CHAPTER IX
THE CONTROL OF TUBERCULOSIS

For many years tuberculosis was the leading cause of death in the United States and the most urgent of all public health problems. In 1914, however, tuberculosis yielded first place in the mortality tables to heart disease, and by 1938 it had dropped to seventh place. Tuberculosis has continued, nevertheless, to be the leading cause of death in certain age groups, particularly in the period from fifteen to twenty-five years of age.

Despite the gratifying decline in the mortality from tuberculosis, from a rate of more than 200 deaths per 100,000 population in 1900 to less than 40 per 100,000 in 1942, with a corresponding decrease in the morbidity rate, the control of tuberculosis is still one of the most important functions of health departments. It is estimated that there are at least 500,000 cases of the disease every year, and that only 150,000 of these patients are given adequate care in sanatoria.

Many factors, medical, sanitary, economic, educational, sociological, and legal are involved in the prevention and control of tuberculosis. Not the least significant of these factors is the adoption of effective legal measures against this scourge. Since 1893, when tuberculosis was first made a reportable disease by a regulation of the Michigan Board of Health, every State has promulgated legislation dealing with this disease. Since 1895, when Massachusetts established the first state sanatorium for the tuberculous, every State has provided by law for state, county, or municipal hospitals for persons afflicted with tuberculosis. 2 In 1900 there were only thirty-four sanatoria exclusively for sufferers from this malady, whereas in 1946 there were more than seven hundred public and private institutions for this purpose, with a capacity of 97,000 beds.

The Nature of Tuberculosis

Tuberculosis is a communicable disease caused by a microorganism known as Mycobacterium tuberculosis, also called the tubercle bacillus. There are numerous forms of the disease, but the most common is the type that affects the lungs, known as pulmonary tuberculosis,

consumption, or phthisis. The childhood type of the disease is distinct from the adult type, but if not diagnosed and treated it may progress to the typical adult case of consumption. Tuberculosis is not hereditary.

When tuberculosis is generally disseminated throughout the body, it is known as miliary tuberculosis. When it affects the skin, it is generally called lupus, while tuberculosis of the glands is known as scrofula. The disease may affect the bones and joints, particularly in children, as well as various organs of the body. When promptly diagnosed and competently treated, tuberculosis can usually be arrested or even cured.

Tuberculosis is most often spread by direct contact, the infection generally taking place in childhood and usually after continuous and prolonged exposure. The disease may also be transmitted by means of articles freshly contaminated by the sputum and other discharges of patients, and by raw milk from cattle infected with bovine tuberculosis. When contaminated milk is the carrier, bone and joint tuberculosis is usually the result, although a few cases of pulmonary tuberculosis have been reported as definitely traced to this source. The spread of bovine tuberculosis can be prevented by the pasteurization of milk, a process that destroys any tubercle bacilli that may be present in a milk supply.

Although most communicable diseases are acute, with a relatively sudden onset, tuberculosis usually develops slowly after the initial infection or series of infections. Occasionally, an acute case of pulmonary tuberculosis will occur. The disease is diagnosed with the aid of the so-called Mantoux test, in which tuberculin is injected under the skin and the reaction noted; by x-rays (roentgen rays) of the chest; by physical examination; by microscopic examination of sputum for the causative organism; and by characteristic clinical signs, if present. Childhood tuberculosis can usually be detected only by means of the tuberculin test and the x-ray.

In making tuberculin tests, the product now commonly used is the purified protein derivative of the tubercle bacillus, which is known as Tuberculin P.P.D. A solution of this substance is injected into the skin (intradermally) of the forearm, and the skin reaction is noted at the end of forty-eight hours. The test is harmless to the patient, as is also the same test made with Old Tuberculin.

Immunization against tuberculosis may be accomplished by means of the Bacillus Calmette-Guerin vaccine, commonly known as BCG. This product was originated in France and has been extensively used in Europe, where well over a million children have been vaccinated.
with it. Investigations conducted in recent years by the United States Bureau of Indian Affairs have indicated that this method may be effective. Since tuberculosis has now reached a relatively low morbidity, authorities do not consider that immunization of the general public against tuberculosis would be practical, as in the case of smallpox, but that such immunization is desirable in groups exposed to special risks, such as student nurses, patients in mental hospitals, American Indians, and others with proven susceptibility to the disease.

Administrative Control

Efficient public health control of tuberculosis depends upon the prompt discovery and registration of all cases of the disease; the segregation of all the carriers of the disease, and the proper hospitalization of as many as possible; the removal of all possibilities of contact between the sick and the well; the investigation of all contacts; the education and instruction in hygienic measures of patients, contacts, and their respective families; and appropriate measures in industry to prevent silicosis and other health hazards.

Such procedures are generally authorized by statutes and are administered under these laws by duly constituted state and local health authorities. In a few States, separate state commissions on tuberculosis have been authorized, although the control of this disease should logically be vested in the state health department, with suitable powers delegated to local health departments. In a number of States, bureaus of tuberculosis under the direction of an executive have been set up in the state health department in accordance with statutory authority or by the action of the state board of health. The existence and the powers and duties of such bureaus have been upheld by the courts on several occasions.8

Reporting of Tuberculosis

Since the adoption about half a century ago of the first regulation for the reporting of all cases of tuberculosis, every State has required by appropriate legislation or by regulations of the state health department that cases of all forms of tuberculosis, a dangerous communicable disease, shall be reported promptly to local health officers by physicians, officials of hospitals and other institutions, and by other persons aware of the disease when no physician is in attendance.

reports are usually required to be made in writing on forms provided by the state health authorities for the purpose, within twenty-four hours after the case has come to the attention of the person reporting. Copies of the reports are forwarded by local health officers to the state health department at weekly intervals.

Where a statute required the reporting of certain specific diseases and "all other dangerous, communicable diseases," it was held in one of the early cases that tuberculosis was reportable under this provision.4

The requirement that suspected cases of tuberculosis shall also be reported is a reasonable procedure in the interests of public health protection, as is also the requirement of reports of recoveries and deaths from the disease and of removals of patients.

**Privacy of Records**

Although vital statistics, which include reports of births, marriages, and deaths, are public records and are open to reasonable inspection by interested citizens,5 morbidity reports are not in this same category. Reports of disease are, in general, considered to be administrative or departmental records, which may properly be kept confidential if the public interest so demands. In many States, laws or regulations require specifically that reports of tuberculosis shall not be made public.

The validity of a board of health regulation stating that records of cases of tuberculosis shall not be open to inspection by the public or to any person except representatives of the health department and such persons as may be authorized by them has been sustained by the Appellate Division of the Supreme Court of New York.6 In this case an insurance company applied for a subpoena directing the health department to produce at a trial its records in the case of a person who was alleged to have had tuberculosis when he applied for insurance, although claiming not to have it. In upholding the refusal of the health department to produce these records, the court pointed out in this case that, "The security inspired by such a rule gives confidence to those requiring treatment and encourages them to cooperate with

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the department of health in an effort to control and eradicate such
diseases."

In the absence of statutory authority establishing the confidential
nature of reports of tuberculosis, it is within the discretion of the
health authorities to grant or withhold the privilege of public inspec-
tion of such records. The Superior Court of Pennsylvania has reversed
a judgment of contempt of court in the case of the director of a bureau
of infectious diseases of a city health department, who appeared in
court pursuant to a subpoena but on the advice of the city solicitor
refused to produce the record of a case of tuberculosis. The litigation
in this action was likewise concerned with insurance.7

In another action on a life insurance policy, it was held by a Mis-
souri court that exclusion from evidence of the records of public health
nurses of a city health department with regard to tuberculous patients
was proper, since such records are privileged.8 In Alabama, however,
the Supreme Court of that State has held that a certified copy of a
medical examination in the files of the state health department show-
ing that a litigant in an insurance action was suffering from tubercu-
losis is admissible in evidence.9 The Court stated that it had been un-
able to find any express statutory authority for the admission in evi-
dence of such documents, but apparently predicated its ruling on the
fact that the state board of health had been authorized by law to
conduct campaigns for the eradication of tuberculosis, a duty which
carried with it the duty to make and keep records.

Control of Cases and Contacts

After a case of tuberculosis has been reported, it is the duty of the
local health officer to take appropriate and reasonable measures to
prevent any possibility of the spread of the disease. If a patient with
open lesions cannot be sent to a sanatorium, he must be isolated, ex-
cept for a qualified attendant, and he must be required to dispose of
his sputum and other discharges in a manner that will not be dan-
gerous to the public health. The attending physician should also be
required by law or regulation to put into effect such procedures as
will insure adequate protection for the patient's family and other
persons.

In some States the health officer is authorized to furnish to tuber-

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On the premises, patients suitable sputum cups and other necessary sanitary equipment, and is empowered to undertake or require any necessary disinfection of the premises during occupancy by the patient or after he dies or moves away.

Compulsory isolation or hospitalization is frequently authorized by law for recalcitrant or careless patients who refuse or neglect to follow the instructions of physicians and health officials, although it is usually provided that commitment shall take place only on a court order requested by the health officer. Under certain conditions, summary quarantine may be proper if the protection of the public health demands such drastic action and its necessity can be shown.

The power of health authorities to quarantine all communicable diseases, including tuberculosis, that are or may be dangerous to the public health is now well established in American jurisprudence as a valid exercise of the police power of the State.

Legislation prohibiting the employment or presence of tuberculous persons in commercial establishments where food is handled and dispensed for human consumption is likewise valid as a reasonable public health measure, as is prohibition of employment of the tuberculous as teachers in public or private schools.

A regulation of the Board of Health of New York City providing that school authorities should require biennially of all teachers and other employees who work in schools and come in contact with the children a certificate from a physician certifying that such teacher or employee is free from active tuberculosis has been upheld as a valid exercise of the power vested in the Board of Health to protect the public health. Although attacked as class legislation, the Court said that there is no constitutional prohibition against class legislation as such if the classification is based on some reasonable ground and is not essentially arbitrary. Having in mind the purpose of the regulation, it was not unreasonable or arbitrary to place school teachers and employees in a different category from the policeman, the fireman, the motorman, the street cleaner, and the clerk.

Establishment and Maintenance of Public Sanatoria

Since adequate facilities for the proper hospital care and treatment of tuberculous persons are necessary for the protection of the public health and for the general welfare, statutes providing for the estab-

10. Condon v. Marshall (1945), 59 N.Y.S. (2d) 52. In Board of Education of Cleveland v. Ferguson (1942), 68 Oh. App. 514, 39 N.E. (2d) 196, the board was held to have no statutory authority to furnish sleeping garments and lunches to tuberculous pupils in special classes.
lishment, erection, financing, maintenance, and conduct of state, county, district, and municipal tuberculosis hospitals, and for the regulation and licensing of private sanatoria have been generally adopted in the States. Such laws have been upheld in numerous instances by the courts, although specific provisions in them occasionally have been ruled invalid or have been subject to judicial interpretation. 11

In some of the States, as in Massachusetts and New York, counties of certain populations are required by law to establish tuberculosis sanatoria, while in other States the county governments are authorized or permitted, but not compelled, to establish such sanatoria. In many statutes, provision is made for a popular referendum, in which the voters of counties, and sometimes of municipalities, may decide by ballot whether to establish a county, district, or municipal hospital for the tuberculous.

Referenda of this nature have been upheld by the courts, 12 although it has been pointed out that all provisions of the law must be strictly followed. 13 The granting of subsidies by the State to counties for hospitals of this nature likewise has been held valid. 14 Where, however, a state constitution forbids the imposition by the legislature of taxes


for the purposes of any county, city, town, or other municipal corporation, a law authorizing a tax levy in a city for the support of a county tuberculosis hospital was held to be unconstitutional, although the original law providing for the establishment and maintenance of the hospital as a county institution was valid.\(^{15}\)

A county is not a municipal corporation but a local subdivision of the State, created without the direct consent of its inhabitants, and it is a proper instrumentality of the State for the carrying out of its public health procedures and policies, such as the hospitalization of the tuberculous,\(^{17}\) unless the state constitution provides otherwise.\(^{17}\)

A municipal corporation cannot pass an ordinance prohibiting the erection within the city limits, on a site selected by the county board, of a county tuberculosis hospital authorized by state legislation.\(^{18}\)

**Private Tuberculosis Institutions**

In order to safeguard the public health by preventing the establishment and operation of private tuberculosis hospitals, camps, schools, resorts, and boarding homes by unqualified persons, state laws usually require that permits for such institutions must be obtained from state or local health authorities. These permits may be revoked by the issuing authority for cause, after a hearing.

Where the legislature has given to a state board of health sole authority to grant or refuse a permit for a private hospital for the care of tuberculous persons, the refusal, decided upon after a full hearing, will be upheld by the courts when no caprice or improper motives on the part of the board are shown.\(^{19}\) When such a permit is granted, a town cannot by subsequent ordinance prohibit the establishment of the private hospital or limit its location.\(^{20}\)

**Tuberculosis Hospitals as Nuisances**

On a number of occasions the courts have been called upon to decide whether tuberculosis hospitals are nuisances, or are likely to

15. *District Board, etc. v. City of Lexington* (1928), 227 Ky. 7, 12 S.W. (2d) 348.


become nuisances if they are established. Although there are on record a few early cases in which the operation and prospective use of private hospitals for the tuberculous in residential districts have been held to be nuisances, these decisions have been overruled in numerous later cases. It is now a well-established principle of law that a tuberculosis hospital is not per se a nuisance, although it might be conducted in such a manner as to become one.

The modern doctrine on this subject has been well expressed by the Supreme Court of California in a decision enjoining the enforcement of a municipal ordinance which declared every hospital for the treatment of contagious and infectious diseases in the city to be a nuisance. Said the court in this case:

That a well-conducted modern hospital, even one for the treatment of contagious and infectious diseases, is not such a menace, but, on the contrary, one of the most beneficent of institutions needs no argument. There is not the slightest danger of the spread of disease from it, and this is the only possible ground on which objection could be made to it. We have no hesitation in holding an ordinance prohibiting the maintenance anywhere within a city of an institution so necessary in our modern life and so beneficent to be wholly unreasonable and invalid.

The hospital in this case was already established.

In denying an action for an injunction brought by several citizens against the erection of a proposed private tuberculosis hospital, the Supreme Court of Louisiana pointed out not only that individual citizens have no standing to champion the rights of the public in abating a nuisance, but that a well-kept tuberculosis hospital is not a menace to health, and the presumption is that the hospital will be well kept. So, too, it was declared by the Supreme Judicial Court of Massachusetts that a municipal hospital for the care of tuberculous persons, to be established according to law, cannot be assumed in


advance to be a nuisance and its erection enjoined. In this decision, it was pointed out that fear of a dread disease by nearby residents of the hospital does not create a nuisance, a proposition that also has been expressed in other decisions.

In an action brought by a teacher to recover damages on the ground that she had contracted tuberculosis in a school where her predecessor had had this disease, it was held that no nuisance had been maintained by the school authorities, and, furthermore, that they were not liable for proven negligence, because the school district was carrying out governmental functions under a state law.

**Industrial Aspects of Tuberculosis**

Under workmen's compensation laws in some States, tuberculosis resulting from or aggravated by an accident while at work, or arising as an immediate result of employment, is compensable, but the direct relationship between the occurrence of the disease and the injury or the working conditions must be clearly proven. In other States, tuberculosis arising from occupational conditions has been held not to be compensable under existing legislation. Other respiratory afflictions


arising out of the nature and conditions of employment, such as pneumokoniosis, silicosis, asbestosis, and the like, which may be accompanied by tuberculosis, are frequently compensable either as accidents or as occupational diseases.\(^{31}\)

At common law it was, and is, the duty of an employer to furnish his employees with a reasonably safe place in which to work, so that they will not contract tuberculosis or any other disease or suffer from avoidable accidents.\(^{32}\) Where tuberculosis is not included in the terms of a state workmen's compensation law, this general principle still prevails, although it has been held that the rule does not apply to provision for means of minimizing the possibility of contraction of a lung disease through inhalation of dusts of manufacture.\(^{33}\) At common law, the employer is liable only for those injuries to workmen that result from the negligence of the employer, either directly or in the hiring of fellow workmen.

A nurse or intern in a hospital who contracts tuberculosis as a direct


result of the service or employment, if this fact can be proven, will be entitled to compensation for the disease.\textsuperscript{44}

Where a veteran of World War I permitted his war risk insurance to lapse, and thirteen years later, when he was totally disabled by tuberculosis, put in a claim for disability during the life of the policy, it was held by the United States Circuit Court of Appeals that it could not be reasonably inferred that he was so disabled when the policy was in effect.\textsuperscript{45}

\textit{Other Legal Aspects of Tuberculosis}

\textbf{Bovine Tuberculosis.} Since bovine tuberculosis is transmissible to human beings by means of infected raw milk, laws and regulations for the detection and control of this disease in cattle and for the pasteurization of market milk are valid under the police power, as described more fully in Chapter XI, on Milk Control.\textsuperscript{46}

\textit{Marriage.} Fraudulent concealment of tuberculosis has been held to be sufficient grounds for the annulment of marriage\textsuperscript{47} or for divorce, this principle being similar to the rule in the case of venereal disease.

\textit{Patent Medicines.} Refusal by the United States Patent Office of a patent for horseradish as a remedy for tuberculosis has been upheld in the federal courts.\textsuperscript{48} The Federal Government has also been successful in the prosecution of nostrums offered as “cures” for tuberculosis.\textsuperscript{49}

\textit{Spitting.} In most of the States there are laws and ordinances making promiscuous expectoration a misdemeanor punishable by fine. In the early days of the anti-tuberculosis movement, campaigns against spitting were undertaken with much vigor, but public expectoration is not now considered a very important factor in the spread of this


\textsuperscript{38} In re Trattner (1929), 30 F. (2d) 879.

disease. Proper disposal of the sputum of tuberculosis patients is, however, a matter of significance.

Treatment. The treatment of tuberculosis is usually a lengthy process, the average duration of sanatorium care generally exceeding six months. Since medical care legally continues until the patient is discharged, and may continue for an even longer period than that, all measures adopted for the care and treatment of the patient in a sanatorium, including occupational therapy and vocational rehabilitation, may legally be considered as medical treatment. This problem sometimes arises in connection with the allotment and use of public funds appropriated for the treatment of the tuberculous in public institutions.