Chapter H 46

TUBERCULOSIS

H 46.01 Tuberculosis—patient. (1) Placard—None.

(2) Restrictions. (a) All individuals afflicted with tuberculosis of the lungs in the communicable form or reasonably suspected of being so afflicted shall exercise all reasonable precautions so as to prevent the infection of others with whom they may come in contact. The principal reasonable precautions are declared to be:

1. Depositing sputum in a special receptacle and disposing of material by burning or thorough disinfecting.

2. Preventing spraying when coughing by coughing into a container or paper napkin held to the mouth or nose.

3. Using individual eating utensils sterilized by boiling after each use.

4. Using separate towels.

5. Sleeping alone.

6. Avoiding coming in contact with other individuals on all possible occasions.

7. Refraining from handling liquids or foodstuffs to be consumed by others or the utensils connected with such handling.

(b) Any individual afflicted with tuberculosis of the lungs in the communicable form, diagnosed as such by a licensed physician or as shown by X-ray or the presence of tubercle bacilli in the sputum, in order to protect others from becoming infected, may be isolated on his premises by the local board of health or the health officer on the direction of the department of health and social services, or by the full-time medical health officer of any city or county with a population of 250,000 or more within his jurisdiction.

(c) The local board of health or health officer may employ as many persons as are necessary to execute its orders and properly guard any patient in isolation if isolation is violated or intent to violate isolation is manifested. Such persons shall be sworn in as guards, shall have police powers, and may use all necessary means to enforce the state laws for the prevention and control of communicable diseases, or for the enforcement of these rules.

(d) The expense of maintaining isolation including examinations and tests to determine the presence or communicability of the disease, and the enforcement of isolation on the premises shall be paid by the city, incorporated village or town upon order of the local board of health. The expenses for necessary nurses, medical attention, food and other articles needed for the comfort of the afflicted person shall be charged aginst him or whoever is liable for his support. Indigent cases shall be cared for at public expense.

(e) Any individual who has been isolated on the premises under provision of these rules shall be released from such isolation by the local board of health or health officer on direction of the department

of health and social services or by the full-time medical health officer of any city or county with a population of 250,000 or more within his jurisdiction when in the opinion of said health officer the isolation is no longer necessary to protect others from becoming infected.

(f) No person with tuberculosis of the lung or other part of the respiratory tract in the communicable form, or reasonably believed to be suffering from such disease, shall be permitted to attend or frequent any school except open-air schools especially equipped for the purpose until the health officer of the municipality where the school is situated furnishes a written certificate stating that the individual is free from a communicable form of tuberculosis. Such certificate shall only be issued after thorough examination by a licensed physician in a manner satisfactory to the department of health and social services.

(g) If an individual afflicted with tuberculosis in a communicable form shall leave the sanatorium against the advice of the medical superintendent or medical supervisor, such an individual shall be reported to the local board of health and may be isolated upon his premises as provided in subsection (2) (b) if in the opinion of the department of health and social services or of the full-time medical health officer of cities or counties with a population of 250,000 or more, it is agreed that isolation is necessary in order to protect others from becoming infected.

(h) The local health officer or an individual delegated by him shall visit all individuals isolated for tuberculosis at least once every 15 days to ascertain that the isolation is being maintained and to ascertain whether to make recommendations for release from isolation or for admission to a tuberculosis sanatorium.

(i) Any individual isolated for tuberculosis may obtain release from such isolation by being admitted to a tuberculosis sanatorium.

(j) Individuals afflicted with tuberculosis in any form and diagnosed as such by a competent physician shall exercise every care and precaution for the protection of others.

(3) Reporting—By name to local health officer.

History: 1–2–56; r. and recr. Register, September, 1959, No. 45, eff. 10–1–59; cr. (3), Register, September, 1960, No. 57, eff. 10–1–60; am. (2) (b), (e), (f) and (g), Register, January, 1975, No. 229, eff. 2–1–75.

H 46.02 Tuberculosis—contacts. No restrictions.

H 46.03 Tuberculosis cases—environment. Patients should be trained to cover their mouth and nose in coughing and sneezing. The use of disposable napkins should be encouraged; these should be collected in a paper bag lined with a waterproof material and the full bag disposed of by burning. Bed linen and other washable items soiled by sputum of the patients may be washed at home in hot water if they are washed separately from clothes of others in the household. If commercial laundry is used, the soiled articles must be well wrapped and clearly labeled as "contaminated." Upon death or removal of a patient with tuberculosis from the premises, ordinary household cleaning is sufficient to make the premises available for others.

History: 1–2–56; r. and recr., Register, March, 1956, No. 111, eff. 4–1–56.

Note: It is the intent of these rules to give reasonable protection to the public from exposure to an individual afflicted with pulmonary tuberculosis in the communicable form.

History: H 46.60–.66; 1–2–56; r. Register, August, 1958, No. 32, eff. 9–1–58.

H 46.05 Care of patients with pulmonary tuberculosis in general hospitals and tuberculosis sanatoria. (1) ROLE OF THE INFECTION CONTROL COMMITTEE. Close supervision by the infection control committee will be necessary to ensure that tuberculosis patients receive a quality of care equivalent to that given patients with other diseases and to ensure that the presence in the hospital of patients with tuberculosis does not present a risk to other patients or staff. The committee should give particular attention to the following:

(a) Provision of an inservice educational program for all professional and allied health personnel to provide a better understanding of the management of patients with tuberculosis and to provide factual knowledge of the epidemiology and methods of transmission of tuberculosis. Information and assistance in the development of programs may be obtained by contacting the local lung association.

(b) Provision of necessary inhospital services, with particular attention to nursing, laboratory, radiology, and social services.

(c) Anticipation of questions from the community regarding the infectiousness of tuberculosis and the measures being taken to protect other patients, visitors, and hospital staff from acquiring tuberculosis.

(2) INHOSPITAL SERVICES. Because of advances in diagnosis and treatment, it is no longer necessary to admit all tuberculosis patients to hospitals. The focus of care of the tuberculosis patient is now the outpatient facility, clinic, health center, or physician's office where the patient should receive most, and sometimes all, of this treatment. Advances in diagnostic techniques make hospitalization solely for diagnostic purposes unnecessary in most instances. Patients who may still require hospitalization include those who are symptomatically ill, those with other major diseases, those who present complex diagnostic problems, those who present difficult problems in the selection and maintenance of chemotherapy programs, and those who are considered infectious for others. Extended hospitalization, however, is rarely required. The decision as to which patients should be hospitalized will vary somewhat among individual physicians. Before a general hospital assumes responsibility for tuberculosis patients, the infection control committee must make sure that the necessary inpatient and outpatient services are available. These services include:

(a) The availability of beds to which patients with tuberculosis will be admitted.

(b) The availability of a physician with expertise in the management of tuberculosis and who is well informed about the community facilities and services available.

(c) Adequate consultative services, either within or outside the hospital.

(d) The availability of laboratory services competent in the biochemical and bacteriologic techniques needed to diagnose and evaluate tuberculosis. This should include drug sensitivity studies and the ability to identify atypical mycobacteria or arrangement to have them done elsewhere.

(e) The availability of necessary radiologic services including tomography.

(f) An interested, understanding, and informed nursing staff.

(g) The availability of necessary outpatient services and followup.

(2m) The most important ingredient is an attitude—a wilingness and a desire on the part of all members of the hospital staff to provide high-quality care to all its patients.

(3) SPECIFIC MEASURES. Three factors should be considered in determining the communicability of tuberculosis: pulmonary cavitation, cough and sputum production, and the presence of acid-fast bacilli on a direct smear of the sputum concentrate. The communicability of tuberculosis has been shown to be primarily a result of airborne transmission, usually by means of droplet nuclei from unprotected coughing and sneezing of patients with open (positive on direct smear) pulmonary tuberculosis. For this reason, respiratory isolation is the appropriate form of isolation during the period of communicability, and the procedures used should conform to those specified for respiratory isolation. If the proper precautions against airborne spread are maintained by patients in isolation, visitors need not be subject to restrictions or special precautions.

(a) The first and most important measure against the spread of infection is education of the patient on how to avoid contaminating his immediate atmospheric environment. He should be taught to be scrupulous in covering his mouth with disposable paper tissues when coughing, raising sputum or sneezing. Sputum ordinarily should be spit into paper tissues. All tissues should be placed in paper bags to be incinerated or disposed of in the same way as other contaminated material.

(b) If the infectious patient is unable or unwilling to cover his mouth during coughing, expectoration, or sneezing, he should wear a mask covering both nose and mouth. The high-efficiency disposable masks are more effective than the standard cotton gauze masks in preventing airborne and droplet spread.

(c) Patients with tuberculosis must be separated from other patients, either in private rooms or in larger rooms restricted to those with tuberculosis. Masks and gowns are not needed under usual circumstances for patients themselves, for hospital personnel, or for visitors. Adequate facilities should be provided so that patients are not confined to their rooms during hospitalization.

(d) Good ventilation without recirculation of air is essential for rooms or wards used for tuberculosis patients. If ventilation of rooms in which there are patients with sputum-positive pulmonary tuberculosis permits air to flow into the corridor or adjacent rooms, window exhaust fans should be installed so that room air will be discharged directly to the outside. Care should be taken that such exhausted air does not reenter the hospital through nearby open windows or air intakes.

(dm) Ultraviolet light is a requirement in areas where tuberculosis patients are under treatment. Properly installed and maintained ultraviolet lights will help to reduce numbers of airborne mycobacteria that circulate within inches of these lights. It should be realized that ultraviolet light has its maximum effect on airborne microorganisms. The use of the ultraviolet must not be allowed to become a substitute for precautionary measures such as controlling cough and expectoration by the patient.

(e) Fomites do not constitute a significant hazard; therefore special laundering, dishwashing, or cleaning procedures are not necessary. Items such as books, magazines, and newspapers can be handled

in the ordinary way and need not be restricted from subsequent use by other patients.

(f) Proper housekeeping procedures should be carried out at least daily as they are for all hospital rooms. A detergent-germicide with good tuberculocidal activity such as a chlorophenol (2%) or an iodophore (450 ppm strength) is suggested.

(g) Terminal cleaning procedures after discharge of a patient with tuberculosis need be no different from those carried out in any other room. In the case of patients for whom respiratory isolation was required, terminal cleaning procedures should conform to those recommended for that category of isolation.

(gm) The elaborate prolonged isolation procedures recommended in the past are unnecessary in the present era of chemotherapy. The period of communicability of tuberculosis is sharply reduced within a relatively short period of time after effective treatment has begun. Within 2 to 3 weeks after the patient has been started on effective chemotherapy, the infectivity of his respiratory secretions will usually have diminished enough for him to be removed from isolation. The best way to judge this is by following serial sputum smears. When a response to therapy is indicated by declining numbers of bacilli in the sputum, and especially if this is accompanied by reduction in cough and general improvement in signs and symptoms, the patient can be removed from isolation as long as he continues the medication to which the organisms are susceptible.

(h) Tuberculosis patients need not be segregated as a public health measure except during the period of communicability. Grouping of patients in a special room or area is recommended primarily to facilitate their instruction and orientation, supervision of the taking of medication, and to ensure that they will come under the observation and care of physicians with particular expertise in the treatment of tuberculosis. Particular care must be exercised, however, to ensure that patients are not denied adequate diagnostic and therapeutic services for nontuberculous conditions as a result of segregation in a special tuberculosis unit.

(i) The greatest risk to contacts of patients having open pulmonary tuberculosis occurs during the period before the disease has been recognized.

(4) CRITERIA FOR DISCHARGE. (a) Adequate chemotherapy has been initiated and the sputum is free of bacilli or the number of bacilli present in the sputum smear is declining.

(b) Hospitalization is not required for other medical reasons.

(c) Contacts liable to severe consequences in a closed environment are not anticipated.

(d) Specific arrangements have been made for posthospital care.

(5) SURVEILLANCE OF HOSPITAL STAFF. (a) A tuberculosis control program is necessary as part of employe health services regardless of whether or not tuberculosis patients are knowingly admitted. Inevitably, some persons with active tuberculosis will be admitted for treatment of other diseases without immediate recognition of the presence of tuberculosis. Such unrecognized cases constitute the greatest hazard of tuberculosis infection for hospital personnel.

(b) The preemployment physical examination should include a standard chest X-ray and a tuberculin skin test using 5 TU PPD.

Tuberculin negative employes should have repeat skin tests at least annually, and more often if in intimate or prolonged contact with infectious patients. Tuberculin positive employes should have repeat chest films at least annually. If an employe's tuberculin reaction converts from negative to positive, a medical evaluation is indicated. It is strongly recommended that the employe be given isoniazid for a one-year period.

(6) REPORTING AND POSTHOSPITAL CARE. (a) Ultimate responsibility for medical follow-up rests with the patient's physician or with an appropriate public or private clinic. The reporting of confirmed cases is required by law because public health authorities are responsible for tuberculosis control. In many places, reporting of suspect cases is also required by law or regulation. Such reporting will initiate the cooperation of the health department in the screening and surveillance of contacts and in an epidemiological investigation to determine the source of the patient's infection.

(b) Prior to discharge, a plan should be formulated in concert with the health department for the patient's subsequent outpatient care. All necessary measures should be taken to ensure that the patient will continue to take medication on an outpatient basis. Such planning may require specific discussion with the public health authorities, the visiting nurse association, and others. In each hospital, a procedure should be established to ensure that a copy of the patient's discharge clinical summary is supplied to the physician or clinic responsible for his followup care and to the appropriate public health jurisdiction.

History: Cr. Register, January, 1975, No. 229, eff. 2–1–75.

H 46.06 Recommendations for treatment of patients with tuberculosis in nursing homes. (1) The management of the nursing home assures that patients are admitted following evaluation of patient status in a certified public health dispensary or by a physician skilled in the care of tuberculosis. Furthermore, assurance is given that the attending physician utilizes the periodic consultation of a clinic or chest specialist for monitoring of the patient's progress.

(2) Arrangement to be made for chest X-rays and provision for laboratory services given at an interval recommended by the consultant.

(3) Each nursing home caring for patients on anti-tuberculosis chemotherapy should be provided with a list of the drugs commonly in use and the possible toxic reactions that might be observed.

(4) A tuberculosis surveillance program for employes in nursing homes utilizing tuberculin skin tests and/or chest X-rays is now an established yearly requirement.

(5) The skin test should not be used as a substitute for a chest X-ray in nursing home patient surveillance programs because of the increased incidence of anergy in these individuals.

History: Cr. Register, January, 1975, No. 229, eff. 2–1–75.

H 46.07 Standards for public health dispensaries. (1) Newly diagnosed tuberculosis patients will be approved for clinic care for 4 years after the diagnosis of tuberculosis is established. The course of standard treatment takes 2 years. The state health officer recommends

clinic visits for observation for an additional 2 years after completion of medication. The patient who does not complete satisfactory treatment, should continue with clinical observation until healed.

(2) Case finding preventive program participants shall be discharged after completion of one year satisfactory chemotherapy.

History: Cr. Register, January, 1975, No. 229, eff. 2-1-75.