Public Health and Individual Rights:
Tuberculosis Control and Detention Procedures
in New York City

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New York City, like other major urban centers in the United States, is currently experiencing a growing tuberculosis epidemic.1 The reasons for the resurgence of this epidemic are multifaceted and interconnected, and include such factors as the decline in the public health care infrastructure during the past two decades,2 an increase in homelessness and poverty,3 and the appearance of HIV/AIDS.4 Between 1985 and 1992, there was a twenty percent

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2. See Lawrence O. Gostin, Controlling the Resurgent Tuberculosis Epidemic: A 50-State Survey of TB Statutes and Proposals for Reform, 269 JAMA 255 (1993). There was, in the face of the dwindling numbers of tuberculosis cases during the 1960s and 1970s, a neglect of facilities for the primary care of tuberculosis. A 1991 report of the Committee on Health of the New York State Assembly stated:

Ironically, policies and programs implemented between 1950 and 1978 were so successful in nearly eradicate TB that the disease became neglected. As more effective TB chemotherapies were developed, TB hospitals were closed (in 1981, the Legislature repealed the statutory authority for them). Treatment demands were shifted to private providers who lacked the capacity to do community follow-up. Funding for public health workers to provide case management dried up. Hospitals shifted their research and treatment capacity to the emerging epidemics of substance abuse and AIDS.

Tuberculosis in New York, supra note 1, at 5.


4. See Peter F. Barnes et al., Tuberculosis in Patients with Human Immunodeficiency Virus Infection, 324 NEW ENG. J. MED. 1644 (1991); Charles L. Daley et al., An Outbreak of Tuberculosis with Accelerated Progression Among Persons Infected with the Human Immunodeficiency Virus, 326 NEW ENG. J. MED. 231 (1992). See generally The Continuing Challenge of Tuberculosis, supra note 1, at 42-43. An individual with HIV infection who is also infected with tubercle bacilli has an estimated one-in-ten chance per year of proceeding to develop active tuberculosis, as opposed to an estimated one-in-ten chance per lifetime for a person without HIV infection. See The Tuberculosis Revival, supra note 1, at 10; see also Barnes et al., supra, at 1644; Peter A. Selwyn et al., A Prospective Study of the Risk of Tuberculosis Among Intravenous Drug Users with Human Immunodeficiency Virus Infection, 320 NEW ENG. J. MED. 545, 549 (1989). In New York City, 33% of reported cases of tuberculosis have been among individuals known to be HIV-infected. See Bureau of Tuberculosis Control, New York City Dep't of Health, Tuberculosis in New York City: 1992 Information Summary 12-13 (1993) [hereinafter Tuberculo-
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increase in the total number of tuberculosis cases reported in the United States, compared with a seventy-four percent decline during the previous thirty-two years.\(^5\)

This Article addresses one component of the tuberculosis epidemic—the tuberculosis control measures that state and municipal health departments are currently implementing in order to assist patients in completing treatment. Treatment for tuberculosis generally includes taking several medications a week, sometimes on a daily basis, for a period extending from six to twenty-four months.\(^6\) The availability of medical treatment and medications alone is often not sufficient to ensure that patients comply with this long and cumbersome course of treatment.\(^7\) Measures to provide treatment and medications must therefore be supplemented with supportive services, such as directly observed therapy (DOT) and incentive programs, which both assist and monitor treatment compliance until cure.\(^8\)

Even when medical and supportive services are available to individuals with tuberculosis, there remains a small but significant number of patients who are unable or unwilling to complete their courses of medication. Inadequate or erratic compliance with treatment by some tuberculosis patients has had a significant detrimental effect on the ability of cities like New York to control the tuberculosis epidemic. Noncompliance with medication is partially responsible for the recent increase in tuberculosis cases and is largely responsible for the initial emergence of a more dangerous strain of the disease known as Multi-Drug Resistant Tuberculosis (MDR-TB).\(^9\)

Coercive measures, such as compulsory DOT and detention, traditionally have been used to attain public health goals when less restrictive alternatives have failed to result in the completion of treatment.\(^10\) Coercive measures are a small but important component of efforts by state and municipal health

\(^5\) See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 3-4.

\(^6\) "Treatment in uncomplicated cases typically involves taking three to four different drugs together on a daily, twice-weekly or thrice-weekly schedule continuously for six months or more." THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 81. "In more complicated cases, such as those with resistance to two or more drugs, treatment involves taking at least four different drugs a day for 12 to 24 months, or even longer, in addition to more extensive medical care in a hospital or long-term care facility." Id. at 81 n.1.

\(^7\) See infra notes 59-64 and accompanying text.

\(^8\) See infra notes 52-58 and accompanying text.


departments to control tuberculosis. Compulsory DOT permits ongoing monitoring of a patient’s compliance with medical treatment. Detention, the most drastic of all coercive means, allows for the physical confinement of persistently noncompliant individuals who are capable of transmitting the disease to noninfected persons.

This Article will explore the use of coercive measures such as compulsory DOT and detention as public health interventions of last resort when all other alternatives have failed to result in the completion of treatment. In addition, we will discuss potential limitations on the use of coercive measures that arise out of policy and civil liberties concerns. Most of the discussion set forth below is based on public health interventions as applied to the tuberculosis epidemic in New York City. Issues relating to noncompliance, however, are relevant to all major urban areas that are confronting a tuberculosis epidemic.

Part I of the Article describes the current status of the tuberculosis epidemic. Part II discusses the benefits and limitations of current public health strategies and interventions aimed at tuberculosis control. Part III addresses the legal and policy issues implicated in the use of coercive measures such as compulsory DOT and detention for individuals who are unable or unwilling to complete treatment. The discussion addresses both constitutional and statutory limitations on the power of state and municipal health departments to use coercive measures as public health interventions. Part IV explains the structure, purpose, and function of the recently amended section of the New York City Health Code (Health Code), which authorizes the Department of Health to detain persistently noncompliant patients until they are cured. We examine both the standards set by the Health Code for authorizing the detention of persistently noncompliant patients and the procedural safeguards provided in the Code to protect the civil liberties of detained individuals.


12. Surveys show that approximately 20% of tuberculosis patients in the United States do not take their medications continuously. See The Continuing Challenge of Tuberculosis, supra note 1, at 82. The rates of compliance appear to vary significantly by city. “For example, in the late 1980s, cities such as Chicago, New York and the District of Columbia reported completion rates ranging from 54 to 60 percent while Dallas, San Francisco and El Paso reported rates above 94 percent.” Id. at 83; see also John A. Sbarbaro, The Patient-Physician Relationship: Compliance Revisited, 64 Annals of Allergy 325, 326 (1990) (survey showed that 31% of select patient group judged to be “undoubtedly reliable” had taken less than 70% of their antituberculosis medication).

I. THE CURRENT TUBERCULOSIS EPIDEMIC

Only a few years ago, many public health experts believed that tuberculosis would soon cease to be a public health concern.14 In 1987, the United States Department of Health and Human Services created an Advisory Council for the Elimination of Tuberculosis. The Council was charged with the responsibility for planning for the end of the disease, a goal thought to be attainable by the beginning of the next century.15 Such optimism by government officials and public health experts, however, turned out to be premature: In 1992, 26,673 new cases of tuberculosis were reported nationwide, a twenty percent increase since 1985.16

Tuberculosis has existed for millennia; evidence of the disease has been discovered in ancient Egyptian mummies.17 Sharp increases in deaths from the disease began to appear in Europe and in the United States during the beginning of the eighteenth century.18 By the middle of the nineteenth century, tuberculosis had become “unquestionably the greatest single cause of death and disease in the Western world.”19 In the 1840s, tuberculosis, or “consumption,” was responsible for almost one out of three deaths in New York City.20 The epidemic continued to grow for the remainder of the nineteenth century and into the twentieth century, with the number of cases in New York City peaking at 24,700 in 1914.21 Beginning in the 1920s, the number of cases in New York, as in the rest of the nation, began a slow but steady decline,22 and by the 1950s, with the advent of antibiotics and better treatment, the number of cases fell drastically.23

In no municipality has the resurgence of tuberculosis been greater than in New York City. There are an estimated 600,000 to one million city residents who are infected with the tubercle bacilli, and approximately 6000 to 7000 New Yorkers have active tuberculosis.24 In 1992, there were 3811 new cases of tuberculosis reported in the city. This was a 130% increase over reported cases in 1985, and represented a rate of increase almost seven times

16. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 3.
19. Id.
20. See JOHN DUFFY, A HISTORY OF PUBLIC HEALTH IN NEW YORK CITY 1625-1866, 457 (1968).
22. The decline was due to “environmental and social improvements [arising from] specific public health measures, industrial legislation [and an] enhanced standard of living.” Id. at 190.
23. See id. at 191-92; THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 3-4.
24. See THE TUBERCULOSIS REVIVAL, supra, note 1, at 9. In accordance with general usage, “tuberculosis” in this paper is used to refer to active disease rather than to latent infection.
higher than the national average over the same period of time.25

Tuberculosis is caused by a species of bacteria known as *Mycobacterium tuberculosis* (*M. tb.* or tubercle bacilli). Approximately ten percent of individuals who are infected with the tubercle bacilli will proceed to develop active tuberculosis at some point during their life unless they are given preventive medication.26 Individuals with tuberculosis infection are asymptomatic and do not present a risk of contagion.27 Individuals with active tuberculosis, however, may be symptomatic and contagious.28 Tuberculosis is spread when an individual with active infectious disease expels airborne particles (through coughing, speaking, or sneezing) which contain the tubercle bacilli.29 Whether another individual becomes infected as a result depends on the length and intimacy of exposure, environmental factors such as ventilation, and the number of viable bacilli in the air.30 While it is extremely difficult for a noninfected individual to become infected through brief casual contact (such as being in the same subway car or movie theater with an infectious individual), the risk is not zero. “Although infection occurs at a specific point in time

25. *See* Tuberculosis Information Summary, *supra* note 4, at 1. Although New York City has less than three percent of the country’s population, the city has nearly one out of six patients with active tuberculosis in the United States. See Memorandum from Dr. Thomas Frieden, Director of Bureau of Tuberculosis Control, New York City Dep’t of Health 1 (May 10, 1993) (on file with authors). New York City has nearly three times as many tuberculosis cases as Los Angeles which, with 1112 cases, was the City with the second most cases in the nation in 1992. *Id.* The boroughs of Manhattan and Brooklyn each had more cases reported in 1992 than any other city in the country. *Id.* In addition, the Bronx and Queens each had more cases than any other city except Los Angeles, Chicago, and Houston. *Id.*

Statistics also show that tuberculosis in New York City predominantly affects members of minority populations. In 1992, non-Hispanic Blacks represented 54.5% of all cases. Hispanics accounted for 27%, a 10% increase over 1991 and the largest increase for any racial or ethnic group. *See* Tuberculosis Information Summary, *supra* note 4, at 3. The trend in New York City is consistent with national figures showing that the disease is growing among members of minority populations and decreasing among whites.

A recent national survey found that:

In 1991, 71 percent of new cases occurred in racial and ethnic minorities. From 1985 to 1991, relatively large increases in numbers of tuberculosis cases occurred among Hispanic Americans (increasing 72 percent), Americans of Asian descent or Pacific Island Origin (increasing 32 percent), and black Americans (increasing 26 percent). During the same period, reports of cases decreased among non-Hispanic white Americans (9 percent) and among Native Americans (13 percent).

26. *See* Division of Tuberculosis Elimination, U.S. Dep’t of Health & Human Servs., CORE CURRICULUM ON TUBERCULOSIS 9 (Apr. 1991) [hereinafter CORE CURRICULUM ON TUBERCULOSIS]; The Continuing Challenge of Tuberculosis, *supra* note 1, at 28. Individuals with active tuberculosis who are immunocompromised, for example individuals with HIV/AIDS, are 10 times more likely than others to develop active tuberculosis. See Barnes et al., *supra* note 4, at 1648.


28. *See* id. Symptoms associated with pulmonary tuberculosis, the most common form of the disease, are “weakness, fever, chest pain, cough, and when a small blood vessel is eroded, bloody sputum.” *Id.* at 30.

29. *See* id. at 28.

when an infectious particle is inhaled, the longer the exposure, the greater likelihood [that] an infectious particle will be inhaled.\textsuperscript{31}

The way in which tuberculosis is transmitted places individuals who live or work in congregate settings such as homeless shelters and prisons—where individuals are often in close contact with others for extended periods of time in areas with inadequate ventilation—at a high risk of acquiring tuberculosis infection. Transmission in congregate settings is of particular concern in New York City, where approximately 120,000 inmates pass through the city's jails every year,\textsuperscript{32} and 86,000 homeless individuals spent some time in the city's shelter system during 1992.\textsuperscript{33} Many of the new cases of tuberculosis reported in New York City have appeared in past or current residents of congregate settings such as prisons, shelters, and even hospitals.\textsuperscript{34}

The resurgence of tuberculosis has also been characterized by the appearance of new strains of the tubercle bacilli that are not effectively treated by traditional anti-tuberculosis medications. The emergence of resistant strains has resulted in the transmission of a new and more dangerous type of tuberculosis known as Multi-Drug Resistant Tuberculosis (MDR-TB).\textsuperscript{35} While Multi-Drug Resistant Tuberculosis has appeared in other areas of the country, it has hit New York City particularly hard.\textsuperscript{36} A 1992 survey found that approximately thirty-three percent of New Yorkers with active tuberculosis were infected with organisms resistant to at least one antituberculosis drug, and nineteen percent were infected with organisms resistant to both of the most effective drugs (isoniazid and rifampin).\textsuperscript{37}

The treatment for MDR-TB is lengthier and more complicated than that for tuberculosis.\textsuperscript{38} Tuberculosis is a preventable and treatable disease with

\textsuperscript{31. THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 3.}
\textsuperscript{32. See REPORT OF THE NEW YORK CITY TASK FORCE ON TUBERCULOSIS IN THE CRIMINAL JUSTICE SYSTEM 1-2 (Working Paper, Jan. 1992) (on file with authors).}
\textsuperscript{35. See PUBLIC HEALTH SERV., U.S. DEPT OF HEALTH & HUMAN SERVS., NATIONAL ACTION PLAN TO COMBAT MULTI-DRUG RESISTANT TUBERCULOSIS I (Apr. 1992) [hereinafter NATIONAL ACTION PLAN].}
\textsuperscript{36. The New York City figures for MDR-TB are much higher than the national average. A national survey by the Centers for Disease Control found that 14.9% of cases tested had organisms resistant to one drug, and 3.3% had organisms resistant to both isoniazid and rifampin. See id. at 1. A 1991 survey of MDR-TB cases in New York City found an alarming increase of 130% in eight years. See Frieden et al., supra note 9, at 524.}
\textsuperscript{37. See NATIONAL ACTION PLAN, supra note 35, at 3.}
\textsuperscript{38. See Frieden et al., supra note 9, at 526; Michael D. Iseman, Treatment of Multidrug-Resistant Tuberculosis, 329 NEW ENG. J. MED. 784, 786 (1993).}
treatment lasting from six to nine months. Treatment for MDR-TB, in contrast, lasts eighteen months or longer. While tuberculosis is rarely fatal if treated appropriately, MDR-TB is frequently fatal.

The emergence of MDR-TB has been linked directly both to physician error in the prescription of medication and to inadequate or erratic compliance with appropriate medical treatment. Once an individual develops MDR-TB, she can transmit the drug-resistant bacilli to other individuals; most of the MDR-TB cases identified today in New York City are found among individuals who were initially infected with drug-resistant bacilli.

II. TUBERCULOSIS CONTROL MEASURES

Successful control of tuberculosis requires that state and municipal health departments promote both prevention and treatment of the disease while improving the public health infrastructure to make delivery of treatment possible. Since the treatment for tuberculosis can last from six to twenty-four months, facilitation of treatment is as important as the availability of the medications themselves. The City of New York, in the face of the resurgence of tuberculosis and the appearance of MDR-TB, has intensified its public health interventions aimed at the identification of individuals with tuberculosis, and expanded its services to assist those individuals in receiving treatment until they are cured.

To facilitate identification and follow-up care, the Department of Health maintains a registry of the names of individuals diagnosed with tuberculosis. The registry is continuously updated to reflect changes in the patients' medical status. Since patients often seek care at different facilities, physicians and

39. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 73 (study shows that 96% of patients who completed treatment were cured); see also CORE CURRICULUM ON TUBERCULOSIS, supra note 26, at 25.
40. See Frieden et al., supra note 9, at 521.
41. See Margaret A. Fischl, Clinical Presentation and Outcome of Patients with HIV Infection and Tuberculosis Caused by Multiple-Drug-Resistant Bacilli, 117 ANNALS INTERNAL MED. 184, 189 (1992); Marian Goble et al., Treatment of 171 Patients with Pulmonary Tuberculosis Resistant to Isoniazid and Rifampin, 328 NEW ENG. J. MED. 527, 530 (1993); see also Altman, supra note 9, at C3 (noting that while tuberculosis is a treatable disease, death rates for MDR-TB have exceeded 80% in some outbreaks).
42. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 44; Frieden et al., supra note 9, at 525; Artin Mahmoudi & Michael E. Iseman, Pitfalls in the Care of Patients with Tuberculosis, 270 JAMA 65, 66 (1993).
43. A recent study of MDR-TB cases in New York City concluded that "[a]lthough all drug resistance can ultimately be traced to inappropriate medical therapy or noncompliance with the treatment regime, in April 1991, most patients with drug-resistant isolates in New York City had drug resistance because they were initially infected with resistant organisms." Frieden et al., supra note 9, at 525.
44. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 6-12.
45. See id. at 11-12; THE TUBERCULOSIS REVIVAL, supra, note 1, at 24-25.
46. Interview with Mitchell Holtzman, Director of Education & Training, Bureau of Tuberculosis Control, New York City Dep't of Health (Mar. 2, 1994).
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hospitals can contact the Department of Health's Bureau of Tuberculosis Control to receive updated information on a particular patient's medical history.47

Until the 1960s, medical treatment for tuberculosis patients was provided in specialized facilities.48 Most of those facilities were closed during the 1960s and 1970s, and, as a result, the responsibility for the treatment of tuberculosis patients shifted to primary care physicians.49 Physicians, many of whom are unfamiliar with tuberculosis, do not always recognize symptoms of the disease or prescribe the appropriate medication.50 In addition, physicians, because of their many responsibilities, are not always able to provide appropriate supervision of tuberculosis patients' adherence to treatment. Public health officials have been forced, therefore, to develop alternative methods of treatment supervision carried out by health care workers other than physicians.51

Directly observed therapy (DOT) programs provide the most successful form of treatment supervision.52 Patients participating in DOT take their medication under the observation of a public health official or other health-care worker.53 Directly observed therapy in New York City is offered in many locations, depending on which is more convenient for the patient—including the patient's home, at a hospital or clinic, and even on street corners.54 Directly observed therapy provides the patient with a regular treatment schedule, while at the same time permitting public health officials to monitor compliance with treatment.55 The number of patients on DOT in New York City has increased from fewer than fifty in 1985 to more than a thousand in 1993.56

The Department has also developed a broad range of incentive programs such as meals, service referrals and placement, and transportation expenses

47. Id. The New York City Health Code requires physicians, hospitals, and clinics to report to the Department of Health the status and treatment of tuberculosis cases. See NEW YORK CITY, N.Y., HEALTH CODE § 11.47(A).
48. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 11.
49. Id.
50. Id.
51. See id. at 12.
52. THE TUBERCULOSIS REVIVAL, supra, note 1, at 25. Many jurisdictions, such as South Carolina, Mississippi, and Denver, report that 90% or more of patients participating in DOT programs complete treatment. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 89-90.
53. Id. at 89.
55. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 88-89; DIRECTLY OBSERVED THERAPY, supra note 54; see also Andrew Maykuth, New York Tries Direct Outreach to Quell the Outbreak of Tuberculosis, PHILADELPHIA INQUIRER, Nov. 8, 1992, at A1.
56. Interview with Mitchell Holtzman, Director of Education & Training, Bureau of Tuberculosis Control, New York City Dep't of Health (Mar. 2, 1994); see also Mireya Navarro, Confining Tuberculosis Patients: Weighing Rights vs. Health Risks, N.Y. TIMES, Nov. 21, 1993, at 1, 45.
to encourage the voluntary completion of treatment.\textsuperscript{57} The use of compliance incentives, coupled with supervision of treatment through DOT programs, have been found to be effective in increasing compliance rates and decreasing the number of new tuberculosis cases.\textsuperscript{58}

Despite New York City's tuberculosis control measures, there remains a small but significant number of tuberculosis patients in the city, perhaps as many as several dozen, who are persistently noncompliant with their courses of medication.\textsuperscript{59} Continuous and consistent compliance is difficult for any patient who must take several medications a week for a period extending from six to twenty-four months. There are many reasons why some patients are persistently noncompliant, including "inappropriate medical care, financial barriers, cultural barriers, mental illness, homelessness, and substance abuse."\textsuperscript{60} Studies show, however, that noncompliance is not limited to individuals who are poor or homeless; in fact, noncompliance can be found in "all social classes and all educational levels."\textsuperscript{61}

Persistently noncompliant patients tend to seek care only when they are very ill, and they usually go to hospital emergency rooms.\textsuperscript{62} These patients often stay hospitalized for only a few weeks; once they begin to feel better, they frequently leave the hospital prematurely, against medical advice.\textsuperscript{63} Once out of the hospital, many of these patients fail to continue with treatment, and as a result, after a few weeks, they again become infectious, possibly with MDR-TB.\textsuperscript{64}

\textsuperscript{57} See \textsc{Directly Observed Therapy}, supra note 54; see also Mireya Navarro, \textit{New York City to Detain Patients Who Fail to Finish Tuberculosis Treatment}, \textit{N.Y. Times}, Mar. 10, 1993, at A1. The use of incentives is recommended to increase treatment compliance rates. See \textsc{Dixie E. Snider & Mary Devereaux Hutton, Improving Patient Compliance in Tuberculosis Treatment Programs} 13 (Centers for Disease Control, U.S. Dep't of Health & Human Servs., Working Paper, Feb. 1989); \textsc{The Continuing Challenge of Tuberculosis, supra note 1}, at 88.


\textsuperscript{60} \textsc{The Tuberculosis Revival, supra note 1}, at 25. Studies have shown that "demographic variables such as age, sex, race, and marital status are rarely predictive of compliance with medical recommendations. Similarly, socioeconomic status, occupation (including physicians and nurses), and level of income are not characteristics that predict noncompliance." Sbarbaro, supra note 12, at 326 (citations omitted).

\textsuperscript{61} \textit{See Notice of Adoption, supra note 59}, at 5.

\textsuperscript{62} \textit{See id}; Navarro, supra note 56, at 45 (describing how one persistently noncompliant patient, hospitalized five times since 1989, "discontinued treatment after each hospitalization, and at least once signed herself out of the hospital while still contagious").

\textsuperscript{63} \textsc{Notice of Adoption, supra note 59}, at 5; \textit{see also The Continuing Challenge of Tuberculosis, supra note 1}, at 77; Etkind et al., \textit{supra note 60}, at 276; Lisa Belkin, \textit{Top TB Peril: Not Taking the Medicine}, \textit{N.Y. Times}, Nov. 18, 1991, at B1.
Persistently noncompliant tuberculosis patients pose a public health threat because they present a risk of transmitting the disease to noninfected individuals. In Massachusetts, for example, officials have been contending for several years with the spread of MDR-TB in one homeless shelter which began with one infectious homeless man who resided at the shelter. Sixty cases of tuberculosis have been traced back to that one source of infection.65 During the first four years of the outbreak, forty of the affected individuals were provided with long-term care at a cost of over one million dollars.66

If, despite the availability of voluntary and free services aimed at assisting patients in completing their courses of treatment, some individuals remain persistently noncompliant, it is then appropriate for public health officials to consider the use of coercive interventions in order to promote and encourage compliance. It is perhaps a truism that most public health interventions specifically aimed at preventing the transmission of a communicable disease (as opposed to being concerned primarily with treatment of the patient) involve some curtailment of civil liberties. The traditional methods of infection control—namely, compulsory examination, identification and notification of contacts, mandatory preventive or curative treatments, control of environmental hazards, and quarantine—all place varying degrees of restrictions upon the liberty of targeted individuals.67

Among the coercive governmental interventions in the context of tuberculosis control, compulsory DOT and detention have received the most attention from public health officials, physicians, community leaders, advocates for the poor, and civil libertarians.68 We turn to the legal and policy considerations which arise from the use of these coercive public health interventions.

III. THE USE OF COERCIVE MEASURES IN THE CONTROL OF TUBERCULOSIS

The use of coercive measures to attain public health goals raises difficult issues concerning an individual’s responsibility to protect other members of society as well as society’s obligation to respect the civil rights and liberties of the individual citizens who are its members. Thus, before coercive measures

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65. See Etkind et al., supra note 60, at 277.
66. Id. The million dollar figure “does not include the cost of short-term hospitalization for the 40 cases before transfer to the long term facility, nor does it include the cost of continued outpatient treatment after discharge,” nor the cost of treatment for the other 20 individuals who did not receive long-term care. Id. See also NOTICE OF ADOPTION, supra note 59, at 4 (“A single non-compliant tuberculosis patient can infect dozens of other people; the cost of treating each patient with drug resistant tuberculosis can be as high as $250,000.”).
67. See Gostin, supra note 10, at 462.
are used as public health measures, we must carefully and openly evaluate the impact of these interventions on individual rights and liberties. Coercive public health measures should be used to control the growth of the tuberculosis epidemic only if they are effective in reducing the transmission of the disease and if all other less restrictive alternatives have failed to result in the completion of treatment.

With these principles in mind, we discuss below the appropriateness of using coercive measures as public health strategies for the control of tuberculosis. Section A discusses the use of compulsory DOT for all individuals who have active tuberculosis. Section B analyzes both the use of detention as a public health intervention and possible constitutional and statutory limitations on the ability of state and municipal public health agencies to use detention as a means of tuberculosis control. Finally, Section C explores the differences between the tuberculosis and HIV/AIDS epidemics and explains why, in the case of tuberculosis, detention may be an appropriate public health intervention of last resort when all other interventions have failed to produce compliance with treatment, but not in the case of HIV/AIDS.

A. Compulsory Directly Observed Therapy

Many public health experts believe that DOT provides the best hope for assisting patients with the completion of treatment. Directly observed therapy programs, as explained above, allow public health officials to monitor compliance with medication while at the same time assisting the patient with a reliable treatment schedule.

Some observers have argued that since it is impossible to predict accurately which patients will be compliant with treatment, all individuals with active tuberculosis should be required to begin follow-up care, after discharge from a hospital, by participating in DOT. According to supporters of this proposal, all patients with active tuberculosis should remain on DOT until a public health official or a physician certifies that the patient is complying with treatment. A compulsory DOT program, it is contended, increases compliance rates while promoting fairness and minimizing the stigma associated with tuberculosis.

69. See supra note 52.
70. See supra notes 52-56 and accompanying text.
71. See THE TUBERCULOSIS REVIVAL, supra note 1, at 24-25.
72. Id.
73. Id. Proponents of compulsory DOT argue that:

[s]ome health authorities may be more likely to assume that homeless individuals, drug users, and people without access to regular health care would be less likely than other TB patients to complete therapy. These groups may be subjected to more restrictive treatment measures without a strong medical or public health rationale. Requiring universal DOT helps insure that all TB patients are treated in an equitable manner.
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Such a program raises several serious concerns. First, before a governmental agency can require a coercive treatment regime, even one as minimally coercive as compulsory DOT, the agency should conduct an individualized assessment of the patient's particular circumstances and consider less restrictive alternatives. Compulsory DOT may impose a coercive hardship on individuals who would otherwise complete treatment without the added burden of having to take their medication in the presence of medical staff or government employees. In addition, at the present time, universal compulsory DOT may be an inefficient use of scarce public health funds, since private physicians and public clinics would have to provide DOT to all individuals regardless of their ability or willingness to comply with treatment.

The approach taken by the New York City Board of Health when it amended section 11.47 of the New York City Health Code seems preferable to a program of universal compulsory DOT. Under the Code, the Commissioner of Health may issue an order mandating DOT for "a person who has active tuberculosis and who is unable or unwilling otherwise to complete an appropriate prescribed course of medication for tuberculosis." Since the Code provides that DOT can be mandated only for those individuals who are truly noncompliant, the Department of Health must conduct an individualized assessment of the person's circumstances to determine the likelihood of voluntary compliance. While DOT undoubtedly has an important role to play in the control of tuberculosis, compulsory DOT should be reserved only for those individuals who have a record of noncompliance or who are otherwise unable to complete a voluntary course of antituberculosis therapy.

B. Detention and Isolation as Public Health Interventions

The systematic use of quarantine as a public health measure in the United States began in the seventeenth century and lasted through World War I. In times when science and medicine simply could not cope with infectious

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74. See Gostin, supra note 2, at 258. For a further discussion of individualized assessments and less restrictive alternatives, see infra notes 99-118 and accompanying text.

75. It is estimated that in New York City, DOT costs between $2000 and $3000 a year per patient, not including the cost of medication. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 19. Such a large expenditure of public health funds on individuals who do not need DOT is a wasteful use of resources. Furthermore, compulsory DOT creates a tremendous obstacle for employed persons who lack both private health insurance or funds to pay for medical care; they would lack access to DOT provided by private physicians, while they would not be able—due to work and other commitments—to spend hours waiting for DOT in overextended public clinics. See THE TUBERCULOSIS REVIVAL, supra note 1, at App. A, 30-31 (dissents from report by Mark Barnes and David Hansell).

76. NEW YORK CITY, N.Y., HEALTH CODE, §11.47(d)(3) (emphasis added).

organisms, it was quite common for individuals with infectious diseases to be isolated from the rest of the community because isolation often appeared to offer the only effective means of preventing transmission. Since infectious diseases like smallpox, yellow fever, and typhus presented such a grave threat to the public health, the use of quarantine was rarely challenged. Beginning in the 1940s, with the advent of modern medicine, effective treatments became available for infectious diseases. As a result, the use of quarantine or isolation was drastically reduced, though its use as a public health tool never completely ceased. Most legal challenges to quarantine orders were brought during the first half of this century, and courts consistently upheld the constitutionality of using quarantine as a public health measure.

The predicament presented by the current tuberculosis epidemic is not based on a need to quarantine because of a lack of any available effective treatment. Instead, detention is sometimes appropriate due to persistent noncompliance with available treatment, and isolation is appropriate since patients with active infectious tuberculosis may spread the disease to others. In our estimation, the use of detention as a measure of last resort to compel compliance with treatment is one appropriate public health measure in fighting an infectious disease which may be transmitted through casual contact, is treatable by available medical technology, and may be fatal if untreated. The use of isolation of an infectious patient is similarly appropriate.

Tuberculosis meets all of the above requirements. First, tuberculosis is transmitted through casual (or nonintimate) contact, for example, coughing and sneezing. The facility with which the tubercle bacilli is transmitted makes it difficult for individuals to protect themselves against exposure to infection. The reduced ability of individuals to protect themselves from tuberculosis infection supports the use of more coercive means on the part of the state to keep infected individuals from transmitting the disease to noninfected individuals.

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78. Id. at 60.
79. Id. at 61.
80. See Gostin, supra note 10, at 464. In the case of tuberculosis, new chemotherapy permitted the rapid termination, "within a matter of weeks or at most several months, dependent upon severity [of] the acute infectious phase of the disease . . . ." See GINZBURG, supra note 21, at 191.
81. See Robert Glass, Forcible Detention of Patients with Active Tuberculosis, 74 PUB. HEALTH REP. 399, 400 (1959) (noting that between 1955 and 1958, 46 individuals were detained for noncompliance in New York City).
83. See supra note 29 and accompanying text.
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Second, the availability of treatment for tuberculosis makes detention an appropriate public health measure in some circumstances. As Professor Gostin has stated, "[t]he availability of prevention or treatment for an infectious condition can serve as a weighty justification for the introduction of . . . public health measures." Since tuberculosis is generally a treatable disease, there are medical and public health rationales which support the use of detention for persistently noncompliant patients: Detention can achieve both the successful treatment of the patient and the protection of the public health. Most persistently noncompliant tuberculosis patients, at the termination of detention, will be cured of the disease, and they will not, during the period of detention, infect others. Finally, tuberculosis may be a fatal disease if not treated appropriately. The severity of the consequences of transmission thus may justify coercive government intervention.

The courts have traditionally been deferential to government officials in their use of the police power to protect the public health. The Supreme Court, in Jacobson v. Massachusetts, upheld a Massachusetts statute that authorized local boards of health to require vaccination and imposed fines on those who refused. The Court stated:

Although this court has refrained from any attempt to define the limits of [the state's police] power, . . . it has distinctly recognized the authority of a State to enact quarantine laws and "health laws of every description;" . . . According to settled principles the police power of a State must be held to embrace, at least, such reasonable regulations established directly by legislative enactment as will protect the public health and the public safety.

Detention of noncompliant patients or isolation of infectious patients are the most drastic uses of the state's police power to protect the public health. There have been few court challenges to detention or isolation orders over the past twenty-five years. While the power of the state to quarantine was upheld long ago, those cases are of limited precedential value since they predate the expansion of individual rights which has occurred over the last three decades. In fact, it is likely that courts today would be more cognizant of the rights of individuals with infectious diseases to be free from unnecessary restraints on their liberty.

Because of the dearth of recent cases challenging detention or isolation

85. Gostin, supra note 10, at 465 (citations omitted).
86. See THE CONTINUING CHALLENGE OF TUBERCULOSIS, supra note 1, at 3.
87. See Gostin, supra note 10, at 465-66; Parmet, supra note 77, at 60-69.
88. 197 U.S. 11 (1904).
89. Id. at 25 (citations omitted).
90. See Parmet, supra note 77, at 55 n.8.
91. See, e.g., cases cited supra note 82.
92. See Gostin, supra note 10, at 468-69; Parmet, supra note 77, at 75-77.
orders, we can seek guidance from the body of law which has developed in constitutional challenges to the civil commitment of mentally ill individuals. Involuntary commitment for dangerous mental illness also seeks the detention of individuals who are deemed to present a danger to the public.93 Unlike the detention of individuals for communicable diseases, however, which has engendered little interest from advocates and civil libertarians, we have seen, over the last twenty years, an explosion of litigation involving the civil detention of the mentally ill.94 As a result, legislatures and courts have struggled to reach an appropriate balance between the right of society to protect itself from the risk of harm and the liberty interests of mentally ill individuals.95 The body of law which has developed is helpful in defining the current power of state and municipal public health departments to use detention as a public health intervention.96

The civil detention of an individual for whatever purpose is an extreme deprivation of liberty which imposes heavy burdens on the state. As Chief Justice Burger stated in his concurrence in O’Connor v. Donaldson,97 a case involving the civil detention of a mentally ill individual:

There can be no doubt that involuntary commitment to a mental hospital, like involuntary confinement of an individual for any reason, is a deprivation of liberty which the State cannot accomplish without due process of law. . . . Commitment must be justified on the basis of a legitimate state interest, and the reasons for committing a particular individual must be established in an appropriate proceeding. Equally important, confinement must cease when those reasons no longer exist.98

We discuss the due process and statutory rights of individuals who are detained under the state’s civil authority below. Subsection (1) outlines the substantive rights to which individuals targeted for detention are entitled prior to detention. Subsection (2) sets forth the procedural rights to which detained individuals are entitled after they are detained. Finally, subsection (3) discusses the impact of the Americans with Disabilities Act (ADA) on the ability of

94. Id. at 5-15.
95. See generally John Q. La Fond, An Examination of the Purposes of Involuntary Civil Commitment, 30 BUFF. L. REV. 499 (1981).
96. See Gostin, supra note 2, at 259 (“Constitutional adjudication in the field of civil commitment of persons with mental illness provides an apt model for TB statutes.”).

While constitutional litigation has helped to define, and ultimately limit, the power of the state to detain mentally ill individuals, no similar challenges have been brought against public health statutes. As a result, many of these statutes are constitutionally suspect. As Professor Gostin has stated:

If challenged in court today, the criteria in many current public health statutes for depriving an individual of liberty would likely be held unconstitutionally vague. . . . Broad discretionary language has remained in public health statutes only because they have not been challenged in the courts since the [recent] developments in constitutional law.

Gostin, supra note 10, at 472-73. For an exception to this surprising absence of litigation, see Greene v. Edwards, 263 S.E. 661 (W.Va. 1980). See also infra notes 121-23 and accompanying text.
98. Id. at 580 (citations omitted).
states to detain tuberculosis patients.

1. Substantive Rights

The Supreme Court, in the civil commitment cases, has set constitutional standards which must be met before an individual can be detained. The central requirements enunciated by the Court are the right to a particularized assessment of an individual’s danger to self or others and the right to less restrictive alternatives.

a. Particularized assessment. In the civil commitment of mentally ill individuals, the Supreme Court has held that a finding of mental illness alone is not sufficient grounds for detention. There must be, in addition, behavioral consequences which place the individual or others in imminent danger of harm. The Supreme Court in O’Connor v. Donaldson held that, “[a]ssuming that [mental illness] can be given a reasonably precise content and that the ‘mentally ill’ can be identified with reasonable accuracy, there is still no constitutional basis for confining such persons involuntarily if they are dangerous to no one and can live in freedom.” The state, before seeking detention of a tuberculosis patient, must also conduct an individualized assessment of that patient’s compliance record to determine whether detention is appropriate. The fact that an individual has active tuberculosis, even if infectious, clearly is not a sufficient justification for detention; instead, an individualized assessment of the patient’s particularized circumstances must be conducted to determine whether the person has, for example, been compliant with treatment in the past or whether she reasonably can be expected to follow contagion precautions.

Detention of an individual should not occur simply because she has active tuberculosis, or even because she has active tuberculosis and is homeless, mentally ill, or a substance user. Even if individuals who fall under the above categories may, in general terms, be less compliant with medication, judging future noncompliance on the basis of these general categories would violate fundamental notions of due process, since individuals would be deprived of their liberty based not on their own record of compliance with treatment, but

100. O’Connor, 422 U.S. at 575 (citations omitted); see also Humphrey v. Cady, 405 U.S. 504, 509 (1972) (explaining that many states require a person to be detained for mental illness only when that person’s “potential for doing harm, to himself or to others, is great enough to justify such a massive curtailment of liberty”).
101. See THE TUBERCULOSIS REVIVAL, supra note 1, at 6, 24-25; Etkind et al., supra note 60, at 275; Sumartojo, supra note 60, at 1312.
on their "status." There must be an individualized assessment focusing on the patient's medical compliance and behavioral history to determine whether she would be noncompliant with treatment and would therefore pose a risk of transmitting the disease to others.

In the area of civil commitment of mentally ill individuals, there has been considerable controversy about the ability of psychiatrists to determine whether an individual presents a risk of harm to self or others. The use of a patient's history, such as her record of compliance with treatment, to determine whether detention is an appropriate public health intervention, may also be a source of controversy because of the inherent difficulties in predicting future behavior. The determination of whether a patient with active tuberculosis will comply with treatment in the future, however, is perhaps easier to make than a psychiatric assessment of future dangerousness in the case of mental illness. In the case of tuberculosis, a record of treatment compliance will contain objective criteria which can be studied. Examples might include whether the patient has left hospitals on several occasions against medical advice or whether she has a record of failing to appear for treatment and medication appointments. It is reasonable to conclude that an individual with a record of repeated noncompliance will be less likely, in the future, to complete an appropriate course of medication.

The issues raised by compliance histories of tuberculosis patients are analogous to those confronted by a New York State court in Seltzer v. Hogue, a case involving the detention of an allegedly mentally ill individual. In Seltzer, Mr. Hogue, the individual whom the state wished to detain, had a personality disorder that was significantly aggravated by his use of alcohol and drugs. Mr. Hogue complied with his medical treatment so long as he was institutionalized; once released, however, he had a history of returning to alcohol and drug use, and of disregarding his medical treatment. The court upheld Mr. Hogue's detention, arguing that "although [his] external behavior has improved somewhat in [the hospital] (a structured setting in which he takes certain seizure medication), he has a history of noncompliance with any treatment program upon his release from psychiatric hospitals." Similarly, some tuberculosis patients, upon being released from acute care facilities,

102. See Robinson v. California, 370 U.S. 660 (1962); see also Gostin, supra note 2, at 258.
103. It has been argued that "psychiatrists have absolutely no expertise in predicting dangerous behavior—indeed, they may be less accurate predictors than laymen—that they usually err by overpredicting violence. The American Psychiatric Association has thus informed the United States Supreme Court that two out of three predictions of long-term future violence made by psychiatrists are wrong." Perlin, supra note 93, at 120-21 (quoting Bruce J. Ennis & Thomas R. Litwack, Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom, 62 CAL. L. REV. 693, 734-35 (1974)).
105. Id. at 782-83.
106. Id. at 783.
107. Id. at 785-86.
Tuberculosis Control and Detention Procedures in New York City persistently fail to comply with treatment. These patients, because of their inability or unwillingness to comply with treatment, create a risk of transmitting tuberculosis infection to others and of developing and transmitting MDR-TB.

b. Less restrictive alternatives. Courts have traditionally analyzed the constitutionality of statutes and regulations which deprive individuals of their liberty by reviewing them in light of the least restrictive means available to advance the same state interest. The doctrine of "less restrictive alternatives" was articulated by the Supreme Court in Shelton v. Tucker. In Shelton, the Court held:

'[E]ven [when] the governmental purpose [is] legitimate and substantial, that purpose cannot be pursued by means that broadly stifle fundamental personal liberties when the end can be more narrowly achieved. The breadth of legislative abridgment must be viewed in the light of less drastic means for achieving the same basic purpose.'

The doctrine of less restrictive alternatives has been applied to a wide variety of constitutional issues such as freedom of association, free exercise of religion, individual privacy, and the right to vote and travel. The doctrine has also been applied by the courts in determining whether a mentally ill individual should be civilly committed. In Lessard v. Schmidt, the court, in reviewing the appropriateness of detaining a mentally ill individual, stated:

Perhaps the most basic and fundamental right is the right to be free from unwarranted restraint. It seems clear, then, that persons suffering from the condition of being mentally ill, but who are not alleged to have committed any crime, cannot be totally deprived of their liberty if there are less drastic means for achieving the same basic goal.

In the case of tuberculosis control, less restrictive alternatives would include free treatment at neighborhood chest clinics, voluntary hospitalization, voluntary DOT, and finally compulsory DOT, the latter being the most

108. See NOTICE OF ADOPTION, supra note 59, at 5; THE TUBERCULOSIS REVIVAL, supra note 1, at 25.
110. Id. at 488.
112. See, e.g., Covington v. Harris, 419 F.2d 617 (D.C. Cir. 1969); Lake v. Cameron, 364 F.2d 657 (D.C. Cir. 1966). The less restrictive alternative analysis has been applied by courts not only in deciding whether a mentally ill individual should be detained, but also in evaluating the conditions of the detention. See Younberg v. Romeo, 457 U.S. 307, 319 (1982).
114. Id. at 1096.
coercive form of intervention short of detention.\textsuperscript{115} All of these measures constitute less drastic means of achieving the same goal—namely, completion of treatment on the part of noncompliant tuberculosis patients.

Not all less restrictive alternatives, however, are appropriate for all individuals. It would not be appropriate, for example, to require the state, before it seeks detention, to provide DOT to a persistently noncompliant individual with active infectious tuberculosis who does not have a place to live, and who thus must reside at a homeless shelter.\footnote{The NEW YORK CITY TB WORKING GROUP, DEVELOPING A SYSTEM FOR TUBERCULOSIS PREVENTION AND CARE iii (1992) (concluding that "DOT alone [is] not particularly successful in increasing treatment completion rates" among users of crack) (citing Centers for Disease Control, U.S. Dep't of Health & Human Servs., Crack Cocaine Use Among Persons with Tuberculosis—Contra Costa County, CA 1987-1990, 40 MORBIDITY & MORTALITY WKLY REP. 485 (1991)).} During the several days or even weeks that it would take to determine whether she is satisfactorily complying with DOT, the patient may transmit tuberculosis infection to dozens of other shelter residents.\textsuperscript{117} The less restrictive alternatives requirement applies only to those alternatives that are reasonable and appropriate given the patient’s particularized circumstances.\textsuperscript{118}

2. Procedural Rights

In the area of criminal procedure jurisprudence, the courts, over the last thirty years, have drastically expanded the procedural protections of criminal defendants.\textsuperscript{119} Similarly, individuals who are detained pursuant to civil pro-
ceedings are entitled to an array of procedural rights, including the right to notice, to free counsel if indigent, to judicial review, and to cross-examine the State’s witnesses.\textsuperscript{120}

In \textit{Greene v. Edwards},\textsuperscript{121} the West Virginia Supreme Court held that the deprivation of liberty under the state’s tuberculosis detention statute was the same, for constitutional purposes, as that under the civil commitment statute for the mentally ill.\textsuperscript{122} The court proceeded to strike down the tuberculosis detention statute because it failed to provide the detainee with due process rights such as, \textit{inter alia}, the right to written notice and the right to counsel.\textsuperscript{123}

The Supreme Court has distinguished between criminal proceedings and civil detention hearings when determining the appropriate standard of proof which the State must meet. In \textit{Addington v. Texas},\textsuperscript{124} the Court acknowledged “that the individual’s interest in the outcome of a civil commitment proceeding is of such weight and gravity that due process requires the state to justify confinement by proof more substantial than a mere preponderance of the evidence.”\textsuperscript{125} The Court, however, refused to hold that the standard of proof required in criminal proceedings, namely proof beyond a reasonable doubt, also applies to the civil detention of the mentally ill. The Court distinguished civil commitments by describing them as not being “punitive” in nature.\textsuperscript{126} The Court also stated:

The heavy standard applied in criminal cases manifests our concern that the risk of error to the individual must be minimized even at the risk that some who are guilty might go free. The full force of that idea does not apply to a civil commitment. It may be true that an erroneous commitment is sometimes as undesirable as an erroneous conviction. However, even though an erroneous confinement should be avoided in the first instance, the layers of professional review and observations of the patient’s condition, and the concerns of family and friends generally will provide continuous opportunities for an erroneous commitment to be corrected.\textsuperscript{127}

The Court concluded by holding that the standard of clear and convincing evidence should be applied in cases of civil commitment.\textsuperscript{128}

\begin{itemize}
  \item \textsuperscript{120} See Vitek v. Jones, 445 U.S. 480, 494-96 (1980).
  \item \textsuperscript{121} 263 S.E.2d 661, 663 (W. Va. 1980). \textit{Greene} is the only appellate opinion decided in the last 50 years which we have found that discusses the constitutionality of a tuberculosis detention statute.
  \item \textsuperscript{122} \textit{Id.}
  \item \textsuperscript{123} \textit{Id.}
  \item \textsuperscript{124} 441 U.S. 418 (1979).
  \item \textsuperscript{125} \textit{Id.} at 427.
  \item \textsuperscript{126} \textit{Id.} at 428.
  \item \textsuperscript{127} \textit{Id.} at 428-29.
  \item \textsuperscript{128} \textit{Id.} at 431-32; see also \textit{Greene v. Edwards} 263 S.E.2d at 663 (requiring that state prove its case in favor of detaining a tuberculosis patient by “clear, cogent and convincing evidence”).
\end{itemize}
3. Americans with Disabilities Act

Some advocates have argued that, in addition to the constitutional principles which are discussed above, the Americans with Disabilities Act of 1990 (ADA) also places limitations on the ability of state and local public health departments to detain persistently noncompliant tuberculosis patients.\textsuperscript{129} Congress passed the ADA in recognition of the long history of discrimination against people with disabilities in the United States and to "provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities."\textsuperscript{130} The ADA targets discrimination in employment (Title I),\textsuperscript{131} public services (Title II),\textsuperscript{132} public accommodations and services operated by private entities (Title III),\textsuperscript{133} and telecommunications (Title IV).\textsuperscript{134}

Some commentators contend that Title II of the ADA should be given a broad definition to include all governmental actions, including all actions taken by state and municipal health departments.\textsuperscript{135} Specifically, they have argued that the ADA requires that any detention of an individual for public health reasons be contingent upon a finding that the individual presents a "significant risk" of harm to others.\textsuperscript{136}

It is clear that under Title II of the ADA, public health departments, like all governmental agencies, must refrain from discriminating on the basis of disability in their provision of services and that communicable diseases, such as tuberculosis, are considered a disability under the ADA.\textsuperscript{137} However, the use of detention as a public health intervention does not center on the fact that an individual has tuberculosis, but instead, on the fact that she has failed to complete treatment. While it is true that an individual must have active tuberculosis before she can be detained, the need for detention is triggered not by the patient's disability but by the patient's inability or unwillingness to comply with treatment.

Furthermore, it is not clear that the use of detention as a public health intervention falls under the definition of public services as set forth in Title II of the ADA. Title II states that "no qualified individual with a disability

\begin{itemize}
  \item \textsuperscript{130} 42 U.S.C. §12101(2)(b)(1) (Supp. II 1990).
  \item \textsuperscript{131} 42 U.S.C. §12111 (Supp. II 1990).
  \item \textsuperscript{132} 42 U.S.C. §12131 (Supp. II 1990).
  \item \textsuperscript{133} 42 U.S.C. §12181 (Supp. II 1990).
  \item \textsuperscript{134} 42 U.S.C. §12191 (Supp. II 1990).
  \item \textsuperscript{135} See \textit{New York City TB Working Group}, supra note 116, at 29-30.
  \item \textsuperscript{136} \textit{Id.}
  \item \textsuperscript{137} See generally Lawrence O. Gostin, \textit{Public Health Powers: The Imminence of Radical Change}, 69 MILBANK Q. 268, 271 (1991); see also School Bd. of Nassau County v. Arline, 480 U.S. 273 (1987) (tuberculosis is a handicap under the Rehabilitation Act, the predecessor of the ADA).
\end{itemize}
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shall, by reason of such disability, be excluded from participation in or be denied the benefits of services, programs, or activities of a public entity, or be subjected to discrimination by such entity."138 The use of detention for public health purposes does not involve state entities providing “benefits of services, programs, or activities.” In fact, the legislative history of the ADA indicates that Congress did not intend the Act to interfere with state and local public health measures aimed at curbing transmission of disease.

[I]f a state or locality has a disease control law or any other public health law, which applies to certain people with disabilities (for example, if a state has a law which required people with certain contagious diseases, such as tuberculosis, to take certain precautions), that law [will] not be preempted by the ADA as long as the requirements of that state or local law were designed to protect against individuals who pose a direct threat to the health or safety of others.139

In the case of the persistently noncompliant tuberculosis patient or the presently infectious tuberculosis patient, a “direct threat” to the public health is surely presented, thereby fulfilling the spirit and letter of the ADA’s requirements.

C. The Limits of Detention

In this Article, we have argued that the use of detention within the constitutional and public health parameters set forth above is an appropriate public health intervention of last resort in cases of tuberculosis and MDR-TB. Persistently noncompliant tuberculosis patients pose a risk of infecting other individuals, and public health officials therefore have a responsibility to explore the use of detention as a public health intervention. The use of detention, however, must be limited to the narrow purpose of encouraging and promoting compliance with treatment on the part of persistently noncompliant patients. The use of detention for other purposes (for example, to punish noncompliant patients) is inappropriate. Similarly, the use of isolation for infectious patients should be limited to the period of infectiousness.

Furthermore, the argument for detention in the case of tuberculosis cannot be applied to all cases of infectious or communicable diseases. As explained above, the use of detention as a public health tool is warranted in this case because the infectious disease may be transmitted through casual contact, is treatable by effective and available medical technology, and may be fatal if not treated appropriately. Since only a few years ago, calls were made for the detention of individuals with HIV/AIDS,140 and given the clear epidemi-
logical connections between HIV/AIDS and tuberculosis (i.e., individuals with HIV infection are at greater risk of developing active tuberculosis), we here consider and reject the broad use of detention for individuals living with HIV/AIDS.

As explained above, the detention of persistently noncompliant tuberculosis patients is justifiable in some cases as a public health intervention of last resort, when all other reasonable and appropriate alternatives have failed to achieve compliance. The detention of individuals with HIV/AIDS, however, is justifiable as a public health intervention only under the most extreme circumstances. Unlike tuberculosis, HIV/AIDS is not transmitted casually but instead is transmitted through the exchange of bodily fluids such as semen and blood. Individuals, therefore, can play a far greater role in protecting themselves from HIV infection, namely by avoiding high risk activities such as engaging in unprotected sex or sharing drug needles. As a result, it is generally inappropriate for the government to use coercive measures such as detention in the case of HIV/AIDS.

Furthermore, since tuberculosis is generally a treatable disease, the period of detention permits both the treatment of the individuals and the protection of others from infection. Since there is a viable medical treatment for tuberculosis, the period of infectiousness is finite. HIV/AIDS, on the other hand, is not a treatable disease and the period of infectiousness is the same as the years of life remaining. Detention, therefore, would not help the afflicted individual and would invariably continue throughout her entire life. In such cases, lifetime detention is a uniquely severe intervention and may be justified only under the most extreme circumstances when the patient has willfully infected others and intends to continue such behavior.


141. See supra note 4.

142. There have been some concerns expressed that the detention of individuals with tuberculosis might lead to the future detention of individuals with HIV/AIDS. See National Lawyers Guild, supra note 129, at 4-5.


144. See JOSEPH, supra note 84, at 60.

145. See Gostin, supra note 10, at 465 (“When there is no finite period of communicability [as] in the case of AIDS, it is difficult to justify the potentially significant infringement of individuals rights necessitated by compulsory control measures.”).
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IV. SECTION 11.47 OF THE NEW YORK CITY HEALTH CODE

In New York City, the authority to detain individuals has historically been granted by section 11.55 of the New York City Health Code (Code). The section states that the Commissioner of Health, "[u]pon determining that the health of others is endangered," can order the detention of an individual with tuberculosis.146 The section does not provide a standard for determining whether detention is appropriate, nor does it provide the detainee with procedural rights.147 The constitutionality of section 11.55 has never been challenged in court. If a constitutional challenge had been brought against section 11.55, the section could have been found unconstitutional for, *inter alia*, being unduly vague and for failing to provide detainees with procedural safeguards.148

Faced with the constitutional concerns about section 11.55, and with the changing nature of the tuberculosis epidemic in New York City—which now included a growing subepidemic of MDR-TB—the Department of Health and the Board of Health amended the New York City Health Code in April 1993. The purpose of the amendment was to clarify the Commissioner's authority to detain individuals with active tuberculosis who present a risk to the public health, either because they pose a direct threat of transmission or because their noncompliance with treatment may lead to the redevelopment of active infectious tuberculosis.149 The amended section 11.47 sets forth the standards for the use of detention as a public health intervention to control the spread of tuberculosis in a manner that reflects both the modern characteristics of the epidemic and developments in constitutional law. Part A of this section explains the powers of the Commissioner of Health to detain persistently noncompliant patients and the requisite standards for making such a determination. Part B discusses the procedural rights provided to individuals targeted for detention under section 11.47 of the Code.

147. *See New York City, N.Y., Health Code §§ 11.55(a)-(b).*
148. The lack of explicit procedural safeguards in the original section was not considered problematic given the possibility of judicial review of a Commissioner's detention order. The notes to the section state that:

> Ultimately, the legality of the removal or detention of a person affected with a communicable disease can be tested only in the courts, either by writ of habeas corpus or by a proceeding under Article 78 of the Civil Practice Act [mandamus]; leaving the initial decision on removal and detention to the Commissioner alone does not, therefore, lessen the protection liberty.

NEW YORK CITY, N.Y., HEALTH CODE § 11.47 notes. Whether such a system of delayed judicial review would pass constitutional muster is beyond the scope of this Article. In order to guarantee systematic and expeditious judicial authorization of detention, it is preferable to provide for judicial review of a detention order directly in the detention statute. *See New York City, N.Y., Health Code § 11.47(e).*

149. *See Notice of Adoption, supra note 59, at 5.* While the amendment did not specifically include a repeal of § 11.55, all future detention orders will be sought under § 11.47 and not under § 11.55. *See id.* at 6.
A. Commissioner's Power to Detain

Section 11.47 grants the Commissioner the authority to issue an order calling for the detention of individuals with active tuberculosis under three circumstances: The temporary detention of an individual for the purpose of conducting a medical examination; the detention (i.e., isolation) of infectious individuals for the period of infectiousness; and the detention of persistently noncompliant individuals who have active noninfectious tuberculosis until they are cured.

Subsection (d)(1) authorizes the Commissioner to detain individuals who have or are suspected of having active tuberculosis, but who are unwilling or unable to submit voluntarily to an examination. Detention for purposes of examination is necessary in those instances when the Department of Health does not have updated information on the health status of a patient (for example, whether the patient has symptoms which are consistent with infectiousness), but the patient refuses to submit voluntarily to an examination. A person may not be detained under subsection (d)(1) beyond the period of time required for an appropriate medical determination of the person's tuberculosis status. If the patient, however, does have active tuberculosis, the Department may seek to have her detained under subsections (d)(4) or (d)(5), if appropriate.

Section 11.47 also grants the Commissioner the authority to issue an order mandating treatment, § 11.47(d)(2), and requiring DOT, § 11.47(d)(3). Failure to abide by a Commissioner's order under (d)(2) or (d)(3) would not automatically lead to the detention of an individual. Detention is only authorized by subsections (d)(1), (d)(4), and (d)(5). Failure to comply with a Commissioner's order under (d)(2) or (d)(3), however, constitutes evidence that the individual is persistently noncompliant, and thus potentially eligible for detention.

Thirty-six states grant public health departments the authority to detain tuberculosis patients for the purpose of conducting a medical examination. See, e.g., CAL. HEALTH & SAFETY CODE § 3285(a) (1990); TENN. CODE ANN. § 68-9-202 (1992). See generally Gostin, supra note 2, at 256.

Section 11.47 defines "active tuberculosis" as follows:

[A] person has active tuberculosis when (A) a sputum smear or culture taken from a pulmonary or laryngeal source has tested positive for tuberculosis and the person has not completed an appropriate prescribed course of medication for tuberculosis, or (B) a smear or culture from an extra-pulmonary source has tested positive for tuberculosis and there is clinical evidence or clinical suspicion of pulmonary tuberculosis disease and the person has not completed an appropriate prescribed course of medication for tuberculosis. A person also has active tuberculosis when, in those cases where sputum smears or cultures are unobtainable, the radiographic evidence, in addition to current clinical evidence and/or laboratory tests, is sufficient to establish a medical diagnosis of pulmonary tuberculosis for which treatment is indicated.

NEW YORK CITY, N.Y., HEALTH CODE § 11.47(j).

Under the Code, an individual with active tuberculosis will be assumed to be infectious until "three consecutive sputum smears . . . collected on separate days at medically appropriate intervals have tested negative for tuberculosis and the clinical symptoms of tuberculosis have resolved or significantly improved."

Id.

See NEW YORK CITY, N.Y., HEALTH CODE § 11.47(g)(1).
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Subsection (d)(4) clarifies the authority of the Commissioner to detain individuals who have active infectious tuberculosis. The section states that an order may be issued when

a person (i) . . . has active tuberculosis that is infectious or . . . presents a substantial likelihood of having tuberculosis that is infectious, based upon epidemiological evidence, clinical evidence, x-ray readings or laboratory test results; and (ii), where the Department finds, based on recognized infection control principles, that there is a substantial likelihood such person may transmit to others tuberculosis because of his or her inadequate separation from others.

The Commissioner is authorized under subsection (d)(4) to seek the detention of patients who are infectious and who present an immediate risk of infecting other individuals. Patients detained under this subsection must be unable or unwilling to isolate themselves from others. Not everyone who is infectious, of course, may be subject to detention. Infectious patients, for example, who are following a course of treatment and who, during the period of infectiousness, can live by themselves, cannot, and should not, be detained. It is only those individuals who have a history of noncompliance with treatment and who are unwilling or unable to separate themselves from others that may be subject to detention under (d)(4). A detained individual must be released after she ceases to be infectious, or after the Department determines that changed circumstances exist which would permit her to be separated adequately from others to prevent transmission.

The third subsection that authorizes detention is (d)(5), which authorizes the Commissioner to detain an individual who has active noninfectious tuberculosis and who, based on her history of noncompliance, is not expected to complete the appropriate course of medication. The subsection states that the Department may seek the detention of an individual

(i) who has active tuberculosis, or who has been reported to the Department as having active tuberculosis with no subsequent report to the Department of the completion of an appropriate prescribed course of medication for tuberculosis; and (ii) where there is a substantial likelihood, based on such person's past or present behavior, that he or she cannot be relied upon to participate in and/or to complete an appropriate prescribed course of medication for tuberculosis and/or, if necessary, to follow required contagion precautions for tuberculosis.

This subsection was specifically written to address the public health threat posed by patients who are not presently infectious, but who pose the risk of becoming infectious because of their past inability to comply with treatment.

156. Forty states grant public health departments the authority to detain individuals with tuberculosis who pose a risk of transmitting the disease. See, e.g., COL. REV. STAT. § 25-4-507 (1990); TEX. REV. CIV. STAT. art. 4471-11, §§ 4(d), 5(c) (1976). See generally Gostin, supra note 2, at 256.

157. See NEW YORK CITY, N.Y., HEALTH CODE § 11.47(g)(2).
These patients are at a risk of developing and subsequently transmitting tuberculosis, including MDR-TB. While the broad language of Section 11.55 arguably gives the Commissioner the authority to detain infectious and noninfectious individuals with active tuberculosis, to date, only infectious patients have been detained under Section 11.55. It has become increasingly clear, however, that a detention policy which only seeks to detain infectious patients, while concurrently limiting the detention period to the infectious stage, will not be an effective public health intervention since many detained patients, upon discharge, fail to continue with treatment. Furthermore, such an approach would not effectively control the development and spread of MDR-TB since it would not prevent noncompliance beyond the period of infectiousness. The Board of Health has concluded that "[f]or patients who are unable to complete treatment [until] cure, the temporary detention in a hospital until they are non-infectious . . . is an ineffective public health strategy. In the recent experience of the Department, only 2 of 33 patients detained while infectious were ultimately cured." The Board reasoned that in order for a detention policy to work effectively in breaking the cycle of transmission, the detention statute must address the challenges presented by both infectious and noninfectious tuberculosis patients who have a record of persistent noncompliance.

The long-term detention of persistently noncompliant patients until they are cured, or until they demonstrate a willingness to comply with treatment, cannot be carried out in acute care facilities because the individuals are not infectious or acutely ill, and thus do not need acute care. To this end, the Health and Hospitals Corporation of New York City has recently made available twenty-five beds at Goldwater Memorial Hospital on Roosevelt Island for the long-term care of tuberculosis patients who are under detention orders. The beds are located in a part of the facility which is secure, since individuals who are under detention orders will not be allowed to leave the premises without permission. Long-term care provides the opportunity to treat and cure the tuberculosis while addressing social and psychological problems which may afflict some detainees. Thus, individuals detained at Goldwater Hospital

158. See Tuberculosis Control Laws, supra note 11, at 8.
159. See NOTICE OF ADOPTION, supra note 59, at 5. In 1992, 50 individuals were detained under the authority of § 11.55. In 1991, 44 individuals were detained for an average period of 38 days. See Navarro, supra note 57.
160. NOTICE OF ADOPTION, supra note 59, at 5.
161. See id.
162. While § 11.47 authorizes the long-term detention of persistently noncompliant patients, it specifically states that the section "shall not be construed to permit or require the forcible administration of any medication without a prior court order." NEW YORK CITY, N.Y., HEALTH CODE § 11.47(i). See Rivers v. Katz, 495 N.E.2d 337 (N.Y. 1986) (mentally ill individuals who are subject to civil commitment may not be forced to take medication against their will in the absence of a judicial order).
163. See Navarro, supra note 57, at 1.
164. See Etkind et al., supra note 60, at 280-81.
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have access to psychiatrists, social workers, substance abuse counselors, and other therapeutic staff, as well as medical staff.165

B. Due Process Rights of Detainees

As noted above, Supreme Court decisions in cases concerning the detention of mentally ill individuals have clarified the constitutional rights of all individuals who are subject to civil detention.166 These cases have led to the development of certain minimum standards which states must meet before courts will authorize the use of detention.167 The Board of Health and the Department of Health, through the amendment of section 11.47, have codified these constitutionally based requirements and rights.168

Section 11.47 requires that the Commissioner make an individualized assessment of the potential detainee’s ability and willingness to comply with treatment and to take contagion precautions.169 The individualized assessment, which should include a thorough review of the person’s compliance and medical history, must be set forth in the written order for detention,170 thus satisfying the written notice requirement.171

The Commissioner must also consider or attempt intervention alternatives that are less restrictive than detention. The section states that the Commissioner must include in the detention order “the less restrictive treatment alternatives that were attempted and were unsuccessful and/or the less restrictive treatment alternatives that were considered and rejected, and the reasons such alternatives were rejected.”172

In addition, section 11.47 mandates the standards for determining whether an individual with active tuberculosis may be detained. The section requires that there be a “substantial likelihood” that the individual “may transmit to others tuberculosis because of his or her inadequate separation from others,”173 or a “substantial likelihood, based on such person’s past or present behavior, that he or she cannot be relied upon” to complete the prescribed course of treatment.174 The substantial likelihood requirement defines and

165. See Navarro, supra note 56, at 1.
166. See supra notes 99-128 and accompanying text.
167. Id.
170. See id.
174. See NEW YORK CITY, N.Y., HEALTH CODE § 11.47(d)(5).
limits the power of the Commissioner to detain a patient with active tuberculosis by requiring a finding that the individual poses a real and significant risk to the health of others.\textsuperscript{175}

The detainee, under section 11.47, is entitled to judicial review of the Commissioner's detention order at any time during the period of detention. Unlike section 11.55, which limits review to habeas corpus and an action for mandamus,\textsuperscript{176} section 11.47 specifically requires that a court review and authorize the continued detention within five business days after a detainee requests release.\textsuperscript{177} Even if the person does not request release, the Department of Health must seek judicial review within the first sixty days of detention, and then at ninety-day intervals.\textsuperscript{178} In any court proceeding to enforce a Commissioner's order, the Commissioner must prove, by clear and convincing evidence, the particularized circumstances which justify detention.\textsuperscript{179} The detained individual is entitled to an attorney immediately upon requesting release, and if she cannot afford counsel, one will be provided for free.\textsuperscript{180}

V. CONCLUSION

The recent resurgence of a tuberculosis epidemic in urban America, and the appearance of MDR-TB, has forced state and municipal health departments to implement innovative medical and supportive services, such as DOT and incentive programs, to assist patients with the completion of treatment. Despite the availability of these services, there remain some patients who are unable

\textsuperscript{175} While the section does not use the term "significant risk," see supra notes 128-30 and accompanying text, the requirement that there be an individualized assessment of compliance and a determination that the patient is substantially likely to fail to comply with treatment, or that she is substantially likely to infect others, is essentially equivalent to a finding that the individual constitutes a "significant risk" to the health of others.

\textsuperscript{176} See \textit{New York City, N.Y., Health Code} § 11.47(e).

\textsuperscript{177} See \textit{New York City, N.Y., Health Code} § 11.47(e). The constitutionality of a statutory scheme that calls for judicial review only after a patient requests release was upheld in Project Release v. Prevost, 722 F.2d 960, 974-75 (2d Cir. 1983), which involved a similar provision under N.Y. MENTAL HYG. LAW §§ 9.27, 9.39 (McKinney 1978).

\textsuperscript{178} See \textit{New York City, N.Y., Health Code} § 11.47(e).

\textsuperscript{179} See id.; see also Addington v. Texas, 441 U.S. 418 (1979).

\textsuperscript{180} See \textit{New York City, N.Y., Health Code} § 11.47(e).
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or unwilling to complete their courses of medication until they are cured, and who thus, present the danger of transmitting the disease to other individuals. Such patients also risk exacerbating the development and spread of MDR-TB, an even more potent threat to the public health. In confronting the problem of persistently noncompliant patients, it is appropriate, when all other alternatives have failed, for state and municipal health departments to use coercive measures such as compulsory DOT and, as a last resort, detention, as ways of encouraging patients to complete treatment.

The ability of the state to use coercive measures is of course limited by constitutional due process principles. The state, therefore, before seeking detention must conduct an individualized assessment of the patient’s medical condition and record of compliance to determine whether she presents a risk of transmitting the disease to others. In addition, in accordance with the less restrictive alternatives doctrine, the state must consider or attempt all reasonable and appropriate means which are less drastic than coercive measures in an attempt to achieve compliance with treatment. Finally, detained individuals must be provided with procedural rights, such as the right to counsel and to a hearing.

The recently amended New York City Health Code section 11.47 authorizes the use of detention in cases when an individual presents a substantial likelihood that she will not comply with appropriate medical treatment or with necessary contagion precautions. The section also codifies the required due process principles, striking, in our estimation, an appropriate balance between public health needs and civil liberty requirements.

POSTSCRIPT

A detention order of a tuberculosis patient issued under section 11.47 of the New York City Health Code, which was reviewed and authorized by a lower court, is currently being appealed to the New York State Appellate Division, First Department. This appeal presents the first challenge to the constitutionality of section 11.47. A decision is expected in June 1994.