, 77 Am. J. Pub. Health. 361, 364 (1987). The 1988 Report of the Presidential Commission on the Human Immunodeficiency Virus recommended that the discretion of the health care provider be preserved with regard to partner notification and that the "decision to warn" be made on a case by case basis. See Presidential Comm'n on the Human Immunodeficiency Virus Epidemic, Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic 129 (1988).

^{96.} Self-disclosure of HIV infection to new sexual partners was a major concern. One study reported only 52% of seropositive women and 31% of homosexual men reported their HIV-positive status to new sexual partners. See Gary Marks et al., Self-disclosure of HIV Infection to Sexual Partners, 81 Am. J. Pub. Health 1321, 1321 (1991).

state and local control.⁹⁷ While no federal system of partner notification exists, the CDC, as part of the Department of Health and Human Services, provides funding to state and local health departments to perform a variety of testing, screening, and partner notification services related to the HIV epidemic.⁹⁸ As a condition of funding eligibility, state health departments are required to implement partner notification programs according to CDC guidelines.⁹⁹ Under this system, "standards, procedures, and practices vary widely from state to state." Recently, the CDC proposed new parameters for partner notification, or what it calls "partner notification support services" (PNSS).¹⁰¹ These proposals would require federally-funded contact tracing programs to provide a comprehensive set of supplemental services, including testing, medical treatment, and counseling, in addition to notification assistance.¹⁰²

While states, therefore, are not federally mandated to provide partner notification services, ¹⁰³ states that choose to accept federal funding for such programs must adhere to CDC guidelines regarding partner notification. In this way, the CDC guidelines establish national criteria controlling the operation of federally-funded contact tracing programs operated by state and local governments. The guidelines allow public health authorities to practice two primary models of partner notification—*patient referral* and *provider referral*. An additional model known as *conditional referral* is a hybrid combination of the two, ¹⁰⁴ which often prevails in modern practice.

With *patient referral*, index patients, who are identified through testing at public health clinics, physician referrals, or through contacts of other infected persons, are asked to contact their sex partners and IDUs with whom they have

^{97.} See ASTHO, supra note 17, at 9. Variable factors across communities concerning the implementation of partner notification programs include financial resources, seroprevalence rates, awareness levels of at-risk populations, differing transmission rates, and the recency of exposure to HIV from an infected source. See id.; see also WORLD HEALTH ORG., GLOBAL PROGRAMME ON AIDS AND PROGRAMME OF STD, CONSENSUS STATEMENT FROM CONSULTATION ON PARTNER NOTIFICATION FOR PREVENTING HIV TRANSMISSION 3 (1989) ("In considering the decision to undertake partner notification as part of a comprehensive AIDS prevention and control programme, the following key local and national variables must be taken into account: (a) Epidemiology . . . ; (b) Resources . . . ; (c) Local Environment . . . ; (d) Existing AIDS Prevention and Control Activities ").

^{98.} See, e.g., 42 U.S.C. §§ 300dd-300ff-90 (1994), as amended by 42 U.S.C.A. §§ 300dd-300ff-90 (West Supp. 1997); see also David R. Holtgrave et al., Human Immunodeficiency Virus Counseling, Testing, Referral, and Partner Notification Services: A Cost-Benefit Analysis, 153 ARCHIVES INTERNAL MED. 1225, 1230 (1993) (concluding that the CDC's annual expenditure of more than \$100 million in funding to states, territories, and cities for the provision of HIV testing, counseling, referral and partner notification services results in a net economic benefit to society).

^{99.} See Gary R. West & Kathleen A. Stark, Partner Notification for HIV Prevention: A Critical Reexamination, 9 AIDS EDUC. & PREVENTION 68, 69 (1997).

^{100.} Id. at 70.

¹⁰¹. See Centers for Disease Control & Prevention, HIV PNSS Operational Guidance Draft Outline 1-8 (1997).

^{102.} See id

^{103.} The federal government may lack the jurisdictional ability to mandate states to perform partner notification in light of the principles of "new federalism" elucidated by the Supreme Court in a series of decisions since 1976. See James G. Hodge, Jr., The Role of New Federalism and Public Health Law, 12 CLEV.-MARSHALL J. L. & HEALTH (forthcoming 1998) (on file with the Duke Journal of Gender Law & Policy).

^{104.} See Cowan et al., supra note 8, at 248.

shared syringes and needles. ¹⁰⁵ A public health official assists the index patient by providing counseling, education, contact cards, and telephone or mail reminders to the patient. ¹⁰⁶ Patient referral programs provide no assurance that contacts are actually notified, little control over the quality of the information actually conveyed, and no confidentiality protection for the identity of the index patient. ¹⁰⁷

Provider referral programs switch the responsibility for notification to trained public health personnel who locate contacts based on names, descriptions, and addresses provided by index patients. ¹⁰⁸ Information regarding their exposure, possible infection, and treatment is provided to partners in a counseled environment, preferably during a face-to-face meeting between the contact and a public health professional. ¹⁰⁹ The confidentiality of the index patient is protected by declining to reveal the patient's name to contacts, ¹¹⁰ although in many instances, contacts are aware of the source of their exposure through their own deduction or other means. ¹¹¹ Provider referral programs are more expensive to administer than patient referral programs because of a significant outlay of state personnel and resources. The confidentiality of index patients, however, is protected better through such programs, as is the quality of the information conveyed to contacts. In addition, there exists a greater potential that contacts will be informed. ¹¹²

Conditional referral occurs when public health personnel obtain the names and other information about the index patient's contacts, but allow the patient a period of time to notify them directly.¹¹³ If the contacts are not informed within the designated time period, a public health worker informs them of their exposure without revealing the index patient's identity.¹¹⁴ As a hybrid model, conditional referral programs share many of the same weaknesses and benefits of patient referral and provider referral programs mentioned above.

Many states statutorily have authorized public health authorities at the state or local level to utilize contact tracing as part of its comprehensive public health strategy for controlling STDs, including HIV/AIDS. While the law of these jurisdictions varies, Table A below summarily charts the statutory sources and general application of these laws.

^{105.} See 1993 Treatment Guidelines, supra note 94.

See Cowan et al., supra note 8, at 248.

^{107.} See Franklyn N. Judson, Partner Notification for HIV Control, HOSP. PRAC., Dec. 15, 1990, at 63, 66 tbl.3.

^{108.} See 1993 Treatment Guidelines, supra note 94.

^{109.} See id.

^{110.} See id.

^{111.} See infra Part IV.A.1.

^{112.} See Judson, supra note 107, at 66.

^{113.} See Cowan et al., supra note 8, at 248.

^{114.} See id.

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TABLE A - STATUTORY AUTHORIZATION FOR CONTACT TRACING^a

State	Disclosures for contact tracing? ^b	Statutory Source(s)	Classification of Programs ^c	Specific Diseases Covered ^d
Alabama	Y	ALA. CODE § 22- 11A-38(a), (d) (1997)	PR	CD
Alaska	N	-	-	-
Arizona	Y	ARIZ. REV. STAT. ANN. § 36-664(B)(3), (K) (West 1993)	PR PR	CD HIV
Arkansas	N	-	-	-
California	Y	CAL. HEALTH & SAFETY CODE § 121015(d) (West 1996)	PR	HIV
Colorado	Y	COLO. REV. STAT. § 25-4-402(3) (1997)	PR	STD
Connecticut	Y	CONN. GEN. STAT. §§ 19a-215(c), -584(a) (1997)	PR PR	CD HIV
Delaware	N	-	-	-
District of Columbia	Y	D.C. CODE ANN. § 6-117(a)-(b) (1995)	PR	CD
Florida	Y	FLA. STAT. ANN. §§ 381.004(3)(e)(5), .26(1), .26(3) (West 1993 & Supp. 1998)	PaR PR	HIV STD
Georgia	Y	GA. CODE ANN. § 24-9-47(h)(3)(B) (1995)	PR	HIV

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State	Disclosures for contact tracing? ^b	Statutory Source(s)	Classification of Programs ^c	Specific Diseases Covered ^d
Hawaii	Y	HAW. REV. STAT. ANN. § 325-101(a)(4)-(5) (Michie 1996)	PR	HIV, AIDS
Idaho	Y	IDAHO CODE § 39-610(2) (1993)	PR	HIV, HBV
Illinois	Y	410 ILL. COMP. STAT. ANN. 325/5(a), /5.5 (West 1997)	PR CR	STD HIV
Indiana	Y	IND. CODE ANN. § 16-41-7-4(c) (Michie 1993)	PR	HIV, AIDS, HBV
Iowa	Y	IOWA CODE ANN. § 141.6 (West 1997)	CR	HIV
Kansas	N	-	-	-
Kentucky	N	-	-	-
Louisiana	Y	La. Rev. Stat. Ann. § 40:1300.14E(1)(a) (West 1992)	PR	HIV
Maine	N	-	-	-
Maryland	Y	MD. CODE ANN., HEALTH-GEN. I § 18-337(b) (1994 & Supp. 1997)	CR	HIV
Massachusetts	N	-	-	-
Michigan	Y	MICH. COMP. LAWS ANN. § 333.5114a (West 1992)	PR	HIV

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State	Disclosures for contact tracing? ^b	Statutory Source(s)	Classification of Programs ^c	Specific Diseases Covered ^d
Minnesota	Y	MINN. STAT. ANN. § 144.4172(4) (West 1989)	PaR	CD
Mississippi	Y	MISS. CODE ANN. § 41-23-1(9) (1993 & Supp. 1997)	PR	AIDS, CD
Missouri	Y	Mo. Ann. Stat. § 191.656.2(1)(d) (1996)	PR	HIV
Montana	Y	MONT. CODE ANN. § 50-16-1009(3) (1997)	CR	HIV
Nebraska	N	-	-	-
Nevada	Y	NEV. REV. STAT. § 441A.220.5 (1996 & Supp. 1997)	PR	CD
New Hampshire	Y	N.H. REV. STAT. ANN. § 141-F:9 (1996)	PR	HIV
New Jersey	Y	N.J. STAT. ANN. § 26:4-41 (West 1996)	PR	STD
New Mexico	Y	N.M. STAT. ANN. § 24-1-9.3 (Michie 1997)	PaR	STD
New York	Y	N.Y. PUB. HEALTH LAW § 2782.2(c), .4 (McKinney 1993)	PR	HIV
North Carolina	Y	N.C. GEN. STAT. § 130A-143(4), (8) (1995)	PR	HIV, AIDS, CD

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State	Disclosures for contact tracing? ^b	Statutory Source(s)	Classification of Programs ^c	Specific Diseases Covered ^d
North Dakota	Y	N.D. CENT. CODE § 23-07.5-05.1(f) (1991 & Supp. 1997)	PR	HIV
Ohio	Y	OHIO REV. CODE ANN. § 3701.241(3), .243(B)(1)(a) (Banks- Baldwin 1994)	PR	HIV, AIDS
Oklahoma	Y	OKLA. STAT. ANN. tit. 63, § 1- 502.2(A)(4) (West 1997)	PR	CD
Oregon	Y	OR. REV. STAT. § 433.045(3) (1992)	n/a	HIV
Pennsylvania	Y	35 PA. CONS. STAT. ANN. § 7605(e)(1)- (2) (West 1993)	PaR	HIV
Rhode Island	Y	R.I. GEN. LAWS § 23-11-10 (1996)	PR	STD
South Carolina	Y	S.C. CODE ANN. §§ 44-29-90, -146 (Law Co-op. 1985 & Supp. 1997)	PR	STD, HIV, AIDS
South Dakota	N	-	-	-
Tennessee	Y	TENN. CODE ANN. §§ 68-10-102, -115 (1996);	PR PR	STD HIV
Texas	Y	TEX. CODE ANN. § 81.051 (West 1992 & Supp. 1998)	PR	HIV

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State	Disclosures for contact tracing? ^b	Statutory Source(s)	Classification of Programs ^c	Specific Diseases Covered ^d
Utah	Y	UTAH CODE ANN. § 26-6-3.5(1)(b) (1995 & Supp. 1997)	PR	HIV, AIDS
Vermont	N	-	-	-
Virginia	Y	VA. CODE ANN. § 32.1-36.1(A)(11) (Michie 1997)	PR	HIV
Washington	Y	Wash. Rev. Code Ann. §§ 70.24.022, .105(2)(g) (West 1992)	PR PR	STD HIV
West Virginia	Y	W. VA. CODE § 16-3C-3(d) (1998)	PR	HIV
Wisconsin	Y	Wis. STAT. ANN. § 252.12(2)(1) (West 1991 & Supp. 1997)	PaR	HIV
Wyoming	Y	WYO. STAT. ANN. § 35-4-133(c) (Michie 1997)	PR	STD

Notes:

a. The Table summarizes those jurisdictions which have enacted statutory law explicitly providing for or allowing contact tracing by state or local governments. It does not chart sources of administrative or common law which may allow for the use of contact tracing in jurisdictions which have not otherwise enacted statutory law authorizing its implementation.

- b. Yes [Y]; No [N].
- c. Provider Referral [PR]; Patient Referral [PaR]; Conditional Referral [CR].
- d. Contagious or Communicable Diseases in general [CD]; Sexually-transmitted Diseases in general [STD]; Human Immunodeficiency Virus [HIV]; Acquired Immuno-deficiency Syndrome [AIDS]; Hepatitis B [HBV].

Consider an example of a contact tracing program as an illustration. 115 A local health department begins a contact tracing program with the names of 100

^{115.} This example is based on information and estimates provided by the CDC. See Centers for Disease Control & Prevention, U.S. Dep't of Health & Human Servs., Partner Notification and Confidentiality of the Index Patient: Its Role in Preventing HIV, 17 SEXUALLY TRANSMITTED DISEASES 113, 113-14 (1990).

persons (index cases) known to be infected with a certain STD. Based on CDC sex partner indices, each index case will on average report 1.8 total sex partners ¹¹⁶ for an aggregate total of 180 sex partners who are potentially identifiable. Of the 100 index cases, half are either married or engaged in a long-term, primarily monogamous sexual relationship. The identity of the marital or other monogamous partner either is already known or is easily obtainable by the health department without the assistance of the index patient. An estimated 50 sexual contacts of the index case are thus readily identifiable. This leaves 130 additional sexual partners whose identities are unknown. The goal of the contact tracing program is to identify, locate, and contact these 130 persons.

Accomplishing this objective requires the participation of as many index cases as possible. Statistics based on a study of 25 HIV-positive women in New Jersey¹¹⁷ reveal that 68% of index cases would voluntarily provide the names of their sex partners to health authorities provided their own identity was not revealed to the contacts. Only 20% of these same index cases would participate, however, if their identities were revealed. As these data indicate, maintaining the confidentiality of index cases is vital to the ability of authorities to track contacts. If the program in question is based solely on patient referral where confidentiality is not protected, authorities may expect the participation of only 20% of the index cases, or 20 persons, which in turn would locate approximately 20% of the remaining 130 unidentified, potential contacts, or twenty-six persons. Thus, a patient referral program would potentially locate a total of 76 contacts (50 spouses/long-term partners + 26 other sex partners voluntarily notified), or 42% of all 180 identifiable sex partners. Of those persons reached, each would know the source through which they were exposed to infection.

A conditional referral program may fare slightly better than one based solely on patient referral since the health department guarantees that it will not disclose the identities of index cases. The premise of a conditional referral program is, however, that index cases will notify their sexual contacts directly. Only when index cases have failed to do so would health authorities assist. Since the confidentiality of index cases ultimately is not guaranteed, many index cases will not participate voluntarily.

Only through the implementation of a provider referral program can health authorities assure index cases that their identities will not be revealed. Of course, this does not mean that some contacts will not guess correctly the identities of the index cases. Regardless, where 68% of the index cases voluntarily participate with such programs as statistics suggest, approximately 88 of the remaining 130 unidentified potential contacts would be named. A provider referral program thus potentially could locate a total of 138 contacts (50 spouses/long-term partners + 88 other partners voluntarily disclosed), or 77% of all 180 identifiable sex partners. Of these contacts, only persons who shared sexual or drug relations solely with the index case in the past several years

^{116.} See id. at 113.

^{117.} See id.

^{118.} See id. at 114.

^{119.} See id.

^{120.} See id. at 113-14.

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would know for certain the source through which they were infected or were in danger of being infected. Since confidentiality is preserved, many contacts remain unaware of the source of exposure, although they would be counseled to practice safe sex with every partner to prevent future exposures.¹²¹

Contact tracing in its traditional sense thus arose from a history of government control of STDs. As one form of partner notification, contact tracing represents a traditional activity of the state to protect the public from epidemic diseases. The voluntary nature of participation is a principal feature of traditional contact tracing. Maintaining the confidentiality of index patients, while not a central feature of patient referral and conditional referral systems, is important in encouraging patients to volunteer their partners' names.

B. Duty of Infected Persons to Disclose

While the duties of infected persons to disclose and health care workers (HCWs) to warn partners of exposure to STDs share characteristics with contact tracing, particularly the quintessential feature of notifying sexual partners, significant differences between these duties and contact tracing exist. The differences between the meanings of partner notification confuse policy formulation and mar societal conceptions of contact tracing programs. In this Part the history of the common law duty of infected persons to disclose their infectious condition to their partners is traced and a modern description of the duty to disclose is provided. In the next Part, the duty of HCWs to warn the sexual or needlesharing partners of their infected patients is explained further.

The underlying tort concept of "duty" is important to understanding the differences between the three meanings of partner notification. A duty is a legal obligation to conform to a certain standard of conduct towards another person. Of the many factors that determine the existence of a duty, the most important is the foreseeability of risk of harm to another. If it is foreseeable that a person's behavior will cause harm to another, that person has a duty to take reasonable

^{121.} See id. at 114.

^{122.} See RESTATEMENT (SECOND) OF TORTS § 4 (1965) (listing seven major factors that contribute to imposing a duty on a person: (1) the foreseeability of harm to the plaintiff; (2) the degree of certainty that the plaintiff suffered injury; (3) the closeness of the connection between the defendant's conduct and the injury suffered; (4) the moral blame attached to the defendant's conduct; (5) the policy of preventing future harm; (6) the extent of the burden to the defendant and consequences to the community of imposing a duty to exercise care with resulting liability for breach; and (7) the availability, cost, and prevalence of insurance for the risk involved); see also Tarasoff v. Regents of the Univ. of Cal., 551 P.2d 334, 342 (Cal. 1976).

^{123.} See Tarasoff, 551 P.2d at 342.

steps or "due care" to avoid such behavior.¹²⁴ In the context of the transmission of infectious diseases, "due care" requires at a minimum disclosing one's condition to others at risk of exposure, including sexual or needle-sharing partners.¹²⁵ The breach of the duty to disclose or warn constitutes tortious, and occasionally criminal, conduct when it results in harm to another.

The duties to disclose and to warn represent a more serious, obligatory side to partner notification. Whether imposed judicially or statutorily, they are grounded in the obligation to do no harm to others. In combination, they require that certain persons, including those infected with STDs and the HCWs treating them, inform foreseeable, unknowing sexual partners of the risks of exposure to

124. See B.N. v. K.K., 538 A.2d 1175, 1179 (Md. 1988). Courts originally based the duty to disclose infection of an STD on the special and intimate nature of the sexual relationship; a duty first was imposed only in marital relationships. See, e.g., Crowell v. Crowell, 105 S.E. 206 (N.C. 1920) (finding that a woman had a legal cause of action where she became infected with a venereal disease by her husband who had hidden his true medical condition from her); Maharam v. Maharam, 510 N.Y.S.2d 104, 107 (N.Y. App. Div. 1986) (finding that a 31-year marital relationship gave rise to affirmative duty of a husband to inform his wife of his STD infection). The duty then was extended to non-married sexual partners. See, e.g., Kathleen K. v. Robert B., 198 Cal. Rptr. 273, 277 (Cal. Ct. App. 1984) ("The basic premise underlying these old cases—consent to sexual intercourse vitiated by one partner's fraudulent concealment of the risk of infection with venereal disease—is equally applicable today, whether or not the partners involved are married to each other."); Long v. Adams, 333 S.E.2d 852, 854 (Ga. Ct. App. 1985) (holding that the legal duty owed by one sexually active person to another "is the same one that every individual in this state owes another: the duty to exercise ordinary care not to injure others"); Duke v. Hausen, 589 P.2d 334 (Wyo. 1979) (finding a duty where parties had only a 17-day relationship). Today, most courts find that it is the foreseeability of risk and not the relationship that is most important. See, e.g., B.N., 538 A.2d at 1179 ("One who knows he or she has a highly infectious disease can readily foresee the danger that the disease may be communicated to others with whom the infected person comes into contact. As a consequence, the infected person has a duty to take reasonable precautions—whether by warning others or by avoiding contact with them—to avoid transmitting the disease.").

125. Partner notification is not the only standard of care. The California Supreme Court in Tarasoff explained that the duty was to take whatever steps were reasonable under the circumstances. See Tarasoff, 551 P.2d at 340; see also William Sundbeck, Note, It Takes Two to Tango: Rethinking Negligence Liability for the Sexual Transmission of AIDS, 5 HEALTH MATRIX 397, 427-30 (1995) (noting that other standards of care include the duty to abstain, the duty to be tested, and the duty to wear a condom). Partner notification, however, is proposed as the standard of care least intrusive to privacy and the most practical. See id. at 429; see also Daniel M. Oyler, Note, Interspousal Tort Liability for Infliction of a Sexually Transmitted Disease, 29 J. FAM. L. 519, 528 (1990-91) ("A simple warning by the infected person of the disease is sufficient in most cases because it gives fair notice of the danger and thus fulfills the duty to use reasonable care "); Eric L. Schulman, Note, Sleeping with the Enemy: Combatting [sic] the Sexual Spread of HIV-AIDS Through A Heightened Legal Duty, 29 J. MARSHALL L. REV. 957, 971-76 (1996); Note, Standards of Conduct, Multiple Defendants, and Full Recovery of Damages in Tort Liability for the Transmission of Human Immunodeficiency Virus, 18 HOFSTRA L. REV. 37, 62-63 (1989). Some courts do not specify a standard of care. See, e.g., Long, 333 S.E.2d at 855. On the other hand, the duty may be defined by the legislature: many states make the transmission of an STD a criminal offense. See, e.g., CAL. HEALTH & SAFETY CODE § 120600 (West 1996); N.Y. PUB. HEALTH LAW § 2307 (McKinney 1993); see also State v. Lankford, 102 A. 63, 64 (Del. 1917) (finding a husband criminally liable for transmitting syphilis); Maharam, 510 N.Y.S.2d at 107 (using criminal statute to set standard of care); Cooper v. Hoeglund, 22 N.W.2d 450, 453-54 (Minn. 1946) (holding that violation of criminal STD transmission statute constitutes negligence per se).

infection. 126 The impetus of these duties is the protection of individuals, not necessarily the concern for public health as is the focus of contact tracing.

Since these duties traditionally have been imposed on individuals, they generally must be carried out by the individuals upon whom they fall, as opposed to being carried out by government health officials who assist with contact tracing among volunteering individuals. The duties do not present voluntary choices left to the discretion of infected persons and HCWs¹²⁷ since the failure to notify persons at risk when required to do so may result in civil liability and criminal sanctions.¹²⁸ In addition, unlike at least one form of contact tracing (provider referral), the satisfaction of these duties generally breaches the confidentiality of infected persons directly, when imposed on the patient, or indirectly, when imposed on HCWs. Under either circumstance, the identity of the infected person is important to fulfilling the duty: persons are entitled to know the individual source of danger of which they are unaware.¹²⁹

The duty of infected persons to disclose to their partners the threat of STD exposure originates in the general duty to warn of contagious diseases (which itself is based on the duty not to harm others). Since the turn of the century, is civil and criminal courts have imposed duties to disclose on infected persons

^{126.} See Schulman, supra note 125, at 973 ("The general rule is that one who knows, or should know, that he or she is infected with an STD, has a duty . . . at least to warn a sexual partner of the infection prior to sexual contact."); see also Estate of Behringer v. Medical Ctr. at Princeton, 592 A.2d 1251, 1281 n.19 (N.J. Super. Ct. Law Div. 1991) ("If a physician has a duty to warn third parties of the HIV status of patients who may be, for example, sexual partners of the patient, it could legitimately be argued that the risk of transmission would similarly require the surgeon to warn his own patients.").

^{127.} See infra Part II.C.2 (discussing an HCW's "privilege to warn").

^{128.} See, e.g., MICH. COMP. LAWS ANN. § 333.5114a(3) (West 1992) (creating criminal sanctions for failure of infected person to inform sexual contacts of infectious condition prior to engaging in sexual relations).

^{129.} See, e.g., Reisner v. Regents of the Univ. of Cal., 37 Cal. Rptr. 2d 518 (Cal. Ct. App. 1995); DiMarco v. Lynch Homes-Chester County, Inc., 583 A.2d 422 (Pa. 1990). Even in the few states where HCWs are not required statutorily to notify at-risk individuals of the identity of the source of exposure, see, e.g., CAL. HEALTH & SAFETY CODE § 120980(a) (West 1996) (permitting, under California's HIV/AIDS disclosure statute, health care workers to inform only at-risk persons that they possibly have been exposed to the virus, without identifying through what source), the identity of the infected person can be revealed by the mere circumstances of notification as with contact tracing programs.

^{130.} See Duke v. Housen, 589 P.2d 334, 340-41 (Wyo. 1979); Minor v. Sharon, 112 Mass. 477, 487 (Mass. 1873).

^{131.} See Schulman, supra note 125, at 971 ("The law on transmission of communicable diseases dates back over 100 years, and includes cases imposing civil liability for transmission of such diseases as smallpox, typhoid fever, tuberculosis, whooping cough, scarlet fever, and even recently, valley fever."); see also Louis A. Alexander, Note, Liability in Tort for the Sexual Transmission of Disease: Genital Herpes and the Law, 70 CORNELL L. REV. 101, 119 (1984) ("[E]arlier precedent... articulated the principle that a person who negligently exposes another to infectious disease should be liable for damages."); Deane Kenworthy Corliss, Comment, AIDS—Liability for Negligent Sexual Transmission, 18 CUMBERLAND L. REV. 691, 699 (1988) ("[A] significant body of case law has developed over the last century to guide litigants in pursuing a cause of action grounded in negligence."); Celia M. Fitzwater, Comment, Tort Liability for Sexual Transmission of Disease: A Legal Attempt to Cure "Bad" Behavior, 25 WILLAMETTE L. REV. 807, 810 (1989) ("Beginning in mid-nineteenth century England, courts began to punish persons who knowingly exposed others to an infectious disease.").

who are aware of the danger of infection. ¹³² Persons with contagious diseases like whooping cough ¹³³ or tuberculosis, ¹³⁴ or their guardians, ¹³⁵ were required to warn others with whom they came into contact. The same duty has been imposed on other responsible parties, including innkeepers, ¹³⁶ parents, ¹³⁷ landlords, ¹³⁸ and most notably, physicians, ¹³⁹ when it is foreseeable that preventable harm will fall on identifiable third parties. ¹⁴⁰

- 132. See Hendricks v. Butcher, 129 S.W. 431, 432 (Mo. Ct. App. 1910) (holding that a person afflicted with smallpox has a duty to "so conduct himself as not to communicate [the] disease" or a "duty to keep away from other persons, or should other persons approach him, to notify them of the fact so that they might protect themselves"); see also Crim v. International Harvestor Co., 646 F.2d 161, 164 (5th Cir. 1981) (holding that an auto manufacturer who brought a Texas car dealer to the Arizona desert to test drive had a duty to warn of valley fever); Capelouto v. Kaiser Found. Hosps., 500 P.2d 880 (Cal. 1972) (allowing recovery for contraction of salmonella); Lawrence v. Commonwealth, 127 S.W. 1013 (Ky. Ct. App. 1910) (imposing criminal liability for going on public highway while knowingly infected with smallpox).
- 133. See, e.g., Smith v. Baker, 20 F. 709 (C.C.S.D.N.Y. 1884) (holding defendant, the parent of several children, liable for negligent transmission of child's whooping cough where defendant failed to tell the owner of a boarding house that the children were diseased).
- 134. See, e.g., Earle v. Kuklo, 98 A.2d 107, 108-09 (N.J. Sup. Ct. App. Div. 1953) (involving a defendant who rented a second floor apartment to plaintiff without disclosing that she, her husband, and her daughter who occupied the first floor of the apartment building were infected with tuberculosis).
 - 135. See Smith, 20 F. at 709.
- 136. See, e.g., Gilbert v. Hoffman, 23 N.W. 632, 634 (Iowa 1885) (finding innkeeper negligent for allowing guests to frequent hotel with knowledge of presence of smallpox).
- 137. See, e.g., Kliegel v. Aitken, 69 N.W. 67, 68 (Wis. 1896) (affirming an action for negligent transmission of child's typhoid fever by a house servant against the child's parents); Smith, 20 F. at 709
- 138. See, e.g., Earle, 98 A.2d at 107; Minor, 112 Mass. at 477 (imposing liability on landlord for failure to warn guests that rented rooms were infected with smallpox).
- 139. See, e.g., Davis v. Rodman, 227 S.W. 612, 614 (Ark. 1921) (holding that a physician had a duty to notify parents that typhoid was contagious and that other children had contracted the disease); Hofmann v. Blackmon, 241 So. 2d 752 (Fla. Dist. Ct. App. 1970) (holding that a physician owes a duty to warn immediate family members of the dangers of the contagious disease and to explain precautionary steps, even if the physician negligently fails to diagnose the condition); Bush v. Commonwealth, 78 Ky. 268 (Ky. 1880); Skillings v. Allen, 173 N.W. 663, 664 (Minn. 1919) (sustaining action for negligent exposure to scarlet fever where physician failed to warn father of daughter's infectiousness); Edwards v. Lamb, 45 A. 480, 480-81 (N.H. 1899) (holding physician liable when he directed patient's wife to dress her husband's infectious wound, negligently advised her that there was not danger, and allowed transfer of infection from wound); Wojcik v. Aluminum Co. of Am., 183 N.Y.S.2d 351, 358 (N.Y. Sup. Ct. 1959) (sustaining an action where a physician failed to notify plaintiff that her husband had contracted tuberculosis); Annotation, Liability of Physician for Permitting Exposure to Infectious or Contagious Disease, 5 A.L.R. 926 (1920); see generally Tracy A. Bateman, Annotation, Liability of Doctor or Other Health Practitioner to Third Party Contracting Contagious Disease from Doctor's Patient, 3 A.L.R.5th 370 (1992) (discussing the question of a doctor's liability to a third party who contracts a disease from the doctor's patient).
- 140. At least one author has recently discussed the duty of attorneys to warn third parties of the HIV status of their clients. See David R. Katner, The Ethical Dilemma Awaiting Counsel Who Represent Adolescents with HIV/AIDS: Criminal Law and Tort Suits Pressure Counsel to Breach the Confidentiality of the Client's Medical Status, 70 Tul. L. Rev. 2311, 2332 (1996) (noting that "[t]he dilemma confronting the professional who represents . . . HIV-infected [clients] will be to balance the ethical obligation of confidentiality owed to the client against the duty to warn identifiable third parties who may be exposed").

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The judicial origins of the duty to disclose STDs can be traced to 1866. ¹⁴¹ Early claims, often brought by aggrieved wives against infected husbands, usually were barred on the basis of the interspousal immunity doctrine. ¹⁴² The interspousal immunity doctrine arose from the legal fiction that recognized a husband and his wife as a single identity. As a result, it was considered morally and conceptually objectionable to permit tort suits between spouses. ¹⁴³ With the adoption of Married Women's Acts into state law, wives began to achieve separate legal identity from their husbands as states abrogated the doctrine. ¹⁴⁴ Although criminal liability for transmission of an STD from a husband to his wife was imposed in the United States as early as 1917, ¹⁴⁵ it was not until 1920 that a wife was allowed to bring a civil cause of action against her husband for the transmission of an STD. ¹⁴⁶

From its origin in common law, the modern duty to disclose requires infected persons to notify persons exposed to infection, whether sexually or through the sharing of drug injection equipment among IDUs. ¹⁴⁷ Spouses and other sexual partners ¹⁴⁸ can recover tort damages for breaches of this duty ¹⁴⁹

^{141.} See Regina v. Bennett, 176 Eng. Rep. 925 (W. Cir. 1866) (charging the defendant for indecent assault after infecting his thirteen-year old niece with a venereal disease, the court reasoned that an assault occurred where the defendant knew of his condition but did not tell the victim to provide her the opportunity to consent to the risk of exposure).

^{142.} See Hegarty v. Shine, 14 Cox Crim. Cases 145 (Ir. Ct. App. 1878) (denying an unmarried woman recovery on other grounds for infection with syphilis while having illicit intercourse with the defendant); see also Bandfield v. Bandfield, 75 N.W. 287, 288 (Mich. 1898) ("The result of plaintiff's contention would... destroy the sacred relation of man and wife...."); Schultz v. Christopher, 118 P. 629 (Wash. 1911) (holding that a divorcee cannot bring an action for a tort committed against her by her husband during the marriage); Regina v. Clarence, 22 Q.B.D. 23, 16 Cox Crim. Cases 511, 522 (1888) (finding conclusive presumption of consent from marriage vows).

^{143.} See Oyler, supra note 125, at 522.

^{144.} See LEONARD KARP & CHERYL L. KARP, DOMESTIC TORTS: FAMILY VIOLENCE, CONFLICT AND SEXUAL ABUSE § 1.16 (1995) (cataloguing the status of the interspousal immunity doctrine in each state); see also Wayne F. Foster, Annotation, Modern Status of Interspousal Tort Immunity in Personal Injury and Wrongful Death Actions, 92 A.L.R.3d 901 (1979 & Supp. 1997). The doctrine has now been dismantled in most jurisdictions. See Oyler, supra note 129, at 519-20; Foster, supra, at 906.

^{145.} See State v. Lankford, 102 A. 63, 64 (Del. Gen. Sess. 1917) ("A wife in confiding her person to her husband does not consent to cruel treatment, or to infection with a loathsome disease.").

^{146.} In *Crowell v. Crowell*, 105 S.E. 206 (N.C. 1920), a wife alleged assault by her husband when he infected her with gonorrhea; her husband asserted immunity from suit on grounds of interspousal immunity. *See id.* at 208. The court, however, rejected his defense, holding that North Carolina's Married Women Statute provided the wife "the right of recovery of damages for any personal injury or other tort sustained by her, and there is no exemption of her husband from liability in an action by her " *Id.* at 209.

^{147.} Few states statutorily have required infected persons to notify their contacts. *But see* IND. CODE ANN. § 16-41-7-1(d) (Michie 1993) (requiring "carriers" of HIV, AIDS, or Hepatitis B to warn or cause to be warned persons at risk); MICH. COMP. LAWS ANN. § 333.5114(a)(3) (West 1992) (requiring persons infected with HIV to inform their sexual partners before engaging in sexual relations); OHIO REV. CODE ANN. § 3701.243(F) (Banks-Baldwin 1995) (requiring persons knowledgeable of a positive result on an HIV test or having been diagnosed with AIDS or AIDS-related complications to disclose such information to sexual or needle-sharing partners).

^{148.} An adulterous person may even owe a duty to the married spouse of his or her partner, since it is foreseeable that the partner will have sex with that person. *See* Mussivand v. David, 544 N.E.2d 265, 273 (Ohio 1989).

through actions brought on the varied bases of assault or battery, ¹⁵⁰ fraud or misrepresentation, ¹⁵¹ infliction of emotional distress, ¹⁵² seduction, ¹⁵³ and negligence. ¹⁵⁴

A crucial issue is whether it is reasonably foreseeable that sexual contact or needle sharing might harm one's partner.¹⁵⁵ In general, a "reasonable person" who knows or should know that they have an STD must communicate this knowledge to any sexual partner prior to sexual relations.¹⁵⁶ The knowledge of infection can be actual or constructive. ¹⁵⁷ In general, "[a]ll courts agree that if

^{149.} See Gregory G. Sarno, Annotation, Tort Liability for Infliction of Venereal Disease, 40 A.L.R.4th 1089 (1985 & Supp. 1997).

^{150.} See, e.g., Kathleen K. v. Robert B., 198 Cal. Rptr. 273, 276 n.3 (Cal. Ct. App. 1984); Lankford, 102 A. at 64; Hogan v. Tavzel, 660 So. 2d 350 (Fla. Dist. Ct. App. 1995); Carbajalo v. Fernandez, 58 So. 581 (La. 1912); Trammel v. Vaughan, 59 S.W. 79 (Mo. 1900); State v. Marcks, 41 S.W. 973 (Mo. 1897); G.L. v. M.L., 550 A.2d 525, 527 (N.J. Super. Ct. Ch. Div. 1988) (holding that the marital privilege does not "include immunity to personal injury suits between spouses based upon the transmittal of a sexual disease"); Cook v. Cook, 32 N.J. Eq. 475 (N.J. Ch. 1880); Regina v. Sinclair, 13 Cox Crim. Cases 28 (Cent. Crim. Ct. 1867); Regina v. Bennett, 176 Eng. Rep. 925 (W. Cir. Ct. 1866).

^{151.} See, e.g., Baranowski v. Torre, No. CV90-0236178, 1991 WL 240460, at *1 (Conn. Super. Ct. Nov. 7, 1991) (stating that the defendant claimed his previous lover died of cancer when he really died of AIDS); B.N. v. K.K., 538 A.2d 1175, 1179-84 (Md. 1988) (allowing a nurse to recover damages from a physician with whom she had sex where physician did not disclose his herpes infection); *Maharam*, 510 N.Y.S.2d at 107; De Vall v. Strunk, 96 S.W.2d 245, 246-47 (Tex. Civ. App. 1936, no writ) (allowing cause of action based on allegations plaintiff consented to intercourse based on a promise to marry and contracted crab lice).

^{152.} See, e.g., B.N., 538 A.2d at 1179-84; Doe v. Doe, 519 N.Y.S.2d 595 (N.Y. Sup. Ct. 1987) (requiring contemporaneous physical injury).

^{153.} See White v. Nellis, 31 N.Y. 405 (1865) (allowing a parent to bring an action when the daughter was seduced, contracted a venereal disease, and was unable to work as a result of the disease)

^{154.} See, e.g., Berner v. Caldwell, 543 So. 2d 686, 689 (Ala. 1989) (allowing cause of action for transmission of genital herpes, holding that "one who knows, or should know, that he or she is infected with genital herpes is under a duty to either abstain from sexual contact with others or, at least, to warn others of the infection prior to having contact with them"); Doe v. Roe, 267 Cal. Rptr. 564 (Cal. Ct. App. 1990) (involving herpes); Kathleen K., 198 Cal. Rptr. at 273 (affirming negligence as a cause of action for the transmission of genital herpes due to defendant's misrepresentation); Gabriel v. Tripp, 576 So. 2d 404, 404 (Fla. Dist. Ct. App. 1991) (negligence based on violation of statute criminalizing the transmission of an STD); Long v. Adams, 333 S.E.2d 852, 856 (Ga. Ct. App. 1985) (unmarried woman recovered for transmission of herpes); R.A.P. v. B.J.P., 428 N.W.2d 103 (Minn. Ct. App. 1988) (ex-wife with herpes had sexual contact with plaintiff without informing him); S.A.V. v. K.G.V., 708 S.W.2d 651, 652 (Mo. 1986) (rejecting spousal immunity defense against negligent transmission of herpes); Stafford v. Stafford, 726 S.W.2d 14 (Tex. 1987) (affirming the lower court's holding that a wife could recover damages as a result of her husband transmitting a venereal disease to her); Duke v. Hausen, 589 P.2d 334 (Wyo. 1979) (negligent transmission of gonorrhea but dismissed for elapse of statute of limitations). Most plaintiffs sue under several tort theories and often satisfy the elements of more than one theory.

^{155.} See Note, supra note 125, at 55. Reasonable care has also been specified as including a duty to disclose one's HIV status to HCWs. See Richard DeNatale & Shawn D. Parrish, Health Care Workers' Ability to Recover in Tort for Transmission or Fear of Transmission of HIV From a Patient, 36 SANTA CLARA L. REV. 751 (1996); A. Samuel Oddi, Reverse Informed Consent: The Unreasonable Patient, 46 VAND. L. REV. 1417 (1993).

^{156.} See Schulman, supra note 125, at 973.

^{157.} See id.

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one has actual knowledge of infection with an STD, he or she at the very least has a duty to warn his or her sexual partner." ¹⁵⁸

Yet, in some instances, imposing a duty to disclose may be difficult where an infected person is unaware that he is infected since he is not symptomatic. Since some sexually transmitted infections manifest immediate symptoms, it is reasonable to impute knowledge of infection, even though a person actually may not have been diagnosed as infected, and thus impose a duty to disclose. Constructive knowledge of one's infection thus is sufficient to impose liability. To hold otherwise and require actual knowledge may provide an incentive for some persons to avoid diagnosis and treatment in order to avoid knowledge of their own infection.

Some STDs like HIV have long latency periods in which persons may not know that they are infected for months or years. HIV has caused courts and commentators to struggle to define when the duty to disclose arises. As one court questioned, "at what level of knowledge of the HIV virus should a [person] foresee potential harm to [his sexual partner] such that [he] acquires a duty to act as a 'reasonably prudent person', as well as to disclose [his] knowledge of the HIV virus to [his sexual partner]." To date, courts have been reticent to impose

^{158.} *Id.* at 974; see also RESTATEMENT (SECOND) OF TORTS § 554 (1977) ("A husband or wife who fraudulently conceals from the other a physical condition that makes cohabitation dangerous to the health of the other spouse is subject to liability to the other spouse for the harm suffered as a result."); Sundbeck, *supra* note 125, at 407 ("The duty to take reasonable measures to avoid infecting a sexual partner with a venereal disease is well-established.").

^{159.} See Sundbeck, supra note 125, at 420 n.164 ("The long asymptomatic stage of AIDS poses a unique risk because a defendant may not have any physical symptoms which would cause him to recognize the danger he poses to others.").

^{160.} See, e.g., United States v. Negron, 28 M.J. 775 (A.C.M.R.), aff'd, 29 M.J. 324 (C.M.A. 1989) (holding defendant liable for not informing his partner even though he used a condom); Doe, 267 Cal. Rptr. at 566-67 (holding that only a slight degree of foreseeability is needed to impose a duty); Meany v. Meany, 639 So. 2d 229, 235-36 (La. 1994) (imputing knowledge and imposing a duty to warn on a husband who experienced a problem with drippage and sought medical advice, but still engaged in sexual intercourse with his wife); M.M.D. v. B.L.G., 467 N.W.2d 645 (Minn. Ct. App. 1991) (finding that the transmission of herpes was reasonably foreseeable when defendant had recurring sores on his penis and was advised by a physician to get a herpes test).

^{161.} See CONTROL OF COMMUNICABLE DISEASES MANUAL 1 (Abram S. Benenson ed., 16th ed. 1995).

^{162.} See Schulman, supra note 125, at 987-92 (arguing for a broader basis for imputation of knowledge and duty to warn).

^{163.} Doe v. Johnson, 817 F. Supp. 1382, 1388 (W.D. Mich. 1993).

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a duty based solely on a person's sexual history.¹⁶⁴ Rather, the person must have had some reasonable basis for knowing their infected status, such as a positive test result, symptomology, or knowledge that a previous sexual partner was infected.

C. Duty of Health Care Workers to Warn

1. Tarasoff v. Regents of the University of California

If an infected individual refuses or fails to inform his partners, HCWs with knowledge of the patient's sexually-transmitted infection and knowledge of the patient's refusal to notify others at risk may have a duty to warn the partners. At common law there was no affirmative obligation to act for the protection of others. Courts have crafted exceptions to this rule, however, based on public policy considerations, and have imposed a duty on HCWs to warn their patient's partners of the patient's infectious condition. While the duty of HCWs to warn shares its origins with the same contagious disease line of cases through which courts developed the duty of infected persons to disclose, it was recognized most famously in *Tarasoff v. Regents of the University of California*. 167

In *Tarasoff*, the California Supreme Court held that mental health professionals have a duty to warn third parties of threats of violence by the professional's patients: "When a therapist determines, or pursuant to the standards of his profession should determine, that his patient presents a serious danger of violence to another, he incurs an obligation to use reasonable care to protect the

^{164.} See, e.g., id. at 1382 (holding that the defendant, Magic Johnson, had a duty to warn, but refusing to extend liability to him solely on the basis of his high volume of sexual activity); C.A.U. v. R.L., 438 N.W.2d 441, 444 (Minn. Ct. App. 1989) (holding that the defendant did not have duty to avoid transmission and warn his partner because it was not reasonably foreseeable for defendant to have constructive knowledge of AIDS and that he could transmit it given scant amount of information available at the time parties were engaged in sexual relations); Doe v. Doe, 519 N.Y.S.2d 595 (N.Y. Sup. Ct. 1987) (declining to impose a duty on defendant to disclose homosexual activity to wife). For cases were a duty to disclose was found but damages not imposed, see J.B. v. Bohonovsky, 835 F. Supp. 796 (D.N.J. 1993); Petri v. Bank of New York Co., 582 N.Y.S.2d 608 (N.Y. Sup. Ct. 1992). On the other hand, criminal liability has been imposed in some cases. See Alan Stephens, Annotation, Transmission or Risk of Transmission of Human Immunodeficiency Virus (HIV) or Acquired Immunodeficiency Syndrome (AIDS) as a Basis for Prosecution or Sentencing in Criminal or Military Discipline Cases, 13 A.L.R.5th 628 (1993).

^{165.} See W. Page Keeton et al., Prosser and Keeton on the Law of Torts \S 53, at 357 (5th ed. 1984).

^{166.} See generally John C. Williams, Annotation, Liability of One Treating Mentally Afflicted Patient for Failure to Warn or Protect Third Persons Threatened by Patient, 83 A.L.R.3d 1201 (1995) (discussing failure to warn in the context of mental illness).

^{167. 551} P.2d 334 (Cal. 1976); see also Thompson v. County of Alameda, 614 P.2d 728 (Cal. 1980) (limiting duty to victims who are foreseeable and readily identifiable).

^{168.} See Tarasoff, 551 P.2d at 340. The case involved the murder of Tatiana Tarasoff, who was the former girlfriend of Prosenjit Poddar, a mentally-deranged patient of psychotherapist, Dr. Lawrence Moore. In therapy sessions Poddar indicated to Dr. Moore his intent to kill a girl he did not specifically name, although it was evident to the doctor that the intended victim was Tarasoff. Dr. Moore did not warn Tarasoff or her parents, but instead asked the police to pick up Poddar. Although the police detained Poddar initially, he later was released on his recognizance after being advised to stay away from Tarasoff. Two months later, Poddar murdered Tarasoff. See id. at 339-40.

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intended victim against such danger."¹⁶⁹ The *Tarasoff* decision has been accepted widely by courts in the United States.¹⁷⁰ Its holding has been extended in several jurisdictions to apply to certain medical professions or to HCWs in general.¹⁷¹ As a result, a HCW who is aware of a foreseeable danger posed by his patient¹⁷² may have a duty to instruct and advise persons likely to come into contact with the patient; in most instances the person at risk is an existing sexual or needlesharing partner.¹⁷³ Even where a HCW is unaware of the existence of such partners, a HCW's failure to warn infected patients of the potential to infect others is actionable negligence when brought by a third party infected by the patient.¹⁷⁴

Exercising the duty to warn necessarily requires a HCW to inform partners of the name of the patient who poses a danger to them. As a result, such notification constitutes a breach of the confidential relationship shared between doctors and patients. Most states recognize a common law duty of confidentiality applying to certain health care professions. Whether derived from the ethical obligations of HCWs or the contractual nature of the doctor-patient relationship,

^{169.} Id. at 340.

^{170.} See Peter F. Lake, Revisiting Tarasoff, 58 ALB. L. REV. 97, 98 (1994) ("Tarasoff has caused controversy, yet it has been widely accepted (and rarely rejected) by courts and legislatures in the United States" (citation omitted)).

^{171.} See, e.g., Reisner v. Regents of Univ. of Cal., 37 Cal. Rptr. 2d 518 (Cal. Ct. App. 1995) (holding duty to unidentified third persons fulfilled merely by informing patient of risks of transmission of AIDS); Bradley v. Ray, 904 S.W.2d 302 (Mo. Ct. App. 1995) (extending Tarasoff to cover all HCWs); Douglas W. Baruch, AIDS in the Courts: Tort Liability for the Sexual Transmission of Acquired Immunodeficiency Syndrome, 22 TORT & INS. L.J. 165, 190 (1987). But see In re Sealed Case, 67 F.3d 965 (D.C. Cir. 1995) (refusing to extend duty to warn third parties to lab technician working as quality control consultant in doctor's office); Lemon v. Stewart, 682 A.2d 1177 (Md. Ct. Spec. App. 1996) (denying recovery to a family who unknowingly cared for AIDS-infected man because there was no possibility of transmission); Ellis v. Peter, 627 N.Y.S.2d 707 (N.Y. App. Div. 1995) (refusing to impose a duty to warn spouses in light of negligent diagnosis of tuberculosis).

^{172.} Tarasoff only extends to instances where an actual danger to third parties is relayed through the treatment of patients. See, e.g., Alberts v. Devine, 479 N.E.2d 113, 119-20 (Mass. 1985) (holding that unless faced with serious danger to patients or to others, a physician owes his patient a duty not to disclose, without patient's consent, medical information about the patient to the patient's employer); Schuster v. Altenberg, 424 N.W.2d 159, 164 (Wis. 1988) ("A [physician's] duty is established when it can be said that it was foreseeable that his [patient] may cause harm to someone." (quoting A.E. Inv. Corp. v. Link Builders, Inc., 214 N.W.2d 764 (Wis. 1974))); see also Davis v. Rodman, 227 S.W. 612 (Ark. 1921) (holding physician negligent for advising patient who was diagnosed with typhoid fever to be put among other children).

^{173.} See Kenneth E. Labowitz, Beyond Tarasoff: AIDS and the Obligation to Breach Confidentiality, 9 ST. LOUIS U. Pub. L. Rev. 495, 510 (1990). Commentators also have discussed whether the duty extends to past partners. See Joseph D. Piorkowski, Jr., Between a Rock and a Hard Place: AIDS and the Conflicting Physicians' Duties of Preventing Disease Transmission, 76 GEO. L.J. 169, 187-89 (1987) (discussing that, although it would be wise from a public policy standpoint to notify past partners of their contact with HIV to prevent further transmission, it is extremely unlikely that a physician would be held liable for failure to warn past sexual partners of the risks of HIV).

^{174.} See Reisner, 37 Cal. Rptr. 2d at 523 ("[W]e believe that a doctor who knows he is dealing with the 20th Century version of Typhoid Mary ought to have a very strong incentive to tell his patient what she ought to do and not do and how she ought to comport herself in order to prevent the spread of her disease." (citation omitted)). But see Britton v. Soltes, 563 N.E.2d 910, 913 (Ill. App. Ct. 1990) (holding that the negligent failure of a doctor to diagnose tuberculosis in a patient does not give rise to an action by a third party who became infected through contact with that patient).

^{175.} See Judy E. Zelin, Annotation, Physician's Tort Liability for Unauthorized Disclosure of Confidential Information About Patient, 48 A.L.R.4th 668 (1996 & Supp. 1997).

patient confidentiality is justified by the need to develop a trusting relationship with one's physician in order to facilitate information exchange. Patient confidentiality is designed to improve the therapeutic process by encouraging disclosures that assist in accurate diagnosis and effective treatment and to strengthen the bonds of the physician-patient relationship as a general social good. 177

If a patient discloses personal information to a health care professional that is private, the professional may be liable for disclosing such information to third parties without the patient's consent.¹⁷⁸ Often described in tort law as a claim for breach of confidentiality,¹⁷⁹ courts also have relied on various other theories of recovery, including invasion of privacy,¹⁸⁰ implied term of contract,¹⁸¹ and breach of fiduciary relationship.¹⁸² Breach of confidentiality claims have been upheld when the physician makes an unauthorized disclosure of information obtained in the course of a therapeutic relationship to employers¹⁸³ or family members.¹⁸⁴

Significant ethical dilemmas arose from this conflict concerning the extent to which a patient's confidentiality should be sacrificed in the performance of the

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^{176.} See, e.g., Alberts, 479 N.E.2d at 118-19.

^{177.} See Bernard Dickens, Legal Limits of AIDS Confidentiality, 259 JAMA 3449, 3449 (1998); Lawrence O. Gostin et al., The Case Against Compulsory Casefinding in Controlling AIDS—Testing, Screening and Reporting, 12 AM. J.L. & MED. 1, 45-47 (1987) ("Trust in and compliance with public health programs depend upon the maintenance of confidentiality.").

^{178.} See Lawrence O. Gostin et al., Privacy and Security of Health Information in the Emerging Health Care System, 5 HEALTH MATRIX 1, 15-16 (1995).

^{179.} See Alan B. Vickery, Note, Breach of Confidence: An Emerging Tort, 82 COLUM. L. REV. 1426 (1982).

^{180.} The invasion of privacy theory effectuates the interest implicated in publicity cases where a person's reputation is at stake. *See, e.g.,* Doe v. Roe, 345 N.Y.S.2d 560, 561 (N.Y. App. Div. 1973) (holding that the plaintiff had a claim for relief for invasion of privacy where a psychoanalyst published certain confidential communications in a book sold publicly). The tort has significant doctrinal limitations in providing an adequate remedy for breach of confidentiality because it typically requires broad publication of the private matter, the public interest in knowing about public events or public figures may defeat the claim, and truth may be a defense. In fact, there may be four distinct branches of tort involved in an invasion of privacy theory: "intrusion upon seclusion," "appropriation of name or likeness," "publicity given to private life," and "publicity placing person in false light." RESTATEMENT (SECOND) OF TORTS § 652(B)-(E) (1977).

^{181.} Courts sometimes incorporate a duty of confidentiality into an implied service contract between the physician and patient. The expectation of confidentiality in the physician-patient relationship may be inferred from the ethical codes of medicine, the law of the state (e.g., licensing requirements), or public policy favoring a strong therapeutic relationship, such as the maintenance of trust between doctor and patient. *See, e.g.*, Hammonds v. Aetna Cas. & Sur. Co., 243 F. Supp. 793, 801 (N.D. Ohio 1965) (implying as a condition of the contract that "the doctor warrants that any confidential information gained through the relationship will not be released without the patient's permission"); Doe v. Roe, 400 N.Y.S.2d 668, 674 (N.Y. Sup. Ct. 1977) (holding that a physician who enters into an agreement with a patient to provide medical attention makes an implied covenant to keep in confidence all disclosures made by the patient).

^{182.} Some courts see the therapeutic relationship as imposing on the physician a fiduciary duty to the patient; a disclosure of private information without appropriate justification is deemed a breach of the fiduciary obligation. *See* Ritter v. Rush-Presbyterian-St. Luke's Med. Ctr., 532 N.E.2d 327, 331 (Ill. App. Ct. 1988); Alexander v. Knight, 177 A.2d 142, 146 (Pa. Super. Ct. 1962).

^{183.} See Horne v. Patton, 287 So. 2d 824, 830-31 (Ala. 1973); Alberts v. Devine, 479 N.E.2d 113, 119 (Mass. 1985).

^{184.} See MacDonald v. Clinger, 446 N.Y.S.2d 801, 806 (N.Y. App. Div. 1982) (Simons, J., concurring); Humphers v. First Interstate Bank, 696 P.2d 527, 530-33 (Or. 1985) (en banc).

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duty to warn. Many legal, medical, and ethical scholars determined that certain cases justified breaches of confidentiality for the sake of preventing harm to innocent third parties. The conflict between a HCW's duty to warn and duty to keep confidential a patient's medical information also has been addressed legislatively through a variety of statutes. 186

Some state legislatures have imposed duties on HCWs to warn the partners of their patients about a risk of infection. These effectively override and justify breaches of patient confidentiality. These statutes at the state level replace common law duties to warn and more precisely define the duty for HCWs depending on each state's requirements. In the case of STD infections, "duty to warn" statutes typically require sex and needle-sharing partners to be notified only if there is a significant risk of transmission, the patient can or will not contact the partner, and the HCW has informed the patient of the intent to notify specified partners.

2. Privilege of Health Care Workers

In circumstances where the law does not impose a duty to warn on HCWs, courts have respected a worker's *privilege* to warn. They have recognized a narrow public policy exception to the physician's traditional duty of patient confidentiality in the form of a privilege (as opposed to a duty) to warn others of his

^{185.} See Bayer & Toomey, supra note 22, at 1161; Gostin & Curran, supra note 95, at 364 ("When there are strong clinical grounds for believing that a specific contact has not been informed who is in serious danger from exposure to HIV, then the prudent course for the physician is to notify the contact of the positive serologic status of the patient."). Eventually the American Academy of Family Physicians, the American Medical Association, and the American Psychiatric Associations issued similar statements supporting the warning of unsuspecting partners as an ethical practice. See Bayer & Toomey, supra note 22, at 1161; see generally Dickens, supra note 177, at 3449.

^{186.} See Christine E. Stenger, Note, Taking Tarasoff Where No One Has Gone Before: Looking at "Duty to Warn" Under the AIDS Crisis, 15 St. Louis U. Pub. L. Rev. 471, 494-99 (1996).

^{187.} See Bobbi Bernstein, Solving the Physician's Dilemma: An HIV Partner-Notification Plan, 6 STAN. L. & POL'Y REV. 127, 135 n.55 (1995) (listing the HIV partner notification provisions enacted in over 30 states); see also infra notes 199-210 and Table B.

^{188.} See Stenger, supra note 186, at 496-99 (reviewing how different states legislatively balance confidentiality with issues of public health).

^{189.} See Bernstein, supra note 187, at 131.

^{190.} See Simonsen v. Swenson, 177 N.W. 831 (Neb. 1920). In Simonsen, a physician warned the manager of a hotel that his patient staying at the hotel was infected with syphilis. After being evicted, the patient sued his physician for making the disclosure to the hotel manager. See id. at 831-32. The court denied the patient's recovery from his doctor, explaining that when a patient's condition is "of a dangerous and so highly contagious or infectious a nature that it will necessarily be transmitted to others unless the danger of contagion is disclosed to them, then the physician should . . . be privileged to make so much of a disclosure to such persons as is necessary to prevent the spread of the disease." Id. at 832; see also Chizmar v. Mackie, 896 P.2d 196, 206-08 (Alaska 1995) (refusing to hold a physician liable for breach of confidentiality after informing a patient's spouse of her condition without her authorization); Urbaniak v. Newton, 277 Cal. Rptr. 354 (Cal. Ct. App. 1991) (denying recovery to a patient after physician disclosed HIV status to his employer).

patient's infectious condition.¹⁹¹ The privilege to warn was effectively overruled by *Tarasoff*. Once *Tarasoff* duties were adopted in most states, what was once recognized as a privilege to warn transferred into a duty to warn.¹⁹² Under *Tarasoff*, physicians no longer had the discretion to breach patient confidentiality in order to protect third parties. Instead, they were obliged, at the peril of tort liability, to disclose information regarding their patients' STDs to endangered third parties.

Although a physician's duty to warn already had been recognized in the context of contagious diseases, early cases did not confront the conflicting duty of patient confidentiality. *Tarasoff* was likely the first case to address the conflict between the duty of patient confidentiality and the duty to warn. ¹⁹³ Its requirement that HCWs disclose their patients' STD infections to endangered third parties breaches patient confidentiality since such disclosure is prohibited by the duty of patient confidentiality. ¹⁹⁴

Many states attempted to resolve this conflict by enacting new legislation.¹⁹⁵ These statutes differ from state to state in three key components: (1) the voluntariness of disclosure; (2) the scope of disclosure; and (3) the legal duties imposed. Some statutes give physicians absolute discretion to decide whether to notify a patient's contacts.¹⁹⁶ For example, laws passed in California and New York provide that a physician may notify a contact if the physician reasonably

^{191.} See, e.g., Curry v. Corn, 277 N.Y.S.2d 470 (N.Y. Sup. Ct. 1966). In *Curry*, a woman's physician revealed to her husband that she had a venereal disease; the husband used this information in a pending divorce action. See id. The woman sued her physician for violation of physician-patient confidentiality. See id. The New York Supreme Court denied recovery, holding that the physician was not liable for breach of his patient's confidentiality because "during marriage [a husband or wife] has the right to know the existence of any disease which may have bearing on the marital relation." Id. at 471 (citing Pennison v. Provident Life & Accident Ins. Co., 154 So. 2d 617, 618 (La. Ct. App. 1963) (denying a wife's claim for breach of confidentiality when her medical record was disclosed to her husband who then used the information and obtained a divorce)); see also Zelin, supra note 175, at 668 (discussing public policy exceptions to physician-patient confidentiality).

^{192.} See Sonia M. Suter, Note, Whose Genes Are These Anyway?: Familial Conflicts Over Access to Genetic Information, 91 MICH. L. REV. 1854, 1874 (1993) ("The recognition that physicians may be immune from liability for disclosure is related to, but distinct from, the duty to warn.").

^{193.} See id. at 1874.

^{194.} See J. David Butts, HIV/AIDS-Related Information and the Rule of Confidentiality: Can We Accept Exceptions?, 40 MED. TRIAL TECH. Q. 1 (1994) (providing a more in-depth historical and analytical discussion of the conflict); Bernard Friedland, HIV Confidentiality and the Right to Warn—The Health Care Provider's Dilemma, MASS. L. REV., Mar. 1995, at 3, 5 ("[H]ealth care providers... are trapped between Scylla and Charybdis.").

^{195.} In addition to modifying preexisting confidentiality statutes, states enacted statutes that specifically guarantee the confidentiality of STD or HIV status. See, e.g., CAL. CIV. CODE § 56.10 (West 1982 & Supp. 1998) (protecting physician-patient confidentiality); CAL. HEALTH & SAFETY CODE § 120705 (West 1996) (protecting STD information); CAL. HEALTH & SAFETY CODE § 120820 (West 1996) (protecting HIV information). HIV confidentiality statutes typically have narrower exceptions for the warning of third parties. See, e.g., CAL. HEALTH & SAFETY CODE § 121015(a) (West 1996) ("[N]o physician and surgeon shall disclose any identifying information about the individual believed to be infected."); N.Y. PUB. HEALTH LAW § 2782(4)(b) (McKinney 1993) ("The physician or public health officer shall not disclose the identity of the protected individual or the identity of any other contact.").

^{196.} See Bernstein, supra note 187, at 131 ("A vast majority of the current state statutes give health care practitioners absolute discretion to decide whether or not to notify the patient's contacts.").

believes a significant risk of transmission exists¹⁹⁷ and that the patient will not warn the contact.¹⁹⁸ In addition, the physician must have notified the patient of the physician's intent to warn the third party.¹⁹⁹ Such laws expressly provide that a physician has no obligation to inform, identify, or locate any partner.²⁰⁰ In contrast, duty to warn statutes create an affirmative obligation to warn, either directly or indirectly, when a physician knows of a third party's risk.²⁰¹

In examining the scope of disclosure, most statutes, including those in California and New York, allow notification of spouses, sexual partners, or needlesharing partners. Some statutes limit warnings to an index patient's spouse or cohabitating sexual partner of over one year; Still others allow only for the warning of the index patient's spouse. In regards to the nature of the imposed legal duties, most statutes, including those in California and New York, Contain provisions limiting the obligation to disclose and providing total immunity for disclosure. While some statutes indicate that the physician has no duty to disclose, they provide no immunity from potential *Tarasoff* liability, Statutes in California and New York, Statutes in Cali

^{197.} See CAL. HEALTH & SAFETY CODE § 121015(a) (West 1996); N.Y. PUB. HEALTH LAW § 2782(4)(a)(2) (McKinney 1993) ("[T]he physician reasonably believes disclosure is medically appropriate and there is a significant risk of infection to the contact....").

^{198.} See Cal. Health & Safety Code \S 121015(b) (West 1996) ("No physician and surgeon shall disclose . . . unless he or she has first discussed the test results with the patient . . . and has attempted to obtain the patient's voluntary consent for notification of his or her contacts."); N.Y. Pub. Health Law \S 2782(4)(a)(3) (McKinney 1993) ("[T]he physician reasonably believes the protected individual will not inform the contact").

^{199.} See Cal. Health & Safety Code \S 121015(b) (West 1996) ("The physician and surgeon shall notify the patient of his or her intent to notify the patient's contacts prior to any notification."); N.Y. Pub. Health Law \S 2782(4)(a)(4) (McKinney 1993) ("[T]he physician has informed the protected individual of his or her intent to make such disclosure").

^{200.} See Cal. Health & Safety Code § 121015(c) (West 1996) ("This section is permissive.... No physician has a duty to notify any person of the fact that a patient is reasonably believed to be infected...."); N.Y. Pub. Health Law § 2782(4)(c) (McKinney 1993) ("A physician or public health officer shall have no obligation to identify or locate any contact.").

^{201.} See, e.g., MICH. COMP. LAWS ANN. § 333.5114a(1) (West 1992) (mandating that physicians "shall refer the individual to the appropriate local health department for assistance with partner notification").

^{202.} See Cal. Health & Safety Code § 121015(a) (West 1996) (allowing notification of a "person reasonably believed to be the spouse, or to a person reasonably believed to be a sexual partner or a person with whom the patient has shared the use of hypodermic needles"); N.Y. Pub. Health Law § 2780(10) (McKinney 1993) (permitting notification of "an identified spouse or sex partner of the protected individual or a person identified as having shared hypodermic needles or syringes with the protected individual").

^{203.} See, e.g., Ky. REV. STAT. ANN. § 311.282(1)(a) (Banks-Baldwin 1997).

^{204.} See, e.g., 410 Ill. Comp. Stat. Ann. 305/9(a) (West 1997); Va. Code Ann. § 32.1-36.1(A)(11) (Michie 1997).

^{205.} See Cal. Health & Safety Code § 121015(a) (West 1996) ("[N]o physician and surgeon . . . shall be held criminally or civilly liable for disclosing"); N.Y. Pub. Health Law § 2783(3) (McKinney 1993) ("There shall be no criminal sanction or civil liability on the part of, and no cause of action for damages shall arise against any physician . . . solely on account of . . . the failure to disclose . . . or . . . disclosure . . . to a contact").

^{206.} Compare VA. Code. Ann. § 32.1-36.1(D) (Michie 1997) ("This section shall not be deemed to create any duty... to release the results...."), with 35 PA. Cons. Stat. Ann. § 7609(c) (West 1993) ("A physician shall have no duty to identify, locate or notify any contact, and no cause of action shall arise for nondisclosure or for disclosure....").

PIERCING THE VEIL OF SECRECY

failing to resolve the physician's conflict between the duty to warn and the duty of confidentiality.

Table B, below, summarizes those states that statutorily have imposed duties or created privileges for health care workers to warn their patient's sexual or needle-sharing contacts of their risk of exposure to STDs, including HIV/AIDS.

TABLE B - STATUTORY DUTY OR PRIVILEGE TO WARN^a

State	Statutory Duty or Privilege to Warn ^b	Statutory Source(s)	Specific Diseases Covered ^c
Alabama	Y - P	ALA. CODE § 22-11A-38(d) (1997)	CD
Alaska	N	-	-
Arizona	Y - P	ARIZ. REV. STAT. ANN. § 36-664(A)(2) (West 1993	CD
Arkansas	N	-	-
California	Y - P	CAL. HEALTH & SAFETY CODE § 121015(a), (c) (West 1996)	HIV
Colorado	N	-	-
Connecticut	Y - P	CONN. GEN. STAT. ANN. § 19a-584(b) (West 1997)	HIV
Delaware	N	-	-
District of Columbia	N	-	-
Florida	Y - P	FLA. STAT. ANN. § 455.2416 (West 1991) (renumbered as § 455.674 (West Supp. 1998))	HIV
Georgia	Y - P	GA. CODE ANN. § 24-9- 47(g) (1995)	HIV
Hawaii	Y - P	HAW. REV. STAT. ANN. § 325-101(a)(4)-(5) (Michie 1996)	HIV, AIDS

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State	Statutory Duty or Privilege to Warn ^b	Statutory Source(s)	Specific Diseases Covered ^c
Idaho	Y - P	IDAHO CODE § 39-610 (2)- (3) (1993)	HIV, HBV
Illinois	Y - P	410 Ill. Comp. Stat. Ann. 305/9-9(a) (West 1997)	HIV
Indiana	Y - P	IND. CODE ANN. § 16-41-7-3(b)(2) (Michie 1993)	HIV, AIDS, HBV
Iowa	Y - P	IOWA CODE ANN. § 141.6(3)(d) (West 1997)	HIV
Kansas	Y - P	KAN. STAT. ANN. § 65- 6004(b) (1992 & Supp. 1997)	AIDS, HIV
Kentucky	Y - P	Ky. Rev. Stat. Ann. § 311-282(1) (Banks- Baldwin 1997)	HIV
Louisiana	Y - P	La. Rev. Stat. Ann. § 40:1300.14E(1) (West 1992)	HIV
Maine	N	-	-
Maryland	Y - P	MD. CODE ANN., HEALTH- GEN. I § 18-337(b) (1994 & Supp. 1997)	HIV
Massachusetts	Y - P	MASS. GEN. LAWS ANN. ch. 112, § 12 (West 1991)	STD
Michigan	Y - D	MICH. COMP. LAWS ANN. § 333.5131-5(b) (West 1992 & Supp. 1997)	HIV, AIDS
Minnesota	N	-	-
Mississippi	N	-	-

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State	Statutory Duty or Privilege to Warn ^b	Statutory Source(s)	Specific Diseases Covered ^c
Missouri	Y - P	Mo. Ann. Stat. § 191.656.2(1)(d), (2) (West 1996 & Supp. 1998)	HIV
Montana	Y - P	MONT. CODE ANN. § 50-16-529(9), -1009(3) (1997)	Health Care Information HIV
Nebraska	N	-	-
Nevada	Y - P	NEV. REV. STAT. ANN. § 441A.220.5 (Michie 1996 & Supp. 1997)	CD
New Hampshire	N	-	-
New Jersey	Y - P	N.J. STAT. ANN. § 26:4-41 (West 1996)	STD
New Mexico	N	-	-
New York	Y - P	N.Y. PUB. HEALTH LAW § 2782.4 (McKinney 1993)	HIV
North Carolina	N	-	-
North Dakota	N	-	-
Ohio	Y - P	Оніо Rev. Code Ann. § 3701.243(В)(1)(а) (Banks- Baldwin 1994)	HIV, AIDS
Oklahoma	N	-	-
Oregon	N	-	-
Pennsylvania	Y - P	35 Pa. Cons. Stat. Ann. § 7609(a) (West 1993)	HIV

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	1	1	
State	Statutory Duty or Privilege to Warn ^b	Statutory Source(s)	Specific Diseases Covered ^c
Rhode Island	Y - P	R.I. GEN. LAWS § 23-6- 17.2(v) (1996)	HIV, AIDS
South Carolina	Y - P	S.C. CODE ANN. § 44-29-90, -146 (Law. Co-op. 1985 & Supp. 1997)	HIV, AIDS
South Dakota	N	-	-
Tennessee	Y - P	TENN. CODE ANN. § 68-10- 115 (1996)	HIV
Texas	Y - P	TEX. HEALTH & SAFETY CODE ANN.§ 81.103(b)(7) (West 1992)	HIV, AIDS
Utah	N	-	-
Vermont	N	-	-
Virginia	Y - P	VA. CODE ANN. § 32.1-36.1(A)(11), (D) (Michie 1997)	HIV
Washington	Y - P	WASH. REV. CODE ANN. § 70.24.105(2)(g) (West 1992)	STD, HIV
West Virginia	Y - P	W. VA. CODE § 16-3C-3(d), (e) (1998)	HIV
Wisconsin	Y - P (If individual is deceased)	WIS. STAT. ANN. § 252.15(5)(a)(14) (West 1991 & Supp. 1997)	HIV

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	State	Statutory Duty or Privilege to Warn ^b	Statutory Source(s)	Specific Diseases Covered ^c
7	Wyoming	N	-	-

Notes

- a. This Table charts statutory sources of authority for health care workers to notify their patients' contacts who are at risk, such as spouses and sexual or needle-sharing partners, of their risk of exposure to STDs or contagious diseases (of which STDs are included). It does not tabulate those jurisdictions where duties or privileges to warn solely are provided for by administrative or common law.
- b. YES [Y]; NO [N]; DUTY [D] (health care worker is statutorily required to warn third parties); PRIVILEGE [P] (health care worker is statutorily allowed to warn third parties, but is not otherwise required to do so).
- c. Contagious or Communicable Diseases in general [CD]; Sexually-Transmitted Diseases in general [STD]; Human Immuno-deficiency Virus [HIV]; Acquired Immuno-deficiency Syndrome [AIDS]; Hepatitis B [HBV].

Most courts and legislatures thus agree that HCWs have a duty to warn third parties who they are aware are in danger of exposure to STD infection from contact with their patients, consistent with *Tarasoff*. The conflicting duty of HCWs to preserve their patients' confidentiality, however, has forced states to legislate limited degrees of immunity from tortious and administrative actions for breaches of patient confidentiality or failures to satisfy *Tarasoff* duties, creating wide-ranging variations of a HCW's privilege to warn.

III. AN "INTEREST-ANALYSIS" OF PARTNER NOTIFICATION

Having described the three meanings of partner notification, this Part outlines a systematic analysis of its various justifications—both theoretical and empirical. This Part provides an "interest-analysis" of partner notification, particularly contact tracing, and evaluates the conflicting interests of government, infected individuals, and their partners. In so much as governmental interests are grounded firmly in constitutional tradition and statutory directive based on the need to control diseases damaging to the public health, they are plenary and at times compelling. They are not, however, absolute. Against these interests is the right to privacy of infected individuals in maintaining the confidentiality of their health status. While these individual interests are legally recognized, they generally are not sufficient to invalidate government interests in contact tracing. Finally, this Part discusses individual fears of discrimination arising from the dissemination of their health status to others and the legal response to such fears in the form of anti-discrimination legislation designed to protect certain infected individuals from egregious societal harms. This interest analysis demonstrates the balance of governmental power over individual rights that legally justifies partner notification.

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A. Governmental Interests in Contact Tracing

Contact tracing is an activity funded, promoted, or undertaken directly by federal or state government.²⁰⁷ Government at both levels, however, must have constitutional and statutory authority to undertake legal contact tracing. As argued in this Part, government has ample, albeit limited, constitutional and statutory authority to engage in contact tracing.

Contact tracing is a quintessential function of state and local governments. States enjoy wide latitude in measures designed to protect the public health. State police powers provide states, as sovereign governments, with broad authority to act in the interest of the public in matters of general welfare, including in matters concerning public health. Pursuant to their police power, states have constitutional authority to implement contact tracing programs. Under such authority, states have enacted legislation or delegated authority to administrative agencies or local governments to implement contact tracing programs as part of their public health statutes regarding STD or disease-specific interventions. In the statutes regarding STD or disease-specific interventions.

While exercises of state police power are plenary, they are not absolute. Police powers cannot be exercised in a manner that violates federal or state constitutional rights.²¹¹ To the extent that state actions regarding partner notification bear a reasonable, if not substantial, relationship to the legitimate state interest in protecting the health of its citizens, courts will uphold partner notification against due process challenges based on its unreasonableness or arbitrariness.²¹² However, where contact tracing is designed improperly or is operated so as to violate the constitutional rights of individuals, such as to coerce or require individual participation under the threat of criminal sanction, state authority likely is invalidated.

Since public health is traditionally the exclusive domain of state government, there is no national requirement that contact tracing programs be implemented. This is not to say that federal involvement is minimal. Congress historically has set policy in the area of contact tracing primarily through the exercise of its Spending Power, which allows the federal government to condi-

^{207.} Contact tracing traditionally is funded and operated at the state and local levels. While the federal government does not operate these programs, it does fund contact tracing at the state level. See, e.g., Roger Doughty, The Confidentiality of HIV-Related Information: Responding to the Resurgence of Aggressive Public Health Interventions in the AIDS Epidemic, 82 CAL. L. REV. 111, 132 (1994).

^{208.} See Jacobson v. Massachusetts, 197 U.S. 11, 25 (1905) ("[T]he police power of a State must be held to embrace, at least, such reasonable regulations... as will protect the public health and the public safety."); see also Lawrence O. Gostin, The Americans with Disabilities Act and the Corpus of Anti-Discrimination Law: A Force for Change in the Future of Public Health Regulation, 3 HEALTH MATRIX 89, 91-103 (1993) (explaining how the states hold wide discretion in regulating individual actors to protect the public health).

^{209.} See Hodge, supra note 103 (forthcoming 1998).

^{210.} See supra Table A.

^{211.} See Hodge, supra note 103 (forthcoming 1998).

^{212.} See, e.g., Jacobson, 197 U.S. at 38; see also Huffman v. District of Columbia, 39 A.2d 558, 560 (D.C. Cir. 1944) (holding that an attempt to locate and treat partner of index case infected with gonorrhea, as authorized by congressional delegation to local health board, does not violate the constitutional rights of a partner where the measures taken constitute a legitimate exercise of police powers to prevent the spread of communicable diseases).

tion the receipt of federal funds for contact tracing programs operated by state and local government on adherence to federal standards. Legislation enacted pursuant to the Spending Power has influenced state STD control since 1918. Although Surgeon General Thomas Parran incorporated contact tracing into mainstream public health practice in the 1930s, the term was not enumerated in federal law for four more decades, when Congress passed the Communicable Disease Control Amendments Acts of 1972. These laws authorized the Secretary of the Department of Health and Human Services (DHHS) to grant funds for case finding and follow up activities, including contact tracing, of infectious individuals with STDs (particularly syphilis and gonorrhea). In 1976, Congress amended the Acts to authorize the Secretary to make project grants for routine testing, including laboratory tests and follow up efforts, of infected persons. The Acts were further amended in 1984 to include other sexually transmitted diseases besides syphilis and gonorrhea.

Despite being classified as an STD since 1988,²¹⁹ Congress has treated HIV differently from other STDs. In specific response to the HIV/AIDS epidemic, it enacted the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990,²²⁰ amending the Public Health Service Act of 1944. The CARE Act authorized the DHHS Secretary to provide grants to state public health depart-

^{213.} See U.S. CONST. art. I, § 8, cl. 1.

^{214.} Initial federal law concerning the control of STDs did not mention contact tracing. The Army Appropriations Act of 1918, 42 U.S.C. § 25 (1918) (repealed 1944), created a Division of Venereal Diseases within the Bureau of the Public Health Service to investigate the cause, treatment, and prevention of venereal diseases. Congress authorized the Division to control and prevent venereal disease primarily through the isolation and quarantine of those infected. The National Venereal Disease Act of 1938, 42 U.S.C. § 25(a)-(d) (1938) (repealed 1944), which amended the Army Appropriations Act of 1918, authorized Surgeon General Thomas Parran to prescribe broad rules and regulations necessary to control and prevent the spread of venereal disease. In 1944, Congress augmented the Surgeon General's power by authorizing Parran to develop the most effective measures for the prevention, treatment, and control of venereal diseases and to grant funds to the states to perform these measures. See Public Health Service Act, 42 U.S.C. § 246 (1944); see also supra Part II.A.1.a).iii).

^{215.} See Communicable Disease Control Amendments Acts of 1972, 42 U.S.C. § 247c (1994).

^{216.} See S. REP. No. 92-825, at 3431 (1972), reprinted in 1972 U.S.C.C.A.N. 3430.

^{217.} See Public Health Service Act of 1976, Pub. L. No. 94-317, \S 203d(1)(B), 90 Stat. 695, 703-05 (codified as amended 42 U.S.C. \S 247c (1994)).

^{218.} The amendments added genital herpes, chlamydia infections, and other causes of nongonoccal to the Acts. *See* S. REP. No. 98-393, at 4818 (1984), *reprinted in* 1984 U.S.C.C.A.N. 4804. The antiquated term "venereal disease" was replaced with the modern term "sexually transmitted disease." Preventative Health Amendments of 1984, Pub. L. No. 98-555, § 3(d)(6)(A)-(B), 98 Stat. 2854, 2855 (1984).

^{219.} See Deborah Dalrymple-Blackburn, Comment, AIDS, Prisoners, and the Americans with Disabilities Act, 1995 UTAH L. REV. 839, 852 (1995); Abigail English, The HIV-AIDS Epidemic and the Child Welfare System: Protecting the Rights of Infants, Young Children, and Adolescents, 77 IOWA L. REV. 1509, 1534 n.131 (1992).

^{220.} See 42 U.S.C. § 300ff (1994), as amended by 42 U.S.C.A. § 300ff (West Supp. 1997).

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ments to implement partner notification programs for HIV infected persons.²²¹ More recently, Congress passed the Ryan White CARE Act Amendments of 1996.²²² It conditioned the receipt of federal funds for partner notification programs by states upon the implementation, via legislative or administrative action, of good faith efforts to notify spouses of index cases infected with HIV and offer testing to them.²²³ Other federal legislation concerning contact tracing has been considered but not enacted.²²⁴

Although the federal government lacks the power to require contact tracing programs as an STD preventive measure, Congress' use of its Spending Power to condition the funding of such programs on compliance with federal guidelines by states is influential. All states receive federal funding for their contact tracing programs and therefore virtually all government contact tracing programs in the United States are operated consistent with CDC partner notification guidelines.²²⁵

[t]he Secretary of Health and Human Services shall not make a grant under part B of title XXVI of the Public Health Service Act... to any State unless such State takes administrative or legislative action to require that a good faith effort be made to notify a spouse of a known HIV-infected patient that such spouse may have been exposed to the human immunodeficiency virus and should seek testing.

^{221.} See 42 U.S.C. § 300ff-46(b) (1994). Congress further authorized the Secretary of Health and Human Services to monitor and study state HIV partner notification programs to determine: 1) how many partners notified pursue counseling and testing for HIV; 2) how many of those who pursue testing are seropositive; 3) the extent to which partner notification results in behavioral changes that effectively prevent transmission and exposure of HIV to other persons; and 4) whether partner notification programs represent a cost-effective use of available HIV-related resources. See Pub. L. No. 101-381, § 402, 104 Stat. 576, 621-22 (codified at 42 U.S.C. § 300ff-46 note (1994)).

^{222.} See 42 U.S.C.A. 300ff-13, -101 (West Supp. 1997).

^{223.} The Ryan White CARE Act states that

⁴² U.S.C.A. § 300ff-27(a) (West Supp. 1997). "Spouse" is defined as any individual who is the marriage partner of an HIV-infected person or who has been the marriage partner of the infected person at any time within ten years of diagnosis. *See* 42 U.S.C.A. § 300ff-27(b).

^{224.} Controversial legislation introduced in 1997 by Representative Tom Coburn (R-Okla.), known as the HIV Prevention Act of 1997, would require states to establish confidential partner notification programs for all partners. See H.R. 1062, 105th Cong. § 1930A(2)(a) (1997); see also Stephanie Stapleton, Treating HIV Like Any Epidemic, 40 Am. MED. NEWS 1, 31 (1997) (stating that bill makes state funding contingent upon their compliance with partner notification programs, in addition to HIV tracking and testing requirements). Separate legislation introduced in the House during the same period by Representatives Nancy Pelosi (D-Cal.) and Connie Morella (R-Md.) would amend the Public Health Service Act, 42 U.S.C. § 247c (1994), to revamp substantially the federal role in controlling the HIV/AIDS epidemic. See William A. Bailey HIV Prevention Act of 1977, H.R. 1219, 105th Cong. (1997). The bill conditions the receipt of federal funds by state and local governments and agencies to control the HIV/AIDS epidemic, including funds for partner notification programs, on numerous federal requirements such as epidemiologic and community resource assessment; local health boards seeking federal funds for partner notification programs would have to coordinate efforts with state and local community planning groups and demonstrate that the use of funds will be effective to be entitled to federal support. See H.R. 1219, 105th Cong. § 2532(f) (1997).

^{225.} See, e.g., Partner Notification Programs Seek Less Controversy, More Sensitivity, AIDS ALERT, Jan. 1994, at 11. Interestingly, recommendations from the CDC's 1993 Sexually Transmitted Disease Treatment Guidelines, see 1993 Treatment Guidelines, supra note 94, regarding partner notification are reflective of the trichotomy of the concept discussed supra Part II. The CDC recommendations are as follows:

While the practice of contact tracing varies across jurisdictions, the authority of states to use contact tracing as a means to control the spread of STDs is well-grounded in their police powers allowing governmental exercises of authority in the interests of public health.

B. Interests of Infected Individuals

While governmental interests in contact tracing are grounded firmly in constitutional and statutory exercises of power for the benefit of the public health, persons infected with STDs have individualized, and often countervailing, interests at stake. Infected persons desire to maintain the privacy of their health status from unnecessary disclosure and to live in a society free from discrimination. They seek to avoid the invasion of privacy and societal discrimination that government-sponsored partner notification subrogates in the interest of public health.

1. Privacy Rights Protections

Contact tracing is criticized for its encumbrance on the privacy interests of those infected with STDs. Notifying the partners of infected individuals of their exposure to an STD, whether attempted anonymously through provider referral programs or explicitly through patient referral programs, necessarily infringes privacy interests of infected individuals. While the degree of privacy infringement varies depending upon the method of partner notification employed, no method completely is protective of an individual's privacy interests. As a result, partner notification is challenged by infected individuals on the grounds that it is violative of constitutional, statutory, and common law privacy protections. These challenges regularly fail in light of the overriding governmental interest in preserving the public health, the voluntary nature of partner notification, and the general inadequacy or non-applicability of privacy protections.

Constitutional claims to privacy made by persons with STDs are unlikely to invalidate partner notification programs. The federal Constitution does not expressly provide individuals with a right to privacy, although the Supreme Court has recognized a limited right to health information privacy as a liberty interest within the Fifth and Fourteenth Amendments.²²⁶ Other courts have relied on

^[(1)] Persons who are HIV-positive should be encouraged to notify their partners and to refer them for counseling and testing [to satisfy their duty to disclose]. [Medical providers] should assist in this process, if desired by the patient, either directly or through referral to health department partner notification programs [through the traditional method of contact tracing].

^[(2)] If patients are unwilling to notify their partners or if it cannot be assured that their partners will seek counseling, physicians or health department personnel should use confidential procedures to assure that the partners are notified [in accordance with HCWs' duty to warn].

¹⁹⁹³ Treatment Guidelines, supra note 94.

^{226.} See, e.g., Lawrence O. Gostin, *Health Information Privacy*, 80 CORNELL L. REV. 451, 495-98 (1995) (providing an in-depth discussion of the privacy rights of individuals in their health care information).

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state constitutional provisions in support of such rights.²²⁷ In either case, constitutional privacy rights are limited. Courts regularly allow infringements on informational privacy through the administration of a flexible test that balances the invasion of privacy against the strength of the governmental interest.²²⁸ Provided

In Whalen v. Roe, 429 U.S. 589 (1977), the Court considered whether the constitutional right to privacy was infringed by a state reporting law that required physicians to relay the names and other information of persons receiving prescriptions for certain addictive drugs to the state health department. Writing for the majority, Justice Stevens found no unlawful violation of individual privacy rights as a result of the reporting requirement where the state had adequate standards and procedures to protect the privacy of the information. See id. at 600. The Court explained that the measures taken by the state health department, including limited access to information and the prevention of on-line interception of computer databases containing such information, were sufficient to protect individual privacy. See id. at 600-02. Rather than prescribing exacting constitutional standards to protect individual privacy, the Court deferred to the ability of governments to protect information that is private in nature, including health information. See id. at 605-06; see also Planned Parenthood of Cent. Mo. v. Danforth, 428 U.S. 52, 80 (1976) (appearing to recognize an independent right to informational privacy, but upholding reporting and record-keeping requirements that were reasonably directed to the preservation of maternal health and properly respected patient confidentiality).

Four months preceding its decision in Whalen, 429 U.S. at 589, the Court acknowledged a narrow right to privacy in one's personal communications in Nixon v. Administrator of General Services, 433 U.S. 425 (1977), although it again deferred to the ability of government sources to protect such privacy interests. See id. at 458-62. Against a challenge by former President Richard Nixon, the Court upheld the constitutionality of a federal statute directing the General Services Administration to take custody of Presidential materials and to have them screened by federal archivists. See id. at 484. The Court based its opinion on the limited intrusion of the screening process, the appellant's status as a public figure, his lack of expectation of privacy in the overwhelming majority of materials, and the virtual impossibility of segregating the small quantity of private materials without comprehensive screening. See id. at 465. It emphasized that the statute's sensitivity to the President's legitimate privacy interests and the unblemished record of the archivists for discretion sufficiently guarded against any infringement of personal privacy. See id. But see J.P. v. DeSanti, 653 F.2d 1080, 1090 (6th Cir. 1981) (holding that the right to privacy does not extend to a general right to nondisclosure of personal information). The Court of Appeals for the Sixth Circuit in DeSanti relied on Paul v. Davis, 424 U.S. 693 (1976), in rejecting a constitutional right to informational privacy. See DeSanti, 653 F. 2d at 1090. In Davis, the Supreme Court held that publication by the police department of a person's arrest for shoplifting did not raise a constitutional question, relying, in part, on the fact that there was no constitutional bar to government publishing a record of an official act such as an arrest. See Davis, 424 U.S. at 712-13.

227. See, e.g., Falcon v. Alaska Pub. Offices Comm'n, 570 P.2d 469, 476 (Alaska 1977) (citing the Alaska constitutional provision guaranteeing a right to privacy); People v. Stritzinger, 668 P.2d 738, 742 (Cal. 1983) (citing a provision of the California Constitution that recognizes a patient's right to privacy, but holding that the right is not absolute); see also ROBERT E. SMITH, COMPILATION OF STATE AND FEDERAL PRIVACY LAWS 17-18 (1981) (listing state constitutional amendments designed to protect a variety of privacy interests, including limits on access to personal information).

228. See Nixon, 433 U.S. at 458 ("[A]ny intrusion must be weighed against the public interest in subjecting the Presidential materials... to archival screening."); see also United States v. Westinghouse Electric Corp., 638 F.2d 570, 578 (3d Cir. 1980) (enunciating six factors developed by the Third Circuit to be balanced in determining the scope of the constitutional right to informational privacy: (1) the type of record and the information it contains; (2) the potential for harm in any unauthorized disclosure; (3) the injury from disclosure to the relationship in which the record was generated; (4) the adequacy of safeguards to prevent nonconsensual disclosure; (5) the degree of need for access; and (6) whether there is a recognizable public interest or statutory mandate).

the government articulates a valid societal purpose²²⁹ and employs reasonable security measures, courts have not interfered with traditional governmental activities of health information collection and distribution. The constitutional right to privacy, in the context of public health, has proven to be nominal, ²³⁰ especially in instances where, as with contact tracing, government policies protect individual privacy to the degree possible and individuals are not compelled to comply with contact tracing programs. Where contact tracing programs represent a traditional method of public health control of infectious diseases and are operated in a manner that safeguards the privacy interests of individuals who voluntarily participate, constitutional privacy rights are thus largely are not implicated.

Statutory protections of personal privacy either are not pertinent or are trumped by legislative directive authorizing partner notification. While the federal government has enacted several statutes and regulations to protect privacy of health information, such protections do not pertain to partner notification efforts conducted at the state and local level. States have enacted health information privacy protection in many forms, including laws similar to the federal Privacy Act and the Freedom of Information Act ("FOIA"). A few states have passed comprehensive medical information statutes that prohibit medical providers from disclosing identifiable health information without a patient's written consent, unless the disclosure is required or authorized by law, as is the case with reporting requirements for STDs or pursuant to duties to disclose or warn.

^{229.} See, e.g., Barry v. City of New York, 712 F.2d 1554, 1560 (2d Cir. 1983) (finding the city's financial disclosure law furthered a substantial state interest in deterring corruption and conflicts of interest); Westinghouse Electric Corp., 638 F.2d at 578-79 (noting strong public interest in facilitating research and investigations of National Institute for Occupational Safety and Health); Schachter v. Whalen, 581 F.2d 35, 37 (2d Cir. 1978) (finding information in medical records crucial to implementation of sound state policy of investigating licensed physicians for medical misconduct).

^{230.} Individuals asserting a constitutional right to informational privacy are unlikely to obtain a remedy except in cases where the state fails to assert any significant interest or is particularly careless in disclosing highly sensitive information. *See* Doe v. Borough of Barrington, 729 F. Supp. 376 (D.N.J. 1990) (holding that a police officer violated constitutional right to privacy by disclosing that a person was infected with HIV); Woods v. White, 689 F. Supp. 874 (W.D. Wis. 1988) (extending the constitutional right to privacy to disclosure of a prisoner's HIV status by prison medical service personnel) (holding that giving chaplains open access to patient medical records violated privacy rights of patients), *aff'd*, 899 F.2d 17 (7th Cir. 1990); Carter v. Broadlawns Med. Ctr., 667 F. Supp. 1269 (S.D. Iowa 1987), *aff'd in part and modified in part*, 857 F.2d 448 (8th Cir. 1988).

^{231.} Federal legislation such as the Privacy Act of 1974, 5 U.S.C. § 552(b)(1)-(3), (6) (1994), which requires federal agencies to utilize fair information practices with regard to the collection, use, or dissemination of systematized records, and the Freedom of Information Act of 1966 ("FOIA"), 5 U.S.C. § 552 (1994), which exempts from governmental disclosure several categories of records, which include health information, apply primarily to federal agencies, not necessarily to state actors whose only federal connection is partial funding. Other federal regulations requiring privacy protections in relation to the treatment of persons for drug or alcohol dependency in federally-funded facilities, 42 U.S.C. § 290dd-2 (1994), and the administration of human subject research, 45 C.F.R. §§ 46.101-.404 (1993), simply do not apply to state-run contact tracing programs.

^{232.} See, e.g., N.Y. PUB. OFF. LAW §§ 91-99 (McKinney 1988 & Supp. 1997-1998).

^{233.} See, e.g., MISS. CODE ANN. §§ 25-61-1, -10, -11, 13, -15, -17 (1991 & Supp. 1997).

^{234.} See, e.g., CAL. CIV. CODE §§ 56-56.37 (West 1982 & Supp. 1998).

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States have also passed disease-specific privacy laws, including privacy laws concerning HIV infection or AIDS²³⁵ and sexually transmitted diseases. These state laws probably are not applicable to contact tracing for two reasons. First, contact tracing expressly is authorized by state statute²³⁷ and courts are likely to defer to the specific purpose of these statutes of notifying partners of their risk of infection. Second, contact tracing relies on voluntary cooperation of persons with infection. By voluntarily disclosing the names of partners, individuals appear to waive their statutory right to privacy in relation to these disclosures.

These same conclusions can be reached concerning common law protections. As previously discussed, the common law imposes a duty of confidentiality on certain health care professionals not to disclose the confidences of their patients. As with statutory privacy protections, the primary exception to the duty of confidentiality in this context is the *Tarasoff* duty of HCWs to warn unknowing partners of their exposure to infection to protect them from contracting a communicable or sexually transmitted infection. Whether in the form of a duty or privilege to warn, the exercise of this form of partner notification undercuts the privacy interests an infected person may expect from the doctorpatient relationship. In this way, partner notification breaks down the privacy expectations of doctors and patients for the limited purpose of notifying third parties.

Despite significant privacy protections governing individual health information at the federal and state levels, governmental interests in partner notification override privacy protections in instances where partners are informed through procedures that are statutorily mandated and respectful of the privacy interests of infected persons.

^{235.} See Harold Edgar & Hazel Sandomire, *Medical Privacy Issues in the Age of AIDS: Legislative Options*, 16 Am. J.L. & MED. 155 (1990) (examining state legislation dealing with HIV-related problems in medical privacy laws).

^{236.} See Lawrence O. Gostin, *The Future of Public Health Law*, 12 Am. J.L. & MED. 461, 463-65 (1986) (arguing for reform of the states' public health statutes to respond to modern notions of disease and privacy).

^{237.} See supra Table B.

^{238.} See supra Part II.C.1.

^{239.} See Lipari v. Sears, Roebuck & Co., 497 F. Supp. 185, 189 (D. Neb. 1980) (holding that the psychotherapist of patient who shot two people is liable for foreseeable harm caused by failure to exercise due care in assessing the patient's risk of danger to others); Hoffmann v. Blackmon, 241 So. 2d 752, 753 (Fla. Dist. Ct. App. 1970) (finding a doctor liable to family members infected by his patient for negligent failure to diagnose a contagious disease); Wojcik v. Aluminum Co. of Am., 183 N.Y.S.2d 351, 357-58 (N.Y. Sup. Ct. 1959) (holding that having diagnosed a contagious disease, tuberculosis, a doctor was under a duty to warn members of the patient's family); see also Alan A. Stone, The Tarasoff Decision: Suing Psychotherapists to Safeguard Society, 90 HARV. L. REV. 358 (1976); Toni P. Wise, Note, Where the Public Peril Begins: A Survey of Psychotherapists to Determine the Effects of Tarasoff, 31 STAN. L. REV. 165 (1978).

^{240.} See supra Part II.C.1.

^{241.} See supra Part II.C.2.

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2. Anti-Discrimination Protections

Discrimination against persons with STDs, particularly those infected with HIV, is a serious concern of infected individuals and of society in general.²⁴² Since most STDs are not transmissible through casual contact, discrimination in the form of access barriers to employment, public accommodations, and services is especially egregious and morally unwarranted.²⁴³ Discrimination against persons with HIV and other STDs nevertheless takes many forms, including refusal to provide medical treatment, adverse employment decisions, and refusals to contract.²⁴⁴ Persons living with HIV/AIDS are stereotyped by society as homosexuals, drug users, or prostitutes, and often are relegated to a lesser social status. As a result, individuals with HIV who participate in contact tracing programs often fear discrimination should their identities be revealed. They similarly may ignore their duty to disclose their HIV status to their partners for fear that such information would be circulated generally throughout the community. Adequate legal protection against discrimination is critical to successful public health strategies because it encourages participation of persons living with HIV/AIDS.

Legislatures at the state and federal levels proscribe discrimination against persons with disabilities.²⁴⁵ The federal Americans with Disabilities Act (ADA),²⁴⁶ prohibits discrimination against persons with disabilities by private actors and state and local governments. The Rehabilitation Act of 1973 prohibits such discrimination by the federal government and others receiving federal funding.²⁴⁷ Together these laws establish national anti-discrimination protection for persons

242. One commentator has noted that

lpleople infected with HIV have much to fear besides the disease. Because of the association of AIDS with promiscuity, primarily homosexual but also heterosexual, or the self-abandonment connected with intravenous (IV) drug use, any adult with AIDS is suspected of degeneracy. . . . The level of public ignorance about the disease, the deficiency of scientific understanding surrounding aspects of its transmission, and the general hysteria about AIDS mean that people diagnosed as HIV positive must face social, economic, and medical hurdles no one with such dire medical prospects should have to confront. . . . A diagnosis of HIV infection, or even suspicion of this, is sufficient in some cases to deprive people of housing, employment, life and health insurance, social tolerance, routine and even emergency medical treatment like mouth-to-mouth resuscitation, schooling, social contacts, friendships, the right to travel in and out of countries—a social identity.

Ferdinand Schoeman, AIDS and Privacy, in AIDS & ETHICS 240, 241 (Frederic G. Reamer ed., 1991).

243. See Ronald Bayer & Larry Gostin, Legal and Ethical Issues in AIDS, in 2 CURRENT TOPICS IN AIDS 263, 264-65 (M.S. Gottlieb et al. eds., 1989).

^{244.} See Burr, supra note 20, at 58 (citing ELINOR BURKETT, THE GRAVEST SHOW ON EARTH (1995)); Larry Tye, AIDS Patients' Partners Tracked, Informed: Colorado Says Its Program Fights Spread of Disease While Protecting Privacy, BOSTON GLOBE, Feb. 1, 1993, at 1.

^{245.} See WILLIAM B. RUBENSTEIN ET AL., THE RIGHTS OF PEOPLE WHO ARE HIV POSITIVE: THE AUTHORITATIVE ACLU GUIDE TO THE RIGHTS OF PEOPLE LIVING WITH HIV DISEASE AND AIDS 220-21 (1996) (citing American Civil Liberties Union AIDS Project, Epidemic of Fear: A Survey of AIDS DISCRIMINATION IN THE 1980S AND POLICY RECOMMENDATIONS FOR THE 1990S 83-134 (1990)).

^{246.} See 42 U.S.C. §§ 12101-12213 (1994).

^{247.} See 29 U.S.C. §§ 701-797 (1994).

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with HIV.²⁴⁸ Many state and local governments also have laws that prohibit discrimination against persons with disabilities generally or against persons with HIV/AIDS specifically.²⁴⁹

A critically important question under disability discrimination law is whether it covers persons in the early stages of STD or HIV infection. The definition of disability under the ADA focuses on the existence of a substantial impairment of a life function, or the perception or record of such impairment. ²⁵⁰ Certainly once an STD, including HIV, infection creates serious impairments, it becomes a disability within the meaning of the statute. In the past, courts regularly found that pure asymptomatic HIV infection is a disability, ²⁵¹ but recent

248. The federal acts specifically prohibit discrimination against disabled persons, which may include persons with HIV, in matters of employment, in places of public accommodation, and in the provision of public services. *See* RUBENSTEIN ET AL., *supra* note 245, at 221. Persons discriminated against are entitled to bring civil suits requesting injunctive relief and can request that the United States Attorney General investigate alleged violations. *See* 42 U.S.C. § 12188 (1994); 28 C.F.R. §§ 36.501-.502 (1994).

Virtually all health care providers are prohibited by the Americans with Disabilities Act (ADA) from refusing to treat HIV-infected individuals. See 42 U.S.C. § 12182 (1994); 28 C.F.R. § 36.104 (1997) (listing places of public accommodation). The ADA also prohibits the unequal provision of services (such as the failure of a doctor to treat an HIV-positive individual for certain conditions that he would normally treat in sero-negative patients) unless necessary, see 42 U.S.C. § 12182(b)(1)(A)(iii); the separate or distinct provision of services (such as the use of special facilities for the treatment of HIV-positive persons), see 42 U.S.C. § 12182(b)(2)(A)(i); and the use of eligibility criteria that effectively screen out HIV-infected individuals (such as a medical provider that requires prospective patients to demonstrate they are HIV-negative) unless necessary, see 42 U.S.C. § 12182(b)(2)(A)(i).

Places of public accommodation, which include virtually every public business, see 42 U.S.C. § 12181(7), and government-operated facility, see §§ 12131-12165, are prohibited from discriminating against persons with HIV. HIV-infected individuals who face unjustified discrimination at their place of employment in nearly any aspect of the employment relationship can file complaints with the Equal Employment Opportunity Commission (EEOC), which is required to investigate merit-based allegations. See 42 U.S.C. § 12117(a); 29 C.F.R. § 1630.4 (1997) (listing what constitutes discrimination against a qualified individual with a disability). After administrative remedies are exhausted, a grievant can file a civil suit against the employer to demand equitable relief (such as reinstatement and back pay in cases of wrongful termination) and seek compensatory and punitive damages where the discrimination is shown to be intentional. See Rubenstein Et Al., supra note 245, at 264-65.

Housing discrimination against disabled persons, including those infected with HIV, is unlawful under a variety of federal, state, and local laws, see id. at 274-87, including the Fair Housing Act, see 42 U.S.C. §§ 3601-3631 (1994). Landlords and real estate agents thus cannot discriminate against HIV-positive persons in the rental or sale of most dwellings without being subject to civil suit, see 42 U.S.C. §§ 3613, or other governmental actions, see 42 U.S.C. §§ 3610, 3614(a).

249. See RUBENSTEIN ET AL., supra note 245, at 221; see also Josephine Gillter & Sharon Rennert, HIV Infection Among Women and Children and Antidiscrimination Law: An Overview, 77 IOWA L. REV. 1313, 1384 n.325 (listing many state statutes regarding HIV anti-discrimination protections).

250. See 42 U.S.C. § 12102(2) (1994) (defining disability with respect to an individual as: "(A) a physical or mental impairment that substantially limits one or more of the major life activities of the individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment").

251. See Chalk v. United States, 840 F.2d 701 (9th Cir. 1988); Doe v. Dolton Elementary Sch. Dist. No. 148, 694 F. Supp. 440 (N.D. Ill. 1988); Thomas v. Atascadero Unified Sch. Dist., 662 F. Supp. 376 (C.D. Cal. 1987); see also Wendy E. Parmet & Daniel J. Jackson, No Longer Disabled: The Legal Impact of the New Social Construction of HIV, 23 Am. J.L. & MED. 7, 16-27 (1997).

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cases question these findings;²⁵² the Supreme Court, at the time of this writing, granted certiori to decide, *inter alia*, whether a person with pure asymptomatic HIV infection is a person with a disability within the meaning of the ADA.²⁵³

The intent of anti-discrimination laws at the federal and state levels is to create an environment in which persons infected with HIV and other STDs (to the degree that their condition qualifies as a disability) are not subject to discrimination. The reality is, however, that discrimination of innumerable types continues, causing infected persons to continue to fear the possibility that their condition may become known to certain individuals.²⁵⁴ Partner notification makes that possibility more probable by collecting and disseminating information to partners who are likely to know them well, or at least by name. Despite the efforts of some contact tracing programs to maintain the confidentiality of index cases, breaches continue to occur and identities are revealed regularly. Where notification of partners remains the priority of partner notification, the concerns of infected individuals regarding discrimination, like their concerns about the privacy of their health status, remain largely unresolved through social legislation.

IV. ETHICAL ANALYSIS BEHIND PARTNER NOTIFICATION

A. Norms and Consequences

As argued previously, partner notification poses serious risks to privacy.²⁵⁵ Infected persons may be members of societally disfavored groups such as sex workers, injection drug users, or gays. Disclosure of their status can result in social stigma among their family and friends. They also are vulnerable to discrimination in employment, housing, and insurance.²⁵⁶ Health records maintained and used by the government worry persons at risk; the potential release

^{252.} See Abbott v. Bragdon, No. 96-1643, 1997 U.S. App. LEXIS 3870, at *5-22 (1st Cir. Mar. 5, 1997), cert. granted, 118 S. Ct. 554 (1997) (subjecting patient with HIV who brought a Title III claim against her dentist who refused to treat her to an individualized assessment of whether her circumstances qualified her as disabled, and so finding in the affirmative); Runnebaum v. Nationsbank of Md., 123 F.3d 156, 167 (4th Cir. 1997) (en banc) (concluding that asymptomatic HIV does not constitute a statutory disability, thus essentially denying these individuals ADA protection); Ennis v. National Ass'n of Bus. & Educ. Radio, Inc., 53 F.3d 55, 60 (4th Cir. 1995) (overlooking the overwhelming legislative history of the ADA that HIV infection constituted a disability to state in dicta that an asymptomatic HIV-positive child was not disabled under the individualized assessment required by the ADA); Cortes v. McDonald's Corp., 955 F. Supp. 541, 544-47 (E.D.N.C. 1996) (finding under individualized assessment that HIV-positive employee who was asymptomatic and appeared well was not disabled for the purposes of the ADA); Doe v. Kohn Nast & Graf, P.C., 862 F. Supp. 1310 (E.D. Pa. 1994) (challenging the standard conception of HIV infection as a "disability" under the ADA, although ultimately agreeing it was in the case of an HIV-positive attorney); see also Parmet & Jackson, supra note 251, at 32-39 (analyzing cases).

^{253.} See Abbott, at *1.

^{254.} See Brandt, supra note 70, at 482 ("To ask persons to voluntarily name contacts when neither the index patient nor the partner are adequately protected from discrimination or assured of adequate services will lead to suspicion and justifiable skepticism among those at greatest risk.").

^{255.} See discussion supra Part III.B.1.

^{256.} See discussion supra Part III.B.2.

of STD or AIDS registries can cause embarrassment and harm.²⁵⁷ Legislatures and courts, moreover, may use these registries for pernicious purposes. In Illinois, for example, a statute was enacted, but not implemented, which would have required cross-matching the state HIV registry with a database of HCWs.²⁵⁸ HCWs infected with HIV would have been dismissed or excluded from certain medical practices.²⁵⁹ Courts also can require disclosure of a person's HIV status for litigation purposes.²⁶⁰ Infected persons also may be concerned with disclosure to sex or needle-sharing partners. Such disclosures could, at minimum, could estrange their lovers, and, more importantly, lead to domestic violence of a physical or psychological nature.²⁶¹ In addition, partners who are knowledgeable about the source of their exposure to an STD can disseminate information about the infected status of their partners to others.

At the same time, the partners of infected persons have an equally powerful claim that they have a "right to know" of the potential exposure to infection. Partners claim, with some justification, that they have a right to accurate knowledge to guide their behavior. Without this knowledge, they cannot weigh adequately the risks of sexual or needle-sharing activities. Failure to warn imposes harsh consequences when an STD is contracted.

The core conceptual problem is that the claim of one individual in a relationship in which an STD is introduced must take precedence; infected individuals cannot maintain their privacy while at the same time making their partners fully aware of their risk of exposure. While the law provides its own answer to this problem, normative or consequentialist reasoning should be examined to help to resolve the conflict.

1. Privacy

Infected persons have a strong ethical claim to the privacy of their medical diagnosis, records, and their health status generally. Privacy interests, however, are sacrificed when necessary to reduce a risk to their sex partners. The degree of sacrifice varies depending upon the form of partner notification. Where partner notification is performed pursuant to one's duty to disclose, privacy interests are swept aside since the duty requires infected individuals to in-

^{257.} See Sue Landry, AIDS List is Out: State Investigating Breach, St. Petersburg Times, Sept. 20, 1996, at A1 (disclosing the names of an HIV registry to a dating service).

^{258.} See Act of Oct. 4, 1991, Ill. Pub. Act 87-763 (1991).

^{259.} See id.

^{260.} See, e.g., Doe v. American Nat'l Red Cross, 151 F.R.D. 71 (S.D. W. Va. 1993) (indicating that persons need to know blood donor's identity when Red Cross screening practices are in question although such information is excluded from the court record); Virgin Islands v. Roberts, 756 F. Supp. 898 (D.V.I. 1991) (requiring a defendant in a rape trial to submit to HIV testing to ascertain whether victim was exposed to virus).

^{261.} See infra notes 304-08 and accompanying text.

^{262.} See Rotello, supra note 88, at A23 ("The rights of infected people must be balanced against the right of all people to protect themselves.").

^{263.} See supra Part II.B-C.

^{264.} See Alberts v. Devine, 479 N.E.2d 113, 119 (Mass. 1985) ("[T]he confidentiality of the [doctor-patient] relationship is a cardinal rule of the medical profession, faithfully adhered to in most instances, and thus has come to be justifiably relied upon by patients seeking advice and treatment.").

form their partners of their own health status. ²⁶⁵ Although bound to maintain the confidentiality of a patient's medical records in light of the HCW/patient relationship, HCWs nevertheless are compelled ethically, ²⁶⁶ in limited circumstances, to inform partners of their exposure to infection under a duty or privilege to warn. ²⁶⁷ Whenever a HCW is compelled under a duty to warn unsuspecting partners, the confidentiality of infected individuals is compromised. In most cases, the fulfillment of the duty to warn requires the HCW to identify specifically the source of exposure to partners so they are aware of the actual source of danger. ²⁶⁸ Privacy interests of infected individuals thus are not preserved through the fulfillment of the duty to disclose or warn.

Contact tracing programs attempt to preserve the privacy interests of infected individuals in two principal ways: (1) contact tracing programs are voluntary in nature;²⁶⁹ and (2) many programs attempt to conceal the identity of the index case from exposed partners to protect the index case's confidentiality. 270 In reality, however, neither of these protections are wholly effective in limiting the incursion on privacy interests. To the extent that contact tracing is voluntary, the privacy interests of infected individuals are protected since they can choose not to participate. Neither infected persons nor their physicians, however, can avoid their respective duty to disclose or warn. Since contact tracing offers a means through which partners can be notified in satisfaction of these duties, participation is not merely encouraged. Rather, contact tracing presents the better of three options facing an individual infected with an STD in many jurisdictions: either notify your partners on your own without any assistance, await the action of your doctor who notifies your partners of your infection, or participate in a contact tracing program where counseling and other assistance is available. Contact tracing thus can be viewed not so much as a voluntary choice of individuals, but rather as a preferred method of satisfying a legal duty.

^{265.} See supra text accompanying note 127-28.

^{266.} See Martha Swartz, Is There a Duty to Warn?, Human Rights, Spring 1990, at 41, 42 ("The duty to maintain the confidentiality of information revealed during the course of medical treatment originated in the Hippocratic Oath and is reaffirmed in the Principles of Medical Ethics" that prohibit physicians from revealing medical information unless "he is required to do so by law" or "where it becomes necessary in order to protect the welfare of the individual or of the community." (internal quotations omitted)); see also Morton Winston, Case Studies: AIDS and a Duty to Protect, HASTINGS CENTER REP., Feb. 1987, at 22, 22 ("The American College of Physicians Ethics Manual (1984) states that 'the physician shall keep secret all that he knows about the patient and release no information without the patient's consent, unless required by the law or unless resulting harm to others outweighs his duty to his patient.'").

^{267.} See supra Part II.C.; see also Frederick G. Reamer, AIDS, Social Work, and the "Duty to Protect," 36 SOC. WORK 56 (1991) (concerning duty to warn arising in context of social worker's knowledge of client's infection despite confidentiality rights of client); Eugene Schlossberger & Lorna Hecker, HIV and Family Therapists' Duty to Warn: A Legal and Ethical Analysis, 22 J. MARITAL & FAM. THERAPY 27 (1996) (concerning duty of family therapists to warn others in context of HIV infection of client).

^{268.} See supra Part II.C.1.

^{269.} See James F. Childress, Contact Tracing: A Liberal-Communitarian Perspective, The Responsive Community, Winter 1990-91, at 69, 72; see also Bernard Lo, Resolving Ethical Dilemmas: A Guide For Clinicians 50 (1995) (stating that "partner notification depends on the voluntary cooperation of infected persons").

^{270.} See Childress, supra note 269, at 73.

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While the success of contact tracing largely is tied to "the record of public health officials in preserving the confidentiality of the information obtained,"271 attempts to conceal the identities of those who voluntarily participate usually are in vain. 272 The maintenance of patient confidentiality through contact tracing is a factual myth.²⁷³ Confidentiality is breached by the mere participation in contact tracing programs since public health authorities become aware of the STD status and identity of index cases for the sole purpose of assisting in the dissemination of exposure information to partners.²⁷⁴ Many partners independently are aware of the source of their infection when contacted. Partners who learn directly or indirectly of the identity of index cases may relay information about the index case to others. Confidentiality is also an ethical myth as an infected individual's privacy rights cannot be preserved where she discloses her private facts to an agency that intends to disclose that information to partners who the infected person knows and who likely know her. Persons who predominantly benefit from confidentiality protections of contact tracing are often the same persons whose lifestyles involve risky behaviors with numerous partners whose identities are either unknown or cannot be recalled over long time periods, as seen with STDs like syphilis and HIV that have long asymptomatic periods. 275 As a result, pri-

^{271.} CASWELL A. EVANS, JR. ET AL., AMERICAN PUB. HEALTH ASS'N, CONTACT TRACING AND PARTNER NOTIFICATION: A REPORT OF THE SPECIAL INITIATIVE ON AIDS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION 4 (1988).

^{272.} While some degree of confidentiality is preserved through contact tracing, how much is preserved depends on the method employed. Since patient referral programs are premised on the voluntary disclosure of seropositivity by index cases, the confidentiality of the index case's identity and STD status unavoidably is breached. See supra text accompanying notes 105-07. Conditional referral programs at least give the index case the option of notifying partners directly or requesting the confidential assistance of trained public health personnel where notification proves too difficult. Like provider referral, conditional referral programs attempt to preserve the identity of index cases by withholding the name of the index case from partners informed through professional public health counselors. Confidentiality, however, is not guaranteed. The identities of index cases are assumed regularly by partners who have engaged exclusively in at-risk behaviors with an index case or are able to rule out other sources of infection. Spouses, long-time, faithful partners, one-time customers of commercial sex workers, steady IDU partners, and others thus basically are notified of the identity of the source of their exposure through contact tracing programs. See supra text accompanying notes 108-14.

^{273.} While a great deal of studies are conducted on the efficacy of partner notification programs, including in relation to their ability to protect the confidentiality of index cases, *see infra* Part V.A, no study has sought to prove that the confidentiality of index cases is maintained by interviewing partners within a reasonable time after notification to determine if partners were able to determine correctly the identity of index cases through their own efforts.

^{274.} See Karen H. Rothenberg et al., The AIDS Project: Creating a Public Health Policy—Rights and Obligations of Health Care Workers, 48 MD. L. REV. 93, 172 (1989). The dissemination of confidential information about index cases by public health authorities other than for the limited purpose of notifying partners anonymously, however, is statutorily prohibited in many states, even where the index case authorizes the authorities to release such information. See, e.g., Grattan v. People, 480 N.E.2d 714, 716 (N.Y. 1985) (holding that public health authorities rightfully refused under statutory authority to honor subpoena duces tecum for the production of the confidential records of a 16-year old girl who participated in a contact tracing program and subsequently waived her confidentiality in the records for the purpose of introducing portions into a criminal investigation).

^{275.} Contact tracing is difficult with a disease such as HIV because

vacy interests of infected persons are sacrificed through systematic contact tracing programs that in reality are not completely voluntary nor confidential.

2. "Right to Know"

Balanced against the claims of infected persons to privacy are the equally compelling claims of their partners to be informed of the risk. Sex partners understandably seek to know unforeseen dangers of which others are aware.²⁷⁶ Partners claim a "right" to know that they have been exposed to infection because (1) knowledge empowers individuals to avoid continuing risks; (2) knowledge of infection allows for early treatment; and (3) knowledgeable partners can adapt their behavior to prevent further transmission of infection to others.²⁷⁷ Just as partner notification does not protect fully the privacy rights of infected persons, it also fails to protect fully their partners' privacy rights. Since contact tracing is by its nature voluntary, index cases are not compelled to participate. Even when index cases choose to participate, they do not have to provide the names of any or all partners, or even to notify partners under patient or conditional referral programs. In addition, a high percentage of partners cannot be located due to inadequate or incorrect information volunteered by index cases.

Conditional and provider referral programs do not actually provide the names of the sources of potential infection to partners, thus leaving some partners with inadequate information to protect themselves fully against a known threat. Although counseling is offered on how to protect oneself against STD infection, not all persons notified of their exposure choose to receive counseling. Some partners, therefore, relinquish their own right to know. Under patient, provider, or conditional referral programs, many partners thus are not informed completely about their risk of infection.

While the exercise of a duty to disclose imposed on infected individuals or a duty to warn imposed on HCWs would resolve some of the weaknesses of contact tracing programs by specifically notifying partners of the sources of their exposure, such duties do not result in reliable notification of partners. Infected individuals regularly ignore their legal duty to disclose without being subjected to significant legal ramifications. HCWs also can be reluctant to notify even when required to do so, as laws that specify when HCWs have a duty to warn can be lofty and difficult to measure. Strong confidentiality measures concerning patient records and medical information, and the threat of legal and administrative action for unnecessary breaches of confidentiality prevent many HCWs

the long period of infectiousness of HIV as well as the current inability to render persons noninfectious further diminishes the potential advantages of tracing contacts. It is important to recognize that the problem with partner notification in this instance is not that it violates civil liberties or that it is intrusive or stigmatizing (although these are important concerns), but the great uncertainty that it effectively serves the goals of public health and welfare.

Brandt, supra note 70, at 482 (citation omitted).

^{276.} See Morton E. Winston, AIDS, Confidentiality, and the Right to Know, Pub. AFF. Q., Apr. 1988, at 91, 99 (arguing that revelation of confidential information is justified when the information revealed may protect those at risk).

^{277.} See Childress, supra note 269, at 74; see also Schoeman, supra note 242, at 266.

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from warning partners.²⁷⁸ Privilege to warn statutes allow HCWs the option of warning in some cases without legal sanctions either for breaches of confidentiality or for failures to warn.²⁷⁹

3. Normative Analysis

Both infected persons and their partners can make normative claims about invasion of autonomy. Persons with infection suggest that principles respect for autonomy militate in favor of privacy. Individuals have the right to control the use of health information. Furthermore, "[t]he principle of respect for autonomy... includes the right to decide insofar as possible what will happen to one's person—to one's body, to information about one's life, to one's secrets, etc." A patient's health status, it is argued, ought not to be disclosed without their consent. Partners also appeal to autonomy in claiming a right to know. Partners cannot make rational, autonomous choices in the absence of relevant information.

Both parties base their normative arguments on the principle of autonomy. However, autonomy, when properly understood, favors the partner's claim. Autonomy supports certain legitimate claims to personal information and decisionmaking for which others interests in confidentiality are insufficient to withhold information.²⁸⁴ Autonomous individuals have the right to engage in behaviors of their choosing.²⁸⁵ The autonomous interests of infected persons, however, are not absolute.²⁸⁶ Autonomy, in its most traditional sense, does not extend to behavior that can result in serious harm to others.²⁸⁷ A person with HIV infection has no legitimate ethical claim that maintaining her confidentiality

^{278.} See supra Part II.C.1.

^{279.} See LO, supra note 269, at 53. Such privilege to warn statutes place the decision of whether to protect a patient's confidentiality or to warn an innocent partner into the hands of HCWs. See id. The notification of similarly-situated sexual partners of infected individuals is left arbitrarily to the discretion of a select few HCWs, thus resulting in potentially uneven and unfair applications. See id.

^{280.} See Tom L. Beauchamp & James F. Childress, Principles of Biomedical Ethics 126 (4th ed. 1994) ("Correlative to [respect for autonomy] is the right to self-determination, which supports various autonomy rights, including those of confidentiality and privacy.").

^{281.} See id. at 408 (noting that "information about persons is an important part of privacy").

^{282.} Id. at 410.

^{283.} See, e.g., id. at 142-46.

^{284.} See id. at 424.

^{285.} See id. at 120; see also Winston, supra note 276, at 92 ("The first and most powerful justification for the rule of confidentiality derives from the individual's right, flowing from autonomy, to control personal information and to protect privacy."). These interests can be defined in terms of privacy and knowledge; privacy, connoting one's "control over the intimacies of personal identity," is a key component of individual autonomy. See Schoeman, supra note 242, at 242. Knowledge is the requirement that autonomous individuals act with knowledge of factors that affect them personally. See id.

^{286.} See BEAUCHAMP & CHILDRESS, supra note 280, at 126 ("The principle of respect for autonomy should be viewed as establishing a stalwart right of authority to control one's personal destiny, but not as the only source of moral obligations and rights.").

^{287.} See id. at 126 (noting that "[i]f our choices endanger the public health, potentially harm innocent others, or require a scarce resource for which no funds are available, others can justifiably restrict our exercises of autonomy").

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justifies failure to protect others from potential harm, especially where the threat of harm is imminent or the consequences of such harm particularly are serious.²⁸⁸

The claim of partners to adequate information necessary to support an autonomous decision is stronger. Partners who engage in sexual relations cannot act rationally without knowledge of the consequences. While a partner is free to consent or refuse sex, that choice is meaningless unless it is made with reasonable knowledge of the risks. Partner notification, then, may be justified by a partner's autonomy right to truthful information to guide their behavior.

4. Consequentialist Analysis

Consequentialist theory supports adopting policies that, on balance, produce the greatest benefit for populations as a whole. The balance of the ethical claims of infected individuals to their privacy and of partners to know depends on the extent to which the recognition of such claims is likely to lead to improved health among the general population. Determining the balance between these competing interests is complex. The objective is to balance the respective interests of infected persons and their partners in such a way that societal health is maximized. What remains unresolved is whether partner notification represents the proper balance.

Many partners believe that their chances for preserving their individual health rely in substantial part on notification of risk. It follows, they argue, that universal notification would improve all partners' chances. Yet, many infected persons, particularly women, counter this observation by documenting the costs of partner notification on infected individuals. Retribution in the form of domestic violence and abuse is a serious consequence of partner notification. In addition, there is a legitimate, unresolved concern that universal partner notification would drive infected persons underground, effectively hiding their STD-positive status from virtually everyone, including partners, doctors, and family members. Determining whether partner notification provides a net benefit to relevant populations truly depends on its efficacy. Privacy rights of infected individuals should yield only if partner notification works meaningfully to alter risk behaviors and to reduce the incidence of HIV and other STDs. This requires a systematic empirical analysis that is discussed later in this Article.

^{288.} See id. at 426. Tom Beauchamp & James Childress note that

[[]m]any well-grounded reasons support the practice of informing spouses and sexual partners (past and present) that a particular person has tested positive for exposure to the AIDS virus. For example, if people are at risk of serious harms, and the disclosure is necessary to prevent—and probably would prevent—the harms (to spouses or lovers or, if they are already infected, to their partners), disclosure is usually justified.

Id.

^{289.} See id. at 126-27.

^{290.} See infra Part IV.B.

^{291.} See infra Part V.

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B. Feminist Theories and Sexual Ethics

Feminists have long supported the idea that women should be informed about their sexual risks.²⁹² In many ways, feminist theory simply reinforces the normative arguments previously discussed because women claim that they cannot make autonomous decisions absent critical information regarding risks they face. However, there are several characteristics of sexual transmission of diseases that suggest a distinct feminist perspective. For reasons of biology, epidemiology, and vulnerability, the "right to know" particularly is pertinent to women.

From a biological perspective, women have an elevated risk, as compared to men, of contracting disease within the context of a heterosexual relationship. Some STDs, such as syphilis, are more difficult for women to detect than men. This increased biological risk also can be seen epidemiologically. Women currently comprise one of the fastest growing groups of people with HIV/AIDS, with increased infection rates seen most heavily among minority women.

In addition, women are much more vulnerable within relationships, often being economically dependent and subject to physical and psychological abuse. Partner notification assumes that individuals can control their exposure to the

^{292.} Despite the focus of contact tracing programs on female prostitutes during the 1930s era of Thomas Parran, such programs were supported by feminist groups as a way to protect innocent women from infection. As previously discussed, the modern concept of the duty to disclose one's infectious diseases originated from civil lawsuits and criminal actions brought by women against their husbands through whom they became infected with venereal diseases. See supra Part II.B. These cases eventually resulted in the overturning of the historic legal fiction of interspousal immunity that had immunized husbands against such actions in the past. See supra text accompanying notes 141-46.

^{293.} See Shelton, supra note 3, at 12; see also Janie Simmons et al., A Global Perspective, in WOMEN, POVERTY, AND AIDS: SEX, DRUGS, AND STRUCTURAL VIOLENCE 39, 47-48 (Paul Farmer et al. eds., 1996).

^{294.} See Blank et al., supra note 85, at 218-19 ("Syphilis infections in women pose a significant challenge to control programs: women are less likely than men to notice painless reproductive tract lesions and are therefore less likely to seek medical care for signs and symptoms of syphilis.").

^{295.} See CENTERS FOR DISEASE CONTROL & PREVENTION, U.S. DEP'T OF HEALTH & HUMAN SERVS., HIV/AIDS PREVENTION 1 (July 1997) [hereinafter HIV/AIDS PREVENTION]; Karen H. Rothenberg & Stephen J. Paskey, The Risk of Domestic Violence and Women with HIV Infection: Implications for Partner Notification, Public Policy, and the Law, 85 Am. J. Pub. Health 1569, 1569 (1995); Pascale M. Wortley & Patricia L. Fleming, AIDS in Women in the United States, 278 JAMA 911 (1997).

^{296.} In 1996, African-American and Hispanic women accounted for 59% and 19%, respectively, of AIDS cases reported among women; these respective rates are 17 and 6 times greater than AIDS reported for white women in the same year. See HIV/AIDS PREVENTION, supra note 295, at 2. In 1994, African-American and Hispanic females accounted for more than 75% of AIDS cases diagnosed among women. See John K. Watters, HIV Test Results, Partner Notification, and Personal Conduct, 346 LANCET 326 (1995).

disease.²⁹⁷ Many women, however, lack control over their own exposure because of their inability to make critical life choices due to poverty, domestic violence, and discrimination.²⁹⁸ Women may lack the power in their relationships to require male partners to refrain from sex or to use condoms.²⁹⁹ Partner notification programs that focus on the role of individuals as agents in the effort to control epidemic STDs may neglect the status of women who societally are dependent on their partners, and thus do not possess the same amount of control over their risk of exposure as most men do.

To the extent that public health strategies reflect a masculine structure of personal responsibility, they ignore the reality of many women's lives, including the imminent threat of physical abuse at the hands of notified male partners. Researchers have identified a strong link between AIDS and violence that for women translates into an epidemic potential for domestic abuse. Where partner notification has the potential to result in domestic violence against women, "[t]he risk of physical harm to the female patient from her partner may be greater than the potential benefit of warning the partner." 301

Even if women do have the economic and physical power to require changes in the sexual behavior of their partners, they may not be aware of the risks. Women often do not know they are at risk, or only learn of their positive

^{297.} The focus of partner notification on individuals is contrary to the principle of feminist ethics that rejects societal concentration on individual rights or freedoms, looking instead to societal relations and the social context of rights. See Karen Lebacqz, Feminism and Bioethics: An Overview, SECOND OPINION, Oct. 1991, at 11, 14-15 ("Feminist ethics, therefore, is explicitly political—it asks about the distribution of power, about who gains and who loses in any action or transaction, about the possibilities for exploitation of those who are relatively powerless."); see also John Hardwig, Should Women Think in Terms of Rights?, in FEMINISM & POLITICAL THEORY 53, 62 (Cass R. Sunstein ed., 1990) ("One of the tools of [the] oppression [of women] has been the one-sided definition of and insistence on the rights of the men in personal relationships.").

^{298.} See Paul Farmer, Women, Poverty, and AIDS, in Women, Poverty, AND AIDS, supra note 293, at 3, 4-5; see also Robin Marantz Henig, The People's Health: A Memoir of Public Health And Its Evolution at Harvard 163 (1997) ("In many AIDS-plagued countries, for example, women's low status, lack of education, and economic dependence on men are so ingrained that AIDS is easily spread despite educational programs.").

^{299.} See Shelton, supra note 3, at 12.

^{300.} See Richard L. North & Karen H. Rothenberg, Partner Notification and the Threat of Domestic Violence Against Women with HIV Infection, 329 New Eng. J. Med. 1194, 1195 (1993). As one New York City caseworker described in her eyewitness account of a HIV-positive woman's disclosure of her HIV infection to her husband: "When she told him, he said 'So you have AIDS?'—then, hysterical sobbing, crying. After he pulled himself together the first thing he did was attack her." Nina Bernstein, When Women Aren't Told Their Lovers Are Dying of AIDS, N.Y. NEWSDAY, Feb. 3, 1993, at 52.

^{301.} North & Rothenberg, *supra* note 300, at 1195 (arguing that this is true especially since medical studies have shown the risk of HIV transmission from female to male is significantly lower than from male to female).

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status when a partner or child is diagnosed with, or dies from, AIDS.³⁰² In the HIV epidemic, the greatest risks to women are from males who are bisexual³⁰³ or injecting drug users.³⁰⁴ Yet the risk status of men is not apparent and often requires some formal notification.

Feminist theories, despite all their degrees and differences, ³⁰⁵ agree that "the evaluation of medical practices must give primary attention to the impact of such practices on women—not just on individual women but on women as a group, including especially disadvantaged women such as poor women and women of color." The HIV/AIDS epidemic has presented a modern challenge to the premises on which feminist support of partner notification is grounded. Although HIV/AIDS generally has been viewed as a gay disease, ³⁰⁷ societal views of HIV-positive women have at times been unbecoming. Consistent with traditional societal views of female prostitutes throughout the syphilis epidemic,

302. See Nora Kizer Bell, Women and AIDS: Too Little, Too Late?, in FEMINIST PERSPECTIVES IN MEDICAL ETHICS 46, 59 (Helen Bequaert Homes & Laura M. Purdy eds., 1992); Nat Hentoff, Editorial, The AIDS Establishment's Conspiracy of Silence, WASH. POST, Oct. 1, 1994, at A23 (noting that in the 1980s "the New York City Health Department surveyed a sizable number of infected women in East Harlem. Hardly any had known, during sex, that their husbands or companions had been infected. The women were furious at having been kept so vulnerably ignorant."); Bernstein, supra note 300, at 52 ("Many of the women most at risk of contracting AIDS have no idea they are in danger. And many of the men responsible find it too hard to tell them on their own."); Tye, supra note 244, at 1 ("'Many partners may not know they're at risk, and that's true for women in particular.'" (quoting Dr. Kathleen Toomey of the CDC)); see also Doe v. Vanderbilt Univ., 824 F. Supp. 746, 747 (M.D. Tenn. 1993) (receiving a tainted blood transfusion, a mother did not discover her HIV transmission until five years later when her infant died of AIDS-related complication).

303. See Bernstein, supra note 300, at 52 (documenting the story of a woman who learned from her husband about his HIV-positive status through a partner notification program, although he failed to inform her that he became infected by engaging in sex with male prostitutes).

304. See Bruce Lambert, As AIDS Spreads, So Do Warnings for Partners, N.Y. TIMES, May 13, 1990, at A22; see also Margaret Connors, Sex, Drugs, and Structural Violence: Unraveling the Epidemic Among Poor Women in the United States, in Women, Poverty, and AIDS, supra note 293, at 91, 91-94 (documenting the story of one married woman who learned of her exposure when she uncovered the wall heater in her bathroom to find a needle, cooker, and rubber hose that her husband used to inject drugs).

305. See Rebecca J. Cook, Feminism and the Four Principles, in PRINCIPLES OF HEALTH CARE ETHICS 193, 195 (Raanan Gillon ed., 1994) ("Feminism is no more monolithic than are the philosophies and politics from which feminist analysts draw inspiration in explaining sexist structures of society and proposing reforms").

306. Lebacqz, supra note 297, at 12; see also Nina Bernstein, The Secret Life of AIDS: When Women Ask Doctors or Social Workers, 'Why Didn't You Tell Me?' the Answer Is Often, 'We Thought You Knew', N.Y. NEWSDAY, Feb. 2, 1993, at B46 (quoting Catherine Lynch, director of women's issues for Gay Men's Health Crisis as saying: "The voices that have dominated the debate so far have been male, coercive, public-health voices at one end and ACT UP at the other.... And guess what, they're all boys. No one's looked at women's stake in this issue.").

307. See Bell, supra note 302, at 49 ("[B]ecause AIDS was first recognized in the United States in the male homosexual population, the disease was stigmatized as a 'gay disease,' referred to, even among male homosexuals, as the 'gay plague.'"); see also SUSAN SHERWIN, NO LONGER PATIENT: FEMINIST ETHICS AND HEALTH CARE 219 (1992) ("Medical researchers and clinicians and public health authorities leapt quickly to the conclusion that AIDS is a 'gay plague,' a punishment for sexual activity that transcends acceptable practice."); HENIG, supra note 298, at 161. This characterization was exacerbated by misinformation that heterosexuals, especially women, could not contract the disease. See Farmer, supra note 298, at 4-5.

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women have been viewed as "vectors" of disease who infect unsuspecting men or children. The rise of heterosexual and vertical transmission of HIV was attributed in part to women. And like other high-risk groups, HIV-positive women became silent victims of the disease as society initially chose to protect the confidentiality of seropositive individuals over female partners' right to know.

Feminists demand that partner notification, like many government-sponsored programs, be analyzed by asking about its specific effects on women. As Katherine T. Bartlett explains:

[A]sking the woman question means examining how the law [or regulation] fails to take into account the experiences and values that seem more typical of women than men, for whatever reason, or how existing legal standards and concepts might disadvantage women. . . . The purpose of the woman question is to expose those features and how they operate, and to suggest how they might be corrected. ³¹¹

Feminists evaluate the models of partner notification in the context of the reality of women's lives to protect women as partners, who may not know they are at risk of infection, and to protect women as patients, who must contend with economic dependence and domestic violence. Although notification is important, it may increase the likelihood of harm suffered by women as patients who are dependent economically or who suffer from abuse, and concurrently oppress women by prohibiting them from making their own choices.³¹²

Partner notification from a feminist perspective is both favored because it gives women vital knowledge to protect themselves and disfavored because it potentially exposes women to violence. Some women face consequences including domestic abuse, abandonment, and economic misfortune as a result of notification. Although feminists generally support partner notification in its effort to notify women at risk of infection, they question the development of the methods through which it is accomplished as unresponsive to women's needs.

^{308.} See Ruth Faden et al., Women as Vessels and Vectors: Lessons from the HIV Epidemic, in Feminism and Bioethics: Beyond Reproduction 252, 252-53 (Susan M. Wolf ed., 1996).

^{309.} One notable expert, James W. Curran, then at the CDC, described HIV-positive women who gave birth as guilty of an "invidious transmission" of HIV from mother-to-child. See Paula A. Treichler, AIDS, Gender, and Biomedical Discourse: Current Contests for Meaning, in AIDS: THE BURDENS OF HISTORY 190, 211 (Elizabeth Fee & Daniel M. Fox eds., 1988) ("With this act the passive receiver again becomes a culpable agent who transmits her infected blood 'vertically' to her unborn child.").

^{310.} See Burr, supra note 20, at 57.

^{311.} Katherine T. Bartlett, Feminist Legal Methods, 103 HARV. L. REV. 829, 837 (1990).

^{312.} See Bell, *supra* note 302, at 57 ("For many women, mandatory testing carries with it the specter of forced celibacy, prohibitions against procreation (accompanied by the potential of sanctions against violators), and even the threat of forced abortion.").

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V. EFFICACY OF PARTNER NOTIFICATION

A. Public Health Efficacy: Empirical Analyses

A partner's claim to knowledge of health risks predominantly supports partner notification. Legal analysis holds that information concerning risks to which partners are exposed justifies the duties to disclose and warn and contact tracing, despite infringements on the privacy interests of infected individuals. Normative analysis favors partner notification because individuals have a legitimate claim to fundamental knowledge necessary to protect their own health. Partner notification, however, cannot rely on the moral "right to know" and legal duties alone. Consequentialist and feminist theories expose weaknesses in the support for partner notification. Infected women face the darker side of partner notification, suffering physical, emotional, and economic abuse from the dissemination of information to their male partners. Consequentialism requires objective proof of the efficacy of partner notification even though it commonly is assumed to be an effective public health strategy.

Partner notification as a public health practice demands more than subjective proof of efficacy. Scientifically-verifiable and demonstrably-sound proof that partner notification actually reduces the risk of infection is required. To be effective, partner notification must accomplish substantially its intended goals. First, partner notification must advise partners of the risks of harm so they can make informed choices to reduce the risks. Under this view, even if contacts do not alter their behaviors, there is a positive value in enhanced autonomy. It is necessary to devote a great deal of attention to this first goal. Under the prevalent methods of contact tracing, patient and conditional referral, data suggest that partners often are not informed. In such cases, there clearly is no positive value to partner notification. When partners are informed, at least the normative value of providing this information to autonomous individuals is accomplished.

Second, and more important, partner notification is designed to protect the public health. If partner notification reduces the rate of STD infection as well or better than other public health interventions, it may be regarded as effective. The central question, therefore, is whether partner notification accomplishes the goal of reducing STD transmissions as part of a national, comprehensive public health strategy. Do the notification, education, counseling, testing, and treatment services provided as part of contact tracing programs reduce the transmission rate of STDs, and, if so, at what cost and how? Answering this question is complex. Some studies suggest that partner notification is effective in limited environments involving high-risk populations. Scientifically-objective proof of the efficacy of contact tracing as a widespread public health practice, however, is inconclusive. The accumulated data suggest that partner notification as a national practice to control HIV infection does not work nearly as well as is claimed by its proponents. As a result, support for partner notification based on moral and legal claims to information loses force where partner notification does not actually serve public health goals.

^{313.} See supra Part III.B.

^{314.} See supra Part IV.A.

Examining the scientific efficacy of partner notification is not a simple task. Efficacy is largely an empirical question. Measuring the effectiveness of partner notification through contact tracing is problematic.³¹⁵ No scientifically valid empirical standard exists to measure the effectiveness of contact tracing as applied to STDs across large populations. The consensus of opinion instead holds that "[a]ctive contact tracing programs have been effective (but costly) in controlling localized outbreaks of specific antibiotic resistant strains of sexually transmitted diseases with short latency periods and in targeting specific subgroups of the population." Studies suggest that STDs such as syphilis, 317 gonorrhea, 318 and chlamydia³¹⁹ have been controlled among subgroups through contact tracing. Contact tracing in the context of HIV/AIDS has been challenged on the basis that finding and notifying partners is less effective than with other STDs since there is no cure for AIDS³²⁰ and the long asymptomatic incubation period of the infection makes tracing difficult among populations.³²¹ These observations, however, do not justify a failure to attempt to notify persons at risk of HIV infection. While AIDS remains a terminal condition, new pharmacological interventions can prolong the life of an HIV-infected individual by delaying symptomology. 322 In addition, although it may be difficult to notify former partners of HIV-infected persons, those who are notified are likely to have been more recently exposed to infection, rendering counselling and treatment services more useful for the contact and potential future partners.323 Clearly, "[t]he key issue remains not

^{315.} See, e.g., Brandt, supra note 70, at 481 ("Do partner notification programs achieve their goals? It is striking how little is known about the relative cost and effectiveness of these programs."); Andrew T. Pavia et al., Partner Notification for Control of HIV: Results After 2 Years of a Statewide Program in Utah, 83 Am. J. Pub. Heath 1418, 1421 (1993) ("[B]ecause of the difficulty of measuring behavioral change and of detecting any impact of behavioral change on the rate of HIV infection, the true effectiveness of partner notification in the control of HIV infection is unknown.").

^{316.} EVANS ET AL., supra note 271, at 6.

^{317.} See Suzanne E. Landis et al., Results of a Randomized Trial of Partner Notification in Cases of HIV Infection in North Carolina, 326 New Eng. J. Med. 101, 101 (1992). But see Andrus et al., supra note 14, at 542 (1990) (finding that partner notification efforts in Oregon were demonstrably inadequate to stem the rise of syphilis infections from 1978 to 1987).

^{318.} See Hawazin Faruki et al., A Community-Based Outbreak of Infection with Penicillin-Resistant Neisseria Gonorrhea Not Producing Penicillinase (Chromosomally Mediated Resistance), 313 New Eng. J. Med. 607, 608-10 (1985); see also Landis, supra note 317, at 101 nn.10-14.

^{319.} See, e.g., Kathleen E. Toomey & Willard Cates, Jr., Partner Notification for the Prevention of HIV Infection, 3 AIDS S57 (1989) (citing Barry P. Katz et al., Efficiency and Cost-Effectiveness of Field Follow-up for Patients with Chlamydia trachomatis Infection in a Sexually Transmitted Diseases Clinic, 15 SEXUALLY TRANSMITTED DISEASES 11 (1988)).

^{320.} While vaccination and a cure would help to break the chain of transmission of HIV, their absence alone does not mean that tracing HIV contacts serves little purpose. Interestingly, when contact tracing first was instituted on a national scale in the United States to combat syphilis in 1936, no truly effective cure had been developed. Penicillin as treatment for syphilis was not available until 1943. *See supra* Part II.A.1.a).ii).

^{321.} See Toomey & Cates, supra note 319, at S58.

^{322.} See id.; see also Lynda Richardson, Progress on AIDS Brings Movement for Less Secrecy, N.Y. TIMES, Aug. 21, 1997, at A1.

^{323.} See West & Stark, supra note 99, at 70 ("Because of the long [latency] periods involved [with HIV], often it is difficult for the patient or health department to locate all the partners, especially those exposed years earlier.").

whether sex and needle-sharing partners of HIV-infected individuals should be informed, but rather how this notification will occur."³²⁴

Public health studies suggest that HIV partner notification programs can be effective in locating and counseling infected contacts of index cases³²⁵ and in reducing STD infection rates,³²⁶ particularly among at-risk groups.³²⁷ These findings often focus on preserving the confidentiality of index cases.³²⁸ For example, a study conducted in the United Kingdom in 1993 found partner notification in the form of a voluntary provider referral program where confidentiality was preserved to be an effective strategy for identifying individuals at risk of becoming infected with HIV and providing them with access to counseling and health care.³²⁹ Twenty-nine new index cases were identified over a seven-year period in a mid-sized community from seventy-nine original index cases, for a seropositivity rate of 31.6%.³³⁰

The seropositivity rate describes the percentage of contacts identified through partner notification in a given program who test positive for HIV for the first time as a result of their notification. In general, the higher the seropositivity rate, the greater the efficacy of contact tracing as claimed by public health authorities. The seropositivity rate in the United Kingdom study, for example, compares favorably to the reported rates of contact tracing programs in Sweden

^{324.} See Toomey & Cates, supra note 319, at S58.

^{325.} A study in Belgium, which recommended the use of a partner notification program for heterosexuals with low risk factors, demonstrated the value of such programs in instances where a single, sexually-active, and HIV-infected individual agrees to participate. See Nathan Clumeck et al., A Cluster of HIV Infection Among Heterosexual People Without Apparent Risk Factors, 321 NEW ENG. J. MED. 1460, 1460 (1989). The index case, a heterosexual man, identified 15 previously unknown female sexual partners, 14 of whom agreed to be tested, and 7 of whom tested positive. See id. In addition to these 7 women, 4 other partners of this single index case had previously tested positive as a result of sexual contact with the individual, thus resulting in 11 total contacts of one person becoming infected with HIV. See id.

^{326.} See M.W. Adler, Contact Tracing, 284 Brit. Med. J. 1211, 1211 (1982); Ralph H. Henderson, Control of Sexually Transmitted Disease in the United States—A Federal Perspective, 53 Brit. J. Venereal Diseases 211, 212-14 (1977); Richard S. Pattman & Elspeth M. Gould, Partner Notification for HIV Infection in the United Kingdom: A Look Back on Seven Years Experience in Newcastle upon Tyne, 69 Genitourinary Med. 94, 94 (1993).

^{327.} See Pavia, supra note 315, at 1418 (recommending that partner notification be used to reach at-risk populations based on a public health study in 1993 which examined the results of mandatory provider referral programs over a two year period in Utah); N.E. Spencer et al., Partner Notification for Human Immunodeficiency Virus Infection in Colorado: Results Across Index Case Groups and Costs, 4 INT'L J. STD & AIDS 26, 31 (1993) (conducting a retrospective study of its voluntary contact tracing services in 1988, the Colorado Department of Health concluded that partner notification should be offered to all HIV-infected individuals, but more specifically to core individuals at greatest risk of HIV infection); Toomey & Cates, supra note 319, at S57 (explaining that partner notification strategies have been effective in targeting intervention activities for specific "core-group" populations).

^{328.} See Landis, supra note 317, at 101.

^{329.} See Pattman & Gould, supra note 326, at 96; see also R.A. Keenlyside et al., Attitudes to Tracing and Notifying Contacts of People with HIV Infection, 305 BRIT. MED. J. 165 (1992).

^{330.} See Pattman & Gould, supra note 326, at 96.

^{331.} See Andrus et al., supra note 14, at 542.

^{332.} See id. ("Traditionally, the success of contact notification has been measured by how many sexual contacts for whom locating information was available were actually notified of their exposure.").

(15%)³³³ and Norway (13%).³³⁴ Comparing seropositivity rates as a measure of efficacy, however, is unsound. Variances in reported seropositivity rates are likely the result of generally incomparable factors, including: (1) the demographics of the population being studied; (2) the culture of the society in which the studies are conducted; (3) the means of operating particular contact tracing programs; (4) the length of time over which the study is conducted; (5) the period in time in which the study is performed; and (6) the sample size of the program studied.³³⁵ This is not to say that reported seropositivity rates of studies on the efficacy of partner notification are of no value. Reported rates can demonstrate the efficacy of different contact procedures within internal studies³³⁶ or in comparison to other public health measures in the same community.³³⁷ Seropositivity rates of contact tracing programs, however, largely are incomparable across populations, methods, and time.

A second fallacy of comparing seropositivity rates as an affirmation of efficacy is that it looks past a primary function of contact tracing, that is, actually notifying and counselling partners. Efficacy studies in Oregon³³⁸ and North Carolina³³⁹ involving syphilis and HIV, respectively, concluded that partner notification is unsuccessful in containing STDs where many potential contacts cannot be notified due to the inability of index cases to identify their numerous sexual and drug partners. In actuality, the ability of contact tracing programs to locate partners of index cases infected with STDs such as syphilis and HIV that have long latency periods is minimal. Since seropositivity rates are calculated only among those partners who are located, the rates do not reflect the prevalence of disease in a community or the effective ability of contact tracing programs to

^{333.} See generally Pattman & Gould, supra note 326, at 96; Johan Giesecke et al., Efficacy of Partner Notification for HIV Infection, 338 LANCET 1096 (1991) (discussing partner notification programs in Sweden).

^{334.} See Pattman & Gould, supra note 326, at 96.

^{335.} For example, in comparison to Pattman & Gould's British study, the Swedish study examined the efficacy of a national (versus local) conditional (versus provider) referral program over eighteen months (versus seven years) in 1989-1990 (versus 1985-1992). See Giesecke et al., supra note 333, at 1096. The Swedish study concluded that of the 365 (versus 79) index cases who voluntarily chose to participate, 53 (versus 29) previously unknown cases of HIV infection were diagnosed for a seropositivity rate of 14.5% (versus 31.6%). See id. at 1098.

^{336.} The Swedish study, for example, internally compared the seropositivity rates of its conditional referral program with available information based on a patient referral model and determined that the rate would have dropped almost 33% if patient referral had been exclusively offered to voluntary participants. *See id.* at 1098; *see also* Richard E. Hoffman et al., *Comparison of Partner Notification at Anonymous and Confidential HIV Test Sites in Colorado*, 8 J. ACQUIRED IMMUNE DEFICIENCY SYNDROMES & HUMAN RETROVIROLOGY 406, 409 (1995) (finding a twofold difference in seropositivity rates of newly tested contacts between those HIV-infected index cases who were tested at confidential versus anonymous testing sites).

^{337.} See Pavia et al., supra note 315, at 1421 (noting from the study that the seropositivity rate of contacts through partner notification "was substantially higher than the rate found in any counseling and testing site, confirming that [partner notification efforts] were successful in reaching those at high risk").

^{338.} See Andrus et al., supra note 14, at 542.

^{339.} See Landis, supra note 317, at 101,105 (stating that because of the large percentages of partners either unidentified or unable to be located through partner notification, the authors were reluctant to endorse the efficacy of partner notification as a practice).

actually trace all, or even most, partners. Seropositivity rates are thus an inaccurate means by which to judge the efficacy of partner notification.

The confidentiality of index cases who voluntarily participate in contact tracing programs is a critical issue of law and ethics.³⁴⁰ Confidentiality has been an appropriate focal point of modern studies examining partner notification efforts involving HIV-positive individuals; these studies stress the importance of confidentiality in the operation of contact tracing programs. A 1991 Colorado study found a twofold difference in seropositivity rates of newly tested contacts between those HIV-infected index cases who were tested at confidential testing sites versus those who were tested at anonymous testing sites.³⁴¹ In addition, in North Carolina, an internal, comparative study of contact tracing programs randomly assigned index cases to participate in a provider referral program (where confidentiality was guaranteed) and patient referral program (where confidentiality was not). 342 Adequate counseling was provided to both groups to encourage the identification and notification of all sexual and needle-sharing partners. Of those who were assigned to provider referral programs, fifty percent of the named partners were located and notified by public health counselors. This compared favorably to the patient referral group where only seven percent of partners were notified, despite the state legal requirement that infected persons notify their partners directly or through a contact tracing programs.³⁴³

While these studies demonstrate the importance of maintaining the confidentiality of index cases in contacting partners, they do not prove that confidentiality actually is maintained. They simply allege that where confidentiality protections are furnished initially, as through provider referral, index cases are more likely to participate in partner notification. As this Article has argued, preserving the confidentiality of index cases through partner notification is a factual and ethical myth. Were index cases advised of this conclusion prior to their participation in a provider referral program, the studies suggest they will not participate voluntarily. While preserving confidentiality is thus an important factor in improving the efficacy of partner notification, studies that reach this conclusion without proving that confidentiality ultimately is preserved are flawed. It is scientifically and ethically inconsistent to advocate the efficacy of confidential partner notification where confidentiality is assured falsely to voluntary participants.

The degree to which partner notification works to alter favorably the behavior of at-risk individuals also is unclear. A study in South Carolina systematically attempted to demonstrate the effectiveness of partner notification in al-

^{340.} See supra Parts II.C, III.B, IV.A.

^{341.} See Hoffman et al., supra note 336, at 409 (describing testing jointly performed by the Colorado Department of Public Health and Environment and the University of Colorado Health Sciences Center). The study compares provider referral methods of partner notification at a single anonymous HIV testing site in Denver to 13 confidential HIV testing sites across the state over an 18-month period. See id. at 406. The seropositivity rate of newly-tested partners of index cases attending confidential testing centers was 36%, compared to only 15% of those newly-tested partners who were HIV-positive and identified by index cases attending anonymous testing centers. See id. at 409.

^{342.} See Landis, supra note 317, at 101.

^{343.} See id. at 103. The overall seropositivity rate among partners of index patients in the study was 23%. See id. at 104.

tering the at-risk behaviors of contacts. HIV-negative individuals reported partners decreased from an average of 5.6 per case to 1.1 per case after partner notification, an eighty percent decrease. HIV-negative individuals reported on average fifty percent fewer partners after partners notification. While these individuals who were re-interviewed at least once, reported partners decreased from an average of 5.6 per case to 1.1 per case after partner notification, an eighty percent decrease. HIV-negative individuals reported on average fifty percent fewer partners after partner notification. While these findings are promising, they lack demonstrative proof of decreased at-risk behaviors, and fail to represent the behavioral trends of many partners who chose not to participate in the follow-up interviews.

Noting a lack of evidence regarding the impact of testing and counseling on sexual behaviors, a group of Canadian researchers examined several STD notification studies in 1994 in an attempt to determine the effectiveness of various partner notification models. Their findings were, not surprisingly, inconclusive, as "there has been a paucity of well designed studies to evaluate the effectiveness of partner notification strategies." The authors noted that, "there is very little upon which to estimate the ultimate benefits and harms of partner notification for HIV infection," and further that, "arguments for and against provider referral for HIV infection tend to be based more on convictions than on

^{344.} See Randolph F. Wykoff et al., Notification of the Sex and Needle-Sharing Partners of Individuals with Human Immunodeficiency Virus in Rural South Carolina: 30-Month Experience, 18 SEXUALLY TRANSMITTED DISEASES 217 (1991) [hereinafter Wykoff et al., Notification of the Sex and Needle-Sharing Partners]. The South Carolina Department of Health and Environmental Control (SCDHEC) examined a voluntary and confidential HIV provider referral program in a rural health district over a 30-month period from 1986-1989. See id. at 218. SCDHEC reported that 49 HIV-positive persons were identified and counseled from 280 contacts who agreed to be tested, a seropositivity rate of 18%. See id.

^{345.} See id. at 220. While reluctant to apply their findings to the rest of the nation, the authors concluded that "partner notification appears to be an effective addition to other efforts to control the spread of HIV," id., for the following reasons: (1) it can accurately target education and testing services to those at greatest risk of acquiring or spreading HIV including those outside typical "risk groups" associated with the diseases; (2) it can be extremely important in supplying necessary medical and health support services to HIV-positive individuals; (3) it is well-accepted by at-risk individuals and results in important behavioral changes; and (4) partner notification may assist in tracking demographic indices and changes in the HIV epidemic in a given area. See Wykoff et al., Notification of the Sex and Needle-Sharing Partners, supra note 344, at 221; see also Jeffrey L. Jones et al., Partner Acceptance of Health Department Notification of HIV Exposure, South Carolina, 264 JAMA 1284, 1284 (1990) (determining that 87% of sexual partners contacted over two years through a partner notification program in rural South Carolina thought the health department was right to contact them about their exposure, and 92% of these same persons indicated that the health department should continue to notify persons exposed to HIV).

^{346.} See Andrew D. Oxman et al., *Partner Notification for Sexually Transmitted Diseases: An Overview of the Evidence*, 85 CANADIAN J. PUB. HEALTH S41 (1994) (examining previous notification studies conducted by Canadian researchers to determine their effectiveness).

^{347.} *Id.* at S45. Minimal assistance with patient referral services is effective and, to a lesser degree, provider referral programs result in more notification than patient referral programs. *See id.* at S46.

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data."³⁴⁸ As a result, they recommended that policy decisions regarding partner notification be based on grounds other than efficacy.³⁴⁹

The Canadian report illuminates a major dilemma in examining the efficacy of contact tracing. It is extremely difficult (or nearly impossible) to measure efficacy accurately with so many variables to calculate. While virtually all studies on partner notification efficacy report disparate rates of seropositivity, none suggest that high rates of seropositivity among contacts of HIV index cases is an exclusive determinant of the efficacy of the program. Whether partner notification actually reduces the rate of HIV transmission through behavioral change remains largely speculative. As part of a national comprehensive public health strategy, partner notification has not been proven scientifically to reduce the rate of HIV infection among the general population or alter the at-risk behaviors of index cases or partners alike.

B. Economic Perspectives: Cost-Effectiveness and Incentives for Behavior Change

With limited financial resources devoted to public health efforts to combat STDs, including HIV, economic justifications for each part of the comprehensive strategy are essential. Strategic elements that produce demonstrably sound, cost-effective benefits are attractive to those who appropriate funds for such efforts, to the exclusion of other, less economically viable elements. Yet, economic analysis cited in support of partner notification often is misguided.

"Savings" in the form of medical treatment costs foregone by the alleged prevention of infection of others as a result of partner notification often is cited as economically justifying such efforts. ³⁵² Partner notification programs are analyzed under cost-benefit principles by calculating the cost per new case identified. This figure is deemed important because identifying a new index case through partner notification may mean that future cases of infection will be pre-

348. See id. at S46.

The fact is that practices like name reporting and contact tracing arose in the late 19th and early 20th centuries, before there was any scientific way of determining whether they worked. They may have satisfied a popular demand that health authorities do something, but the fact is, we don't really know how effective they were.

Rotello. supra note 88. at A23.

349. See Oxman et al., supra note 346, at S46.

350. See Pavia, supra note 315, at 1422 (describing how the authors were unable to conclude through incontrovertible data that partner notification and HIV testing decrease the transmission of HIV by modifying the behavior of index cases, despite statistics based on a small sample group of partners suggesting a substantial decrease in the reported rate of sexually-transmitted diseases among partners over a four-year period).

351. See EVANS ET AL., supra note 271, at 6 ("The costs of contact tracing for HIV must be weighed against the competing needs of other public health programs. The diversion of resources from other communicable disease programs such as AIDS, STD, and TB programs should be viewed in light of the increase of cases of these diseases in many areas.").

352. See Spencer et al., supra note 327, at 31 (noting that the Colorado study estimated that if each of the 12 partners identified as positive avoided transmitting HIV to at least one individual because of partner notification services, and only 6 of the 12 potentially-infected individuals later contracted HIV, the average savings in medical care costs would outweigh the costs of the program almost 11:1); see also Pavia et al., supra note 315, at 1422.

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vented since index cases are counseled on how to prevent infecting others. In addition, with STDs other than HIV, where curative treatment presently is available, identifying and treating an infected individual effectively can break the chain of transmission. The lower the cost of new case identified, the more economically sound a program is judged to be, principally because the costs of prevention are much lower than the costs of treating people once they have become infected.³⁵³

Comparing the costs of identifying new index cases to the costs of treating future infected persons if index cases go unidentified is senseless from the public health perspective. Not only do such comparisons completely fail to address whether partner notification results in positive behavioral changes among those notified, the comparisons ridiculously suggest that if it takes X dollars to treat an HIV-infected individual, it is cost-effective to spend X - 1 dollars to prevent such infections through partner notification. Public health authorities will not deny that spending resources on efforts to prevent the transmission of STDs has positive cost-benefits, provided an adequate number of infections are prevented.³⁵⁴ With limited resources devoted to public health efforts to control STDs, however, funds must be allocated to efforts that most effectively reduce infection rates. Partner notification is not "the sole strategy for preventing [STD] transmission."355 To the contrary, it is a part of a comprehensive public health strategy that includes testing, screening, and reporting services, largely funded by the CDC. 356 It is important, therefore, to examine the opportunity costs of expending limited resources on partner notification to the exclusion of other strategies that may be more effective. Regardless of cost-benefit analyses, the economic inquiry should be whether X dollars spent on partner notification could be used more efficiently to accomplish public health goals through other strategies such as health education or condom distribution. Unfortunately, comparative economic

^{353.} In the Colorado HIV study, the cost to identify a new index case through patient and provider referrals programs in 1988 was estimated to be \$1625 per person identified. See Spencer et al., supra note 327, at 31. Other studies have documented varied costs per new HIV index case identified. See Stephen Crystal et al., AIDS Contact Notification: Initial Program Results in New Jersey, 2 AIDS EDUC. & PREVENTION 284, 292 (1990) (noting that the cost per contact identified was \$2260 for New Jersey's conditional referral program); Pavia et al., supra note 315, at 1422 (noting that the cost to identify each partner newly testing positive was \$3205 for Utah's provider referral program); Randolph F. Wykoff et al., Contact Tracing to Identify Human Immunodeficiency Virus Infection in a Rural Community, 259 JAMA 3563, 3565 (1988) (including figures of \$810 per case for South Carolina provider referral program).

^{354.} A 1993 investigative report affirmatively answered, through cost-benefit principles, the broad economic question: "Does the expenditure of CDC HIV/AIDS funds on CTRPN [counseling, testing, referral, and partner notification] services provide a net economic benefit to society?" Holt-grave et al., *supra* note 98, at 1228 (internal quotations omitted). According to their calculations (using 1990 figures), CTRPN services in combination produce a benefit-cost ratio of 20.09, meaning that for every dollar spent on these services, society gains \$20.09 in total economic benefits. *See id.* The cost per infection averted through CTRPN services was estimated at \$25,780. *See id.* at 1230. The authors concluded that "it can be strongly stated that [CTRPN services do] appear to yield net economic benefits to society." *Id.*

^{355.} EVANS ET AL., supra note 271, at 7.

^{356.} See infra Part VI.A.

studies examining partner notification against other strategic public health efforts to control STDs virtually are non-existent.³⁵⁷

There is still a finer economic question to be examined. Economics is a scientific theory used to predict rational human behavior. At its core, it is the science of rational choice in an environment of limited resources in relation to human wants. Under this view [t]he task of economics, so defined, is to explore the implications of assuming that man is a rational maximizer of his ends in life, his satisfactions—what... shall [be] call[ed] his 'self-interest.'" Individual behavior is rational when it adheres to economic principles of rational choice. The economic question concerning partner notification is the degree to which it influences individual behavior so as to produce rational decisions that accomplish public health objectives.

In their controversial economic analysis of the AIDS epidemic in which they argue that public health education manipulates and interferes with rational decisionmakers, Tomas J. Philipson and Richard A. Posner conclude that CDC programs (such as contact tracing) that identify disease transmission may increase the spread of disease. They envision sexual encounters and relationships under their rational choice model as "trade[s] in the standard economic sense of an activity perceived as mutually beneficial to the persons engaged in it." They argue that people will engage in risky behaviors in an economically rational fashion; a person will participate in sexual acts placing them in danger of HIV infection where the actor's expected utility or subjective welfare is maximized. Since individuals will act according to the determination of their own maximum utility, Philipson and Posner argue that the threat of HIV infection will alter individual risky behavior differently. In the face of an incurable disease like HIV/AIDS, those who choose risky sex essentially value it over life.

Predicting in 1993 that the United States population is approaching an economically efficient level of HIV infection, 367 Philipson and Posner have been described as arguing that 368

^{357.} But cf. Giesecke et al., supra note 333, at 1096, 1099 (examining the relative costs of partner notification in Sweden, where HIV-prevalence is relatively low, as compared to the costs of strategies to prevent the transmission of HIV, and concluding that partner notification programs "seem[] more cost-effective than large screening programs").

^{358.} See RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 3 (3d ed. 1986).

^{359.} See id.

^{360.} See id.

^{361.} See id. at 3-4.

^{362.} See Ronald Bayer et al., Trades, AIDS, and the Public's Health: The Limits of Economic Analysis, 83 Geo. L.J. 79, 103 (1994) (reviewing Tomas J. Philipson & Richard A. Posner, Private Choices and Public Health: The AIDS Epidemic in an Economic Perspective 128 (1993)).

^{363.} Id. at 79 (citing PHILIPSON & POSNER, supra note 362, at 5).

^{364.} See id. (citing PHILIPSON & POSNER, supra note 362, at 8). Stated alternatively, "[w]hen someone engages in unprotected sex, he or she is using an informal internal calculator to decide whether the risk of getting AIDS or some other [STD] outweighs the benefits—money or drugs in some cases and love, acceptance, status, or pleasure in others." HENIG, supra note 298, at 163-64.

^{365.} See Bayer et al., supra note 362, at 79 (citing PHILIPSON & POSNER, supra note 362, at 13-14).

^{366.} See id. at 87 (citing Philipson & Posner, supra note 362, at 75, 230).

^{367.} See id. at 91 (citing PHILIPSON & POSNER, supra note 362, at 44).

state intervention to fight AIDS is presumptively unwarranted.... [They further argue] that mandatory testing for HIV is not worth the cost (in terms of, among other things, privacy) and could well be counterproductive; that the state is probably spending far too much money on research for vaccines, cures, and treatment; and that some money should be spent on targeted education programs that facilitate the operation of people's rational calculations.³⁶⁹

The economists were critical of testing for HIV, arguing that testing actually increases the spread of HIV infection, as uninfected persons are lulled into risky behaviors after testing negative and some infected individuals hide their disease from partners despite testing positive. The Philipson and Posner argue that to the extent that contact tracing results in additional testing of contacts, partner notification may contribute to the spread of HIV.

Though imaginative, Philipson and Posner's economic assessment of partner notification as contributing to the spread of HIV is neither supported by empirical data nor accepted by public health authorities. No study has found an increase in overall HIV infection rates based on increased HIV testing or partner notification. Allowing the HIV epidemic to run its course, as Philipson and Posner suggest, is unfounded and inconsistent with public health practice. Unlike the non-interventionist nature of economic strategies, public health efforts, like partner notification, necessarily are interventionist. Where persons are dying of a preventable disease, public health interventions not only are compelling, but also are practical where early identification may benefit the infected through clinical intervention, particularly in the case of perinatal transmission of HIV.

While economic justifications for partner notification in the form of costbenefit analyses are off target, it equally is negligent to suggest that partner notification actually contributes to increased incidences of STD infection. The answer to the true economic question of whether partner notification is more or less effective, in comparison to other elements of a comprehensive public health strategy, largely is unknown. As a result, supporting partner notification as a national practice on an economic basis alone is illusory.

VI. ALTERNATIVE MODELS FOR PARTNER NOTIFICATION

Despite the moral and legal claims supporting partner notification, impediments to implementing it as a widespread practice abound. In addition to its general failure to protect confidentiality, state operated contact tracing programs are not perceived by infected individuals as voluntary, in light of judi-

^{368.} See William N. Eskridge, Jr. & Brian D. Weimer, The Economic Epidemic in an AIDS Perspective, 61 U. Chi. L. Rev. 733 (1994) (reviewing Phillipson & Posner, supra note 362).

^{369.} *Id.* at 738-39 (citing PHILIPSON & POSNER, *supra* note 362, at 133-42, 163-66, 181-206, 220-22).

^{370.} See Bayer et al., supra note 362, at 91, 103 (citing PHILIPSON & POSNER, supra note 362, at 91, 94).

^{371.} See id. (citing PHILIPSON & POSNER, supra note 362, at 128).

^{372.} See id. at 91, 105.

^{373.} *See id.* at 91. To the contrary, testing and partner notification have been effective empirically in reducing HIV infection, at least among high-risk populations when confidentiality is maintained. *See supra* notes 325-30 and accompanying text.

^{374.} See Bayer et al., supra note 362, at 105-06.

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cially enforced duties to disclose and warn, but rather as options to self-notification. In this sense, partner notification has a mandatory nature that discourages participation. Lack of participation is one determinant of the essentially unproven efficacy of partner notification efforts. Although partner notification is an accepted practice both ethically and morally, its unproven efficacy reflects the reality that administrating morality is problematic. Cost-benefit analysis projects positive returns on dollars spent on partner notification, but in the economic sense, such programs suffer from a lack of demonstrable evidence that the services provided are the most cost-effective available or actually result in behavioral modification. These facts, coupled with the real world potential of partner notification to cause more harm than good, especially as experienced by STD-positive women and other disadvantaged persons who may suffer mental and physical harm, societal discrimination, and personal economic ruin, challenge the public health conception of partner notification as a valid and useful tool.

Partner notification represents the weak link in the comprehensive public health strategy to prevent STD transmission. Worse yet, it actually may hinder persons from being tested for STDs. Although more studies about the effectiveness of partner notification are necessary given its long-standing use, present evidence suggests that partner notification at best represents an antiquated and largely ineffective public health intervention when implemented nationally. As a result, other public health measures should be examined to determine if they can be utilized more effectively to combat STDs without the drawbacks of partner notification.

A. Partner Notification as Part of Public Health Surveillance and Prevention Strategies

Partner notification cannot be viewed outside the context of a broad range of public health strategies designed to prevent transmission of STDs. Contact tracing, for example, can only be effective if individuals at risk are tested early in the course of their infection and if positive cases are reported to health authorities. If individuals and health officials have no knowledge of their STD status, the issue of partner notification does not arise.

Testing involves the administration of a diagnostic test to determine whether individuals have contracted a particular infectious condition.³⁷⁵ Tests exist to diagnose virtually every known STD,³⁷⁶ although the effectiveness and costs vary for each STD.³⁷⁷ In the case of HIV, a serologic test for the disease was not developed until 1985;³⁷⁸ later, the CDC would recommend pre- and post-test

^{375.} See THE HIDDEN EPIDEMIC, supra note 6, at 157.

^{376.} *See id.* at 157-58 (noting that several different diagnostic tests exist for many STDs); *see also* Shelton, *supra* note 3, at 12 (noting that two-thirds of STD infections cannot be detected other than through the use of diagnostic tests).

^{377.} See THE HIDDEN EPIDEMIC, supra note 6, at 157-58.

^{378.} See Lawrence O. Gostin et al., National HIV Case Reporting for the United States: A Defining Moment in the History of the Epidemic, 337 NEW ENG. J. MED. 1162, 1162 (1997).

counseling³⁷⁹ and medical intervention³⁸⁰ as integral parts of HIV testing. Despite opposition from AIDS service organizations, who argued that testing would lead to greater discrimination,³⁸¹ millions of HIV serologic tests have been performed at publicly-funded testing sites,³⁸² including family planning clinics, tuberculosis clinics, drug treatment centers, and primary care clinics.³⁸³ The main purpose of testing for STD infection as part of the comprehensive strategy is to diagnose and treat persons to prevent further transmission.³⁸⁴

Testing, however, like partner notification, is not exclusively a function of public health authorities. Many private health care providers provide testing services for individual patients. Still others seek testing for STDs, including HIV, test themselves anonymously using home collection tests. Private testing methods allow individuals to learn of their STD status in a confidential setting outside public health clinics, hospitals, managed care organizations, and private physician offices. The primary disadvantage of home testing, from a public health perspective, is the lack of opportunity to provide positive, non-directive counseling concerning the psychological effects of testing, opportunities for treatment, and strategies for behavior change.

While testing services concentrate on diagnosing infection among consenting individuals who request or seek such services, screening programs attempt to determine infection through tests administered to groups at risk of disease or other sub-populations. Screening, which refers to the "systematic application of [diagnostic tests] to specific targeted populations, is implemented to diagnose individuals who are or may be at risk of contracting an STD or who would pose a threat to others. An example is the screening practice of premarital

- 381. See Richardson, supra note 322, at A1 (describing opposition from Gay Men's Health Crisis).
- 382. See Centers for Disease Control & Prevention, supra note 379, at 2073.

- 384. See Landry & Forrest, supra note 380, at 261.
- 385. See Centers for Disease Control & Prevention, supra note 379, at 2073.
- 386. See Gostin et al., supra note 378, at 1165.

^{379.} See Centers for Disease Control & Prevention, *Technical Guidance on HIV Counseling*, 269 JAMA 2072, 2073-74 (1993) (stating that HIV counseling prior to or after testing should be culturally competent, sensitive to issues of sexual identity, developmentally appropriate, and linguistically specific).

^{380.} See David J. Landry & Jacqueline Darroch Forrest, *Public Health Departments Providing Sexually Transmitted Disease Services*, 28 FAMILY PLANNING PERSPS. 261, 261 (1996) (stating that while federal funds assist with providing prevention strategies, state and local governments are expected to provide necessary funds for medical treatment of infected individuals).

^{383.} *See id.* at 2074. Federal public health objectives call for the increase of the number of publicly-funded tests as well as the number of facilities where such are provided by the year 2000. *See id.* at 2073-74 (citing Public Health Serv., Healthy People 2000: National Health Promotion and Disease Prevention Objectives—Full Report with Commentary (1991)).

^{387.} Screening involves the administration of diagnostic tests to individuals or populations to detect diseases. See Vergil N. Slee & Debora A. Slee, Health Care Terms 397 (2d ed. 1991); see also The Hidden Epidemic, supra note 6, at 156 (stating that current guidelines on acceptable screening practices for STDs do not recommend the testing of national populations as such efforts largely are ineffective and represent an inefficient use of limited resources).

^{388.} Gostin & Curran, *supra* note 95, at 361. In the context of STD prevention strategies, screening represents the programmed testing of members of risk groups to determine those who are STD-positive, not the testing of donated tissue products, like blood, to protect recipients of such products (although such is another form of screening). *See id.*

syphilis tests dating back to the 1930s.³⁸⁹ Modern STD screening programs target persons who utilize family planning and adolescent health clinics for STDs like chlamydia.³⁹⁰ Since patients at STD and drug treatment centers may have an elevated risk, these centers are frequently the focus of screening programs.³⁹¹ Mandatory screening programs involving such individuals, however, have been criticized as ineffective at accomplishing the public health objective of modifying atrisk behaviors.³⁹² Individual counseling and therapy on a voluntary basis, therefore, are recommended as a corollary to screening programs.³⁹³

Where testing and screening procedures identify cases of STD infection among individuals, reporting requirements mandate that these cases be relayed to state authorities.³⁹⁴ Reporting, which can be named or non-named and coded to prevent dissemination of private information, exists at all levels of public health.³⁹⁵ Reporting requirements are justified by the need to track the prevalence and incidence of STDs across populations.³⁹⁶ Disease patterns and trends determined through state reporting assist authorities in their efforts to allocate limited resources devoted to preventing STD transmission.³⁹⁷ Information gained through reporting also may assist in measuring the efficacy of public health efforts to control particular STDs. Mass educational campaigns can be targeted to at-risk groups, and named reporting can be a direct link to offering partner notification services to infected individuals who otherwise have not been located through public testing and screening.³⁹⁸

Although STD reporting requirements differ from state to state, all states require reporting for STDs, including syphilis, gonorrhea, chlamydia, chancroid, and hepatitis B. Private providers, however, often fail to comply with reporting requirements. AIDS reporting is required in all states, and more than half

^{389.} See The Hidden Epidemic, supra note 6, at 156 (noting that despite being proven virtually ineffective in preventing syphilis infection, this screening technique remains a requirement under the laws of 15 states as of 1996). Syphilis screening among members of the general population was recommended during the Parran era of the 1930s. See Thomas A. Farley, Approaches to Screening and Antibiotic Use for Syphilis Prevention, 24 SEXUALLY TRANSMITTED DISEASES 227, 227-28 (1997).

^{390.} See Landry & Forrest, supra note 380, at 261.

^{391.} See Gostin & Curran, supra note 95, at 363.

^{392.} *See id.* (stating that mandatory screening programs for whole populations are generally disliked by public health authorities as violative of personal liberties and privacy interests).

^{393.} See id.

^{394.} See Richardson, supra note 322, at A1.

^{395.} See, e.g., Nancy E. Stroup et al., Sources of Routinely Collected Data for Surveillance, in Principles and Practice of Public Health Surveillance 31, 33-38 (Steven M. Teutsch & R. Elliot Churchill eds., 1994) (discussing disease notification and reporting mechanisms).

^{396.} See id. at 37.

^{397.} See Richardson, supra note 322, at A1.

^{398.} See Stroup et al., supra note 395, at 37-38; see also Lawrence O. Gostin & James G. Hodge, Jr., The "Names Debate": The Case for National HIV Reporting in the United States, 62 Alb. L. Rev. (1998) (forthcoming).

^{399.} See Shelton, supra note 3, at 12.

^{400.} See id.

the states have reporting requirements for HIV.⁴⁰¹ This policy decision of states to not require HIV reporting is in part reflective of the vocal concerns of community advocates about infringements on privacy interests resulting from the systematic reporting and collection of confidential information by government.⁴⁰²

While many infected persons can be identified and assisted through testing, screening, and reporting requirements, partner notification is intended to supplement these methods. Partner notification is an accepted component of the comprehensive public health strategy where testing and screening programs identify infected individuals, the names of infected persons are reported to state public health authorities who track the spread of the disease, and contact tracing assists individuals in notifying their partners of the risk of infection. Testing is recommended for all partners notified and the strategic process is begun again. Throughout the process, counseling and education are stressed to modify individual risky behaviors.

As one component of the strategy designed to reach persons at risk of infection who may not otherwise be aware of their exposure or inclined to modify their at-risk behavior, partner notification lacks proof of efficacy and unnecessarily imposes serious infringements on individual rights and interests. Alternative approaches to partner notification can achieve the same public health objectives more efficiently with less intrusion on personal liberty and privacy interests.

B. Utility of Alternative Approaches to Partner Notification

While the national practice of partner notification may be challenged, the need to inform at-risk persons of dangers of which they may be unaware is indisputable. The value of collecting information from infected individuals and notifying those at risk is clear. It is the method of notification that comprehensive analysis of partner notification brings into dispute. As an alternative to direct partner notification, information gained through the channels of partner notification, that is through infected individuals, can be used to focus educational and notification efforts in a confidential manner on persons at risk, including partners. While some public health authorities suggest developing focused educational programs for people at high risk for STD infection of the need to individuals.

^{401.} See Gostin et al., supra note 378, at 1163 (finding that 26 states now have HIV reporting, and 2 more, Florida and New Mexico, are in the process of implementing HIV surveillance. But those states account for only 24% of the AIDS cases reported to the CDC through 1996. Of the 10 states with the highest rates of reported AIDS cases, of which New York is included, only New Jersey and Louisiana have implemented HIV reporting).

^{402.} These policies may soon change to reflect the expected national recommendation of the CDC that all reporting agencies provide information concerning HIV and AIDS infection. *See id.* at 1162, 1165.

^{403.} Thus, this Article is not advocating the abandonment of the public health theory of partner notification. Utilizing available information from people who are infected with an STD serves a legitimate purpose of directing public health efforts in areas where prevention is a real possibility. Rather, this Article agrees with others that there may exist a more effective means of using available information effectively to notify persons at risk of exposure without infringing the privacy interests of infected persons or sacrificing the ethical rights to know of their partners.

^{404.} See Landis, supra note 317, at 105.

street/community outreach programs⁴⁰⁵ as alternatives to partner notification, others propose using information gained through the traditional practice of partner notification to ascertain the at-risk behaviors of all individuals within a group or sub-population at risk.

Through methods similar to modern business marketing principles, most applications of contact tracing in its present form can be replaced with social network analysis (SNA). Complex in practice, SNA attempts to measure the way in which people relate to each other by examining determinants of their social structure, or network. It transforms information obtained from individuals through interviews, surveys, or epidemiologic studies into data about their interaction within networks. Complementary approaches of network ascertainment and ethnography are combined to describe a social process, such as the transmission of disease, and to contribute to disease control and program evaluation. Instead of concentrating on information about partners, as traditional contact tracing does, SNA attempts to identify persons in an infected individual's social setting and offer epidemiologic treatment (testing and medical evaluations) to STD network members discovered through ethnographic analysis. Further analysis allows authorities to target public health efforts at those who are calculated to be at the greatest risk of infection.

Some of the benefits of SNA over traditional contact tracing include: the ability of public health authorities to focus efforts on persons at greatest risk of STD infection; the development of enhanced knowledge about existing transmission rates within defined areas and sub-populations that "brings disease control closer to the starting line;" the advantage of not being required to inquire specifically about partners of infected persons; the provision of important information to at-risk individuals without breaching the confidentiality of sources; the ability to identify and notify persons at risk who are not necessarily former or existing sexual or IDU partners of infected persons, but may be in the future; and the ability to develop more detailed information about at-risk behaviors to allow more effective behavioral interventions.

There are disadvantages to SNA as well. First, the approach is dependent upon information gathering, and thus is labor intensive, expensive, and time-consuming. This drawback also is true of provider referral, which is perhaps the most efficacious form of contact tracing. Second, if the information is incomplete or incorrect, network behavioral calculations may be off target. Third, SNA

^{405.} See West & Stark, supra note 99, at 70.

^{406.} This concept has developed independently of this Article. See Samuel R. Friedman, Editorial, Network Methodologies, Contact Tracing, Gonorrhea, and Human Immunodeficiency Virus, 23 SEXUALLY TRANSMITTED DISEASES 523 (1996); Richard Rothenberg & Jerry Narramore, The Relevance of Social Network Concepts to Sexually Transmitted Disease Control, 23 SEXUALLY TRANSMITTED DISEASES 24 (1996).

^{407.} See Rothenberg & Narramore, supra note 406, at 24-25.

^{408.} See id. at 26.

^{409.} See id. at 27.

^{410.} See id. at 27-30.

^{411.} Id. at 29.

^{412.} See Friedman, supra note 406, at 524.

^{413.} See Rothenberg & Narramore, supra note 406, at 28.

requires technologically-advanced statistical calculations by knowledgeable experts to which smaller public health districts may lack adequate access. New statistical methods that simplify the deduction of individual behavior from aggregate data without affecting accuracy, however, may prove valuable in epidemiological applications like SNA. Fourth, network techniques also may be incompatable for differing STDs and difficult to replicate in all communities. Fifth, since SNA does not undertake to notify partners directly, participation by infected persons does not satisfy their legal duty to disclose; HCWs cannot refer infected patients to SNA programs to fulfill their duty to warn. Finally, like contact tracing, the efficacy of SNAs in the field of epidemiology remains unclear.

Innovative strategies like SNA, nonetheless, demonstrate new guidance for public health efforts. In weighing the benefits of SNA and the drawbacks of contact tracing, public health authorities should consider SNA in combination with contact tracing on a reduced scale, limited to those environments in which contact tracing is demonstrated to be more effective.⁴¹⁷

VII. CONCLUSION

From its origins in the practice of reglementation to its development during the syphilis epidemic to its modern application in the HIV/AIDS epidemic, partner notification has been motivated by the moral imperative to notify and protect persons who are unaware of their risk of STD exposure. Few people question the underlying morality of open and honest information in relation to a "hidden epidemic." The consequences of partner notification are complex, however, and are not uniformly beneficial to infected persons, their partners, and the community. Even though the practice is defensible on normative grounds, partner notification has demonstrable flaws. Partner notification presents a cost to individuals in loss of privacy and in discrimination. For women, it can result in abandonment, neglect, and abuse. In addition, research data do not demonstrate convincingly the effectiveness and economic benefits of partner notification. For these reasons, alternative strategies like social network analysis should be considered to supplement or replace partner notification. Social network analyses, involving focused education and notification of sub-populations at high risk, may change risk behaviors without infringing civil liberties.

As seen in the syphilis epidemic, and now experienced in the fight against HIV, STDs strike vulnerable populations and pose a complex dilemma between civil liberties and public health. HIV/AIDS eventually will become a chronic, manageable disease, but its immediate lesson is clear: public health efforts must

^{414.} See Karen Freeman, Statistician Builds What May Be a Better Data Mousetrap, N.Y. TIMES, July 8, 1997, at C8.

^{415.} See Friedman, supra note 406, at 523.

^{416.} But see id. at 524 ("Research to develop and field-test ways to combine contact tracing with rapid-ascertainment network techniques could provide an important tool for preventing epidemic outbreaks of a range of parenterally and sexually transmitted diseases.").

^{417.} See id. at 524 (recommending that network techniques should be used for "[s]pecific research projects . . . [where they] may provide better data"); Rothenberg & Narramore, *supra* note 406, at 29.

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be modeled within societal realities. Relics of the past, such as contact tracing, must conform to modern understandings of privacy, women's rights, and perhaps most important, a rigorous determination of public health efficacy and cost-efficiency.