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What Is A Reportable Case of Tuberculosis?

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In one large American city, the reporting of cases of tuberculosis has been compulsory for more than half a century. Yet, despite this long history of experience in the field, about 40 percent of the tuberculosis deaths in the past 6 years were never reported as living cases of tuberculosis. And this is not alone the experience of this particular city. The American Public Health Association (*1*) reported in 1947 that in 66 communities 30 to 89 percent of the tuberculosis deaths were unreported as living cases.

The current status of tuberculosis morbidity reporting in the United States is confused, shows uneven development from area to area, and, generally, leaves much to be desired. The usual experience of mass chest X-ray surveys, in which the majority of cases of tuberculosis are previously unknown to the health department concerned, is demonstrable proof of this.

At the present time, general agreement can be reached on only one point: that there is an abundance of disagreement—disagreement on objectives, on definitions, and on procedures. One of the greatest blocks to good reporting, for example, still remains the lack of any clear-cut definition of what may be considered a reportable case of tuberculosis; this, despite more than 30 years of almost universal compulsory reporting in the United States (*2*). Confusion still remains, too, on such basic questions as: Who should report? How should cases be reported? What reports should be counted? What types of medical diagnoses should be reported, and which of those reported should be counted?

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Why Reporting?

Tuberculosis case reporting has many purposes. In general, these may be summarized as follows:

1. Individual case supervision:
   (*a*) In order to accomplish continuous supervision and treatment as long as may be necessary to prevent further spread of the disease; and
   (*b*) In order to obtain needed information about individual tuberculous patients.
2. Program management:
   (*a*) For epidemiological information;
   (*b*) In order to determine the extent and nature of the tuberculosis control problem; and
   (*c*) In order to provide a means of evaluating the effectiveness of control measures.

To achieve these objectives, good initial reporting, as well as efficient follow-up, is essential. At the local and district levels, the instrument for directing follow-up and case supervision will ordinarily be a tuberculosis case register; at the State level, it may be either a case-record system or merely a master index of reported tuberculosis cases. None of these devices, however, can serve their intended purposes without accurate and complete case reporting.

Nor can there be effective program management in terms of intelligent planning and evaluation until case reporting has reached a degree of completeness and accuracy. As a preliminary step, the study of morbidity reports may be used to good advantage to measure the effectiveness of reporting itself. The ratio of newly reported cases per tuberculosis death, which has been in use for many years, can be a useful tool in the measurement of the completeness of reporting.

Obviously, where reporting is inadequate, it cannot serve as the basis for program management. Under such circumstances, morbidity reporting can be used only for the purpose of demonstrating that reporting is poor and that prompt and full reporting of cases upon diagnosis needs to be encouraged. A case in point here is that of the State health department whose office of morbidity statistics received and counted two new tuberculosis morbidity reports from a particular county in a recent year. During that same year, however, the Division of Tuberculosis of that same health department received informal reports on 124 new cases. Although other instances of the failure of reporting systems may be less spectacular, they nevertheless appear frequently.

Once reporting is established on a sound basis, the way is opened for the kind of evaluation and planning which will give direction and meaning to control efforts. To begin with, case reporting provides a reliable means for evaluating the effectiveness of case-finding efforts.

And having established both case reporting and case finding on an adequate and stable basis, morbidity information then becomes an invaluable tool, permitting the study of specific problems relating to the disease and its control, and facilitating the measurement of the size and nature of the problem, as well as of control trends. Heretofore, such measurements have been largely presumptive, based usually on tuberculosis death rates.

Who Reports?

State laws and health department regulations frequently specify that any person who knows or suspects an individual to be tuberculous is required to report this fact. In practice, however, only physicians' diagnoses are accepted and counted. All physicians, whether they be consulting specialists, general practitioners, or employed by tuberculosis control agencies, are required to report all cases of tuberculosis known to them. Clinics, hospitals, sanatoria, and laboratories are also used to facilitate more complete reporting. Several States are willing to accept positive sputum reports from laboratories as case reports. On the other hand, many States, particularly those in which acid-fast saprophytes are frequently found, prefer not to accept such reports as diagnoses of tuberculosis until verified clinically.

How Are Tuberculosis Cases Reported?

The specific form to be used in reporting cases of tuberculosis has been the subject of widespread discussion for many years. Simplicity and convenience are, of course, primary considerations in the selection or design of such a form in order to assure the widest possible participation by physicians and others responsible for reporting. In one State, two separate forms are currently in use, and selection of the particular form to be used is left to the convenience of the person or agency reporting. Thus, a special tuberculosis morbidity report form is used primarily by chest specialists, both in clinics and in private practice, and by any other physicians who see substantial numbers of tuberculosis cases. General practitioners, on the other hand, are encouraged to report cases of tuberculosis on the general morbidity report form, although they may, if they choose, use the special reporting form.

The use of special forms has several advantages over that of the general morbidity form insofar as the reporting of tuberculosis is concerned. On the one hand, it is obviously more convenient when used by chest specialists and others who see tuberculosis frequently. On the other, these special forms permit a director of tuberculosis control to obtain at least a minimum of information about stage of

disease, activity, sputum status, and conditions of supervision—all basic to the intelligent direction of a control program.

Desirable as the special form is from the administrative point of view, it may sometimes be difficult to require its use by any but those having frequent contact with tuberculous patients. The general practitioner, who normally sees few such cases, and who normally uses the general morbidity reporting form (which calls only for name, address, age, sex, race, and identification of disease) might, perhaps, find it difficult to keep on hand and use supplies of specialized reporting forms.

Where the general reporting form is used, auxiliary procedures may need to be established in order to obtain detailed information. One State uses this approach by employing the general morbidity reporting form, and, upon receipt of such a report on a case of tuberculosis, having the local health department query the reporting physician by telephone for sufficient additional information to complete a special tuberculosis morbidity report.

In general, almost half the States use a special tuberculosis morbidity report form, while the remaining States use the general morbidity report form for the reporting of tuberculosis. Some States, in an effort to obtain reports on all known cases at the earliest possible moment, accept letters, sanatorium admission or discharge reports, and Veterans Administration and other reports containing diagnoses of tuberculosis signed by physicians. In a study of 19 States, 11 were found to accept reports from informal sources of this type. However, a special study by the Division of Public Health Methods, Public Health Service (*3*) demonstrates that these basic sources of reporting are often not incorporated into the reporting system. Other observations also indicate that reporting is often incomplete from sanatoria, hospitals, and, for that matter, health department clinics. In other words, a health department may, in some instances, forget or neglect to report a case even to itself.

In an effort to have the most complete reporting, too, most of the 19 States in the first study mentioned above accept as morbidity reports death certificates which cite tuberculosis as the cause of death, if no previous morbidity reports have been filed on such cases. We are informed, however, that at least two States do not follow this procedure.

How Are Reports Counted?

In general, a tuberculosis case report is cleared with the health department master index of reported tuberculosis cases. If a previous report is found, it is not counted as a new case; if no previous report is found, it is counted as a newly reported tuberculosis case.

In the past 6 years substantial progress has been made in the improvement of reporting procedures. All States now have a master index of reported tuberculosis cases, but they are not all functioning with equal effectiveness. At least five of these State indexes are definitely inadequate—in one State because private physicians are not required to report patients by name; in three States because the largest city does not report the names of its cases to the State; and in another State because the file is arranged by counties. In yet another State, reporting falls short of the mark because of the practice, over many years, of destroying cards for cases which have moved out of the State or which have been reported definitely inactive. Thus, if a patient returns to the State or his disease becomes reactivated, and he is again reported, he is counted a second time as a new tuberculosis case. These and other procedures make it either impractical or impossible to eliminate duplication, so that accuracy is limited.

In some States, too, cards on suspects have been interfiled with those on cases, without any entry as to which are cases and which are suspects. Thus, when a case is found to have been previously placed in the file, it cannot be counted as a new case, even though the previous report may have been merely a suspect report. The same problem is encountered in those States which have in years past filed pulmonary calcifications with active tuberculosis. Futhermore, in those States where death certificates, sanatorium reports and other reports of tuberculosis cases are not counted unless the case is also reported on the official form, the count of known cases is also obviously incomplete.

Other types of administrative procedure serve to complicate reporting practices further in some areas. One State, for example, requires the physician to report each case twice, after which the State health officer reviews the case to decide whether it is to be counted as a case of tuberculosis. In one large city, a tuberculosis case is not counted until a nurse visits the patient's home. In other words, even though the leading chest specialists in the city and the director of tuberculosis control all agree upon the diagnosis of clinical tuberculosis, it is not recognized and counted as a case of tuberculosis as far as the official morbidity statistics are concerned if the patient moves before the nurse's visit or if the nurse is unable to find anyone at home. On the other hand, if a case is classified as "minimal inactive tuberculosis, dismiss," it is nevertheless counted if the nurse talks with a member of the patient's family.

Any count of the number of newly reported tuberculosis cases in a city or State is ordinarily assumed to be the number new to that geographic area. Some of those cases may have been diagnosed elsewhere, but the health department concerned will frequently have no

opportunity of determining whether they were actually reported elsewhere. In a study of 19 States, it was found that 15 accept Interstate Reciprocal Notification of Disease Reports and similar forms as sources of reporting, even though the cases have already been diagnosed in another State, while several States count such reports only after an official morbidity report is received. At least one local and one State health department exclude such cases from their counts of newly reported tuberculosis cases entirely.

What Medical Diagnoses Are Counted?

The fundamental question which governs policies determining the acceptance of tuberculosis morbidity reports is: *What is a Reportable Case?* Because there is basic and widespread disagreement over this point and over such matters as what, medically, constitutes a case of tuberculosis, and what types of medical diagnoses to accept, practices vary widely from State to State, and for that matter, may vary from county to county within a given State.

Information obtained on the practices in 19 States shows that 15 of them count both active and inactive tuberculosis cases, 2 report only active cases, and 2 do not have any definite policy. Another health department has the policy of counting reports on inactive cases; in practice, however, no inactive cases are reported except those found in mass X-ray work. Some health departments count as a case of tuberculosis an individual classified as "Minimal, inactive, dismiss, not significant for further follow-up." Three States have the policy of reporting (*a*) all reinfection pulmonary cases except those "apparently cured"; (*b*) active primary tuberculosis; (*c*) active nonpulmonary tuberculosis; and (*d*) acute pleural effusion which is either definitely or presumably tuberculous. It seems probable that a number of other States follow a close approximation of this policy which was approved by the American Trudeau Society (*4*) in 1944.

In a number of States the regulations require that suspected cases be reported as well as diagnosed cases. In practice, however, it is the usual procedure to count only those definitely classified as tuberculous.

Many States do not require the reporting of primary tuberculosis, and, generally, reports on such cases are not counted when received. However, one State just recently inaugurated the practice of counting primary tuberculosis.

While active nonpulmonary tuberculosis is generally considered reportable, one State's general morbidity report specifies merely "Tuberculosis, pulmonary" as one of the reportable diseases.

In the extensive mass case-finding programs in operation in many parts of the country, many cases are being found with X-ray shadows

typical of pulmonary tuberculosis and with varying degrees of clinical and laboratory evidence to establish definite diagnoses. Frequently, more cases of probably inactive tuberculosis are found than of active tuberculosis. Agreement should be reached on what types of cases should be reported and counted in order to make morbidity statistics satisfactory for comparison purposes, either from one State to another or from one year to another.

The primary need is for working definitions which may be applied at once, and which will, if possible, be stated in such a way as to permit amplification and greater precision as research on clinical, X-ray, and laboratory diagnostic techniques progresses. In general, the term, "suspected tuberculosis" has been used extensively, as well as three categories of diagnosed tuberculosis—active, undetermined, and inactive.

It is felt by many that the Diagnostic Standards, now being revised by the American Trudeau Society and the National Tuberculosis Association, should be utilized in the study of this problem as should the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death. The most significant codes in this latter classification are:

006—Radiological evidence suggestive of active respiratory tuberculosis not classifiable elsewhere. (This has been interpreted to include all those cases which are to be followed because of the possibility that they may have active tuberculosis.)

001, 002, 003—Pulmonary and pleural tuberculosis (excluding cases with no evidence of clinical tuberculosis and which require no present treatment or supervision.)

Special condition in examination without sickness:

Y03—Follow-up examination for inactive tuberculosis, not needing further medical care.

The Detroit Conference

On May 2, the entire problem of tuberculosis morbidity reporting in the United States was reviewed and discussed by the Annual Joint Meeting of State Tuberculosis Control Officers and State Sanatoria and Hospital Directors, which was held in Detroit.

The Conference agreed that there is an urgent need for improved reporting procedures in order to achieve the acknowledged objectives of tuberculosis morbidity reporting. It is of major significance that the Conference recommended the appointment of a committee to study the problem fully and to present a proposed program for the improvement of reporting at the next joint annual meeting. The Conference further suggested that the special committee give consideration to the following:

1. The problem of defining a reportable case of tuberculosis in the light of the Revised International List of Causes of Death and of the pending revision of the American Trudeau Society's Diagnostic Standards.

2. The problem of reporting and counting inactive tuberculosis.

3. The possibility of obtaining greater similarity in forms and—more important—in procedures throughout the country.

The Conference's recommendation should come as welcome news to all participants in the work of tuberculosis control. The committee's work will be difficult, to be sure, but results of its studies may be expected to make important contributions toward more effective control. The authors can only offer their best wishes for the committee's success in resolving the many problems of tuberculosis morbidity reporting.

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Simple Apparatus for Controlling Temperatures of Film-Processing Solutions

By Willard W. Van Allen, B.Sc.*

Sensitometric work in the processing of films requires the precise control of the temperatures of all solutions used. To accomplish this, the Electronics Laboratory of the Division of Tuberculosis has for some time employed a system which is simple, inexpensive, and accurate. Although this temperature control system is neither novel nor original, visitors to the Laboratory have shown so much interest in it that a full description appears appropriate.

As may be seen from the schematic diagram, the system requires the following components: a conventional water jacket; insert tanks for processing solutions; a mercury-column thermostat and suitable relays; a circulating pump, and a source of small quantities of hot and cold running water.

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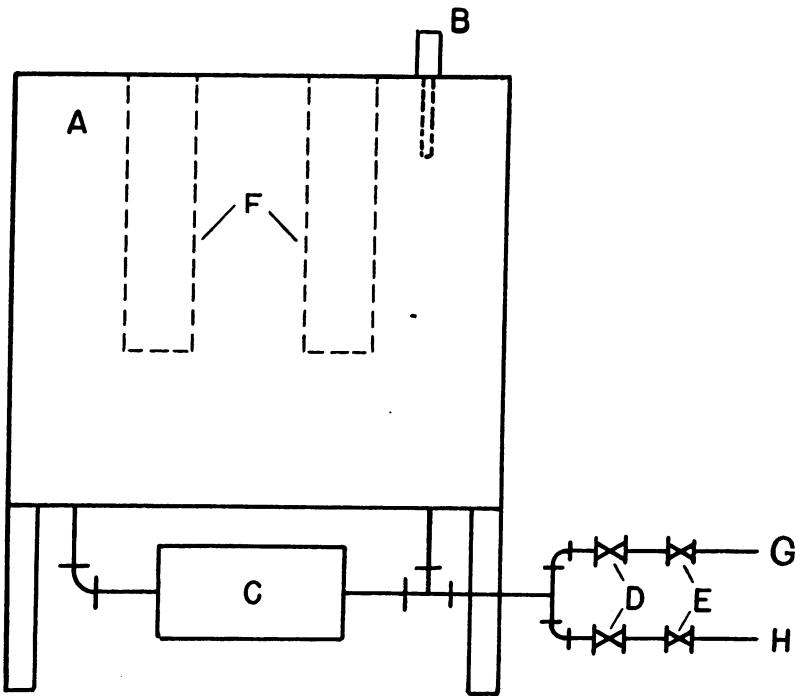
In operation, the system is extremely simple. The tanks containing the processing solutions are set in the water jacket, and temperature is controlled by mixing small quantities of hot and cold water alternately in the jacket.

The admission of hot and cold water into the system is controlled by the thermostat inserted into the water jacket. This thermostat, in conjunction with suitable relays, operates two solenoid valves through which hot and cold water alternately are bled into the circulating water in the jacket. As the temperature of the water falls slightly below the operating point of the thermostat, hot water enters the system, and when the temperature consequently rises slightly above normal, the hot water is shut off and cold water enters. The actual amount of water bled into the circulating system is adjusted by means of valves so that the heating and cooling cycle requires from 1 to 3 minutes. The cycle repeats itself at more or less regular intervals. The water in the jacket is thus maintained at the average temperature for which the thermostat is set. The thermostat used in this laboratory is pre-set at 68° F. and has an operating differential of less than 0.1° F.



Schematic diagram of temperature controlled water jacket for film processing. *A*—water-jacket tank. *B*—thermostat. *C*—circulating pump. *D*—solenoid valves controlled by thermostat. *E*—hand valves to regulate rate of flow. *F*—solution tanks. *G* and *H*—hot and cold water supply lines.

A centrifugal pump, placed conveniently under the water jacket tank, keeps the water in the jacket in continuous circulation and mixes the incoming tempering water with it thoroughly and rapidly. The exact rate of circulation is unimportant provided only that it is rapid enough to prevent the formation of layers of hot and cold water. Without this circulation the tempering water cannot be blended satisfactorily with the rest of the water in the jacket and very poor temperature control results.

The amount of hot and cold water required depends upon the temperatures at which they are available, but ordinarily does not exceed about one gallon per minute for a 50-gallon water jacket. Where the temperature of the cold water from the city mains rises above 65° F. as it does in the warmer climates during the summer months, some source of refrigerated water is essential. However, since the amount of water required is small, this problem is not as serious as it is in systems where the water in the jacket is not recirculated.

The temperature of the processing solutions in the insert tanks follows the temperature swing of the water in the jacket much more slowly because of the time required for heat exchange between the solutions and the water in the jacket at these small temperature differences. As a result of this "inertia" the temperature of the processing solutions remains more nearly constant even than that of the surrounding water. Indeed, measurements have shown that under the described operating conditions the solutions do not vary by more than a few hundredths of a degree.

This high degree of accuracy in temperature control is obviously greater than is required for routine film processing, yet it is interesting to note that it is achieved without the use of expensive or intricate equipment. Control adequate for routine processing may be obtained within somewhat wider limits by using a more rugged thermostat and associated control circuits.

The system described offers several advantages. Very precise temperature control is obtainable within any required tolerance. The amount of water required is small—only a fraction of that required by non-circulating systems using a mixing valve. The apparatus is simple, rugged, inexpensive and easily available. It requires no adjustment from day to day. It has even been adapted to portable equipment.

Effective Nursing Care for the Tuberculous

By Chesley Bush, M. D., Esta H. McNett, R. N., B. S., Lucile Petry, M. A., and Martha B. Naylor, R. N., B. S.*

"How can we provide effective nursing care in tuberculosis sanatoria?"

This question aroused so much interest at the Joint Annual Meeting of State Tuberculosis Control Officers and State Tuberculosis Sanatoria Hospital Directors in Detroit in May of this year that we have thought it worthwhile to review some of the facts that were brought out at that meeting. World War II, with its accompanying dislocation in medical and nursing services focused the attention of both lay and professional people sharply upon the problem of general nursing and tuberculosis nursing in particular. It is time to review these problems in the light of postwar conditions and the circumstances which may be expected to arise in years to come.

Throughout the field of nursing there is still a deficit of workers. The total number of employed professional nurses in the United States in the summer of 1948 was 280,500.[1] This number is actually much higher than it has ever been before, but the Women's Bureau of the United States Department of Labor estimated in 1947 that by 1950, 409,700 registered professional nurses will be needed to maintain standards of nursing care—129,200 more than the 1948 number. By 1955, the requirements will have risen to 477,700 and by 1960, 554,200 nurses will be needed in the United States.

Nursing needs have increased in spite of lower death rates, longer life expectancies, and a generally healthier population. The number of people in the United States has increased by an estimated 16,000,000 since the 1940 census. More people are now living to an older age than ever before, and consequently the diseases and disabilities of older people have multiplied. A high standard of living has prevailed since the early years of the war, medical prepayment plans have spread, and public health services have been expanded in many areas. In 1940, 10,087,000 patients were admitted to hospitals in the United States, but by 1948 the number of hospital admissions had risen to 16,422,000.[2]

The increasing need for nurses, the remarkable spirit of cooperation that developed during the war, and the present favorable general economic situation have helped to break down many of the rivalries

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[1] American Nurses' Association. Facts about Nursing, New York, 1948.

[2] All figures on hospital populations, beds, and nursing personnel are taken from the Journal of the American Medical Association, annual hospital numbers for appropriate years.

that once existed between trained professional nurses and practical nurses. During the war years when many professional nurses were in the armed services, nonprofessionals—practical nurses, aides, and other lay workers—helped to carry on a great part of the country's hospital nursing services. While many of these workers were untrained or only briefly trained on the job, this group (particularly as increasing numbers have been given instruction) are becoming regular members of the nursing team of which the graduate nurse is captain.

The number of practical nurses, attendants, aides, orderlies, and ward maids in all hospitals throughout the United States in 1948 was 225,000. It is difficult to estimate how many more are needed, or could be effectively used in relation to the number of professional nurses. Research on this subject is lacking and should be supplied.

An acute deficit of nurses also exists in the field of tuberculosis. This disease is now seventh on the list of causes of death in the United States and its death rate is constantly declining, but it still accounts for more than 5 percent of all the days spent in hospitals in this country. In 1948 there were 72,445 tuberculosis beds in all nonfederal hospitals registered with the American Medical Association with an average daily census of 58,210 patients. To care for these patients there were 5,295 graduate nurses, 6,288 practical nurses and 3,227 volunteer aides, orderlies, and ward maids. In some tuberculosis hospitals nonprofessionals give as much as 75 percent of the care to patients, and many sanatoria include ex-patients among their part-time auxiliary workers.

The accompanying table shows the changes that have taken place since 1941 in the average daily census in all hospitals and in tuberculosis hospitals. It also shows as far as possible, the number of nurses available to care for the patients. Before 1944, the statistics published by the American Medical Association did not include material on practical nurses, aides, orderlies, and maids in tuberculosis hospitals. Consequently, there is no record of how many were employed before that year.

As can be seen, the supply of nurses has increased rapidly, but the demand has increased even faster. The profession is faced with the necessity of providing more nurses to meet the added demand. How is this to be done?

Young women become nurses usually because to them nursing provides a satisfaction they can gain in no other profession. Dr. Esther Lucile Brown in "Nursing for the Future" (*1*) expresses this with special aptness: ". . . to witness and also to influence growth, development, and change not only in childhood but during all stages of life; to observe and treat the never absent but infinitely variable emotional component of disease; to be a participant in community

Professional and auxiliary nursing personnel and average daily census in registered hospitals and tuberculosis hospitals with the corresponding index for United States, 1941 to 1948, inclusive

Year	Average daily census	Graduate nurses	Practical nurses and attendants	Volunteer nurses' aides	Orderlies	Ward maids
	All registered hospitals [a]					
1941	1,087,039	[b] 112,842	112,334	N. R.	24,837	N. R.
1942	1,126,028	[b] 120,114	116,294	N. R.	25,857	N. R.
1943	1,257,124	[c] 126,591	109,736	34,801	31,140	N. R.
1944	1,299,474	125,458	88,114	48,859	37,368	29,754
1945	1,405,247	144,724	80,105	49,774	52,654	33,866
1946	1,239,454	146,602	96,092	12,804	37,234	31,422
1947	1,217,229	167,354	119,746	9,688	31,813	35,630
1948	1,217,154	196,120	141,834	11,512	35,788	35,867
	Index 1944=100.0 for all registered hospitals					
1944	100.0	100.0	100.0	100.0	100.0	100.0
1945	108.1	115.4	90.9	101.9	140.9	113.8
1946	95.4	116.9	109.1	26.2	99.6	105.6
1947	93.7	133.4	135.9	19.8	85.1	119.7
1948	93.7	156.3	161.0	23.6	95.8	120.5
	Tuberculosis hospitals [d]					
1944	58,475	4,138	4,277	251	1,593	1,304
1945	54,827	4,174	3,794	1,099	1,395	1,414
1946	55,678	4,261	4,286	154	1,489	1,643
1947	55,463	5,236	5,474	797	1,441	1,426
1948	58,210	5,295	6,288	182	1,369	1,676
	Index 1944=100.0 for tuberculosis hospitals					
1944	100.0	100.0	100.0	100.0	100.0	100.0
1945	93.8	100.9	88.7	437.8	87.6	108.4
1946	95.2	103.0	100.2	61.4	93.5	126.0
1947	94.8	126.5	128.0	317.5	90.5	109.4
1948	99.5	128.0	147.0	72.5	85.9	128.5

N. R.—No reported data.
[a] Federal and nonfederal hospitals.
[b] Graduate nurses actually employed.
[c] Including private duty nurses.
[d] Data for nonfederal hospitals only.

SOURCE: Hospital Service in the United States. Journal of the American Medical Association, annual hospital numbers for selected years.

efforts to protect health and to condition persons in the maintenance of health. What is the importance of 'unpleasant tasks' when compared with opportunities such as these?"

Unfortunately, many hospitals today are so badly understaffed that nurses cannot give time to the niceties of care. Tuberculosis, because it is a chronic, communicable disease, often causes a serious dislocation in the life of a patient. In addition to medical treatment, a patient in a sanatorium must be given a sense of well-being and freedom from strain and worry. Yet the hasty care a nurse is too often obliged to give does not foster this sense that is so important for recovery. Nurses themselves are painfully aware of this contra-

diction to their own standards of nursing. If the pressure and haste, the mechanization of nursing, that both tuberculosis and general nurses cite most frequently as a source of dissatisfaction in their work—if these can be eliminated, many more young women will wish to enter the profession.

In tuberculosis hospitals the nurse is likely to be even more pressed for time than in general hospitals. An accepted recommendation of standards for nursing services in tuberculosis hospitals has long been the following: 3.3 bedside nursing hours per 24 hours per bed-surgical patient; 2.7 bedside nursing hours per bed-medical patient; 1.5 bedside nursing hours per semi-ambulant patient; 0.5 bedside nursing hours per ambulant patient (*2*).

But 11 years have passed since these recommendations were made, and almost none of the tuberculosis hospitals and sanatoria have been able to employ enough nurses to make such a standard possible in actual practice.

Another source of a nurse's satisfaction in her work has always been the sense of sharing the scientific understanding and confidence of the doctor in the treatment of patients. The doctor who makes the nurse a member of the medical team, who treats her with respect and consideration, who is aware of her contribution to treatment, and gives recognition to it, helps to make nursing a more attractive profession.

Salary is not the nurse's primary consideration. Yet, while the cost of living has increased since the war and nurses' salaries have also increased, they have not risen proportionately. No nation-wide survey of salaries in tuberculosis hospitals has been made, but recent studies of several typical tuberculosis facilities have indicated that the total value of minimum salaries for staff nurses usually varies from about $175 to $245 a month, including maintenance. Maximum salaries range from about $185 to $269, but increases are slow. Some hospitals provide rooms, meals or laundry services for their nurses, but others provide neither services nor allowances to meet the cost of the services outside the hospital.

Hours, according to the studies which have been made, are likely to be more satisfactory in tuberculosis services of general hospitals than in sanatoria. Many tuberculosis hospitals have two shifts a day, while the general hospitals nearly always have three. Split shifts and 6-day weeks are common in sanatoria, but the 8-hour day and 5½-day week are the rule in general hospitals. The American Nurses' Association in its official Economic Security Program asks a 40-hour week with an 8-hour straight-time work day for all nurses and remuneration for overtime and on-call service.

Sanatorium nurses work from 44 to 67 hours a week, while the

average workweek for other nurses is about 44 hours. Although their over-all salaries are in general comparable, on an hourly basis the sanatorium nurses are less well paid. Some hospitals pay extra for night duty, and a few general hospitals give cash bonuses ranging from $10 to $50 a month for tuberculosis nursing. Policies of wages and hours in tuberculosis sanatoria should be checked against the improvements that have already taken place in general hospitals if the sanatoria are to compete on an equal footing with general hospitals for nurses.

Vacation policies are more or less uniform. The average hospital, either tuberculosis or general, grants its nurses 2 weeks with pay. Nurses in the latter are likely to have more holidays, but paid sick leave of 12–15 days is about the same for both types of hospital. Health insurance, hospitalization, and retirement policies need to be liberalized for both.

If improvements are made to guard tuberculosis nurses against infection, more women will undoubtedly be attracted to this branch of nursing. In fact, careful observance of safe techniques in caring for communicable disease cases may make tuberculosis nursing even safer than general nursing where there is danger from unrecognized cases.

Before a nurse is assigned to duty on a tuberculosis service, she should have a general physical examination, a chest X-ray, and a tuberculin test. Each of these procedures should be repeated at intervals for the protection of the nurse. Many authorities also recommend BCG vaccination for nonreactors to tuberculin. But studies show that few tuberculosis hospitals give prospective nurses routine preemployment physical examinations, and some do not even give tuberculin tests, although preemployment X-ray is done almost everywhere.

Nurses who have been assigned to tuberculosis services after having passed a physical examination and whose chest X-rays are satisfactory must be given protection on the job. The following recommendations have been made (*3*).

1. Stop the spread of all organisms insofar as possible from the source:

   (*a*) By providing the best practical methods of collecting and destroying all body discharges contaminated by tubercle bacilli;

   (*b*) By trying to interest and teach the patient and members of his family in regard to their responsibilities for helping with these procedures.

2. Improve all hospital housekeeping procedures to the point where the dissemination of disease-producing organisms, tubercle bacilli, are—insofar as possible—eliminated from the environment. (The handling of soiled linen and the care of eating utensils should be included in housekeeping.)

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3. Initiate all practical *aseptic* nursing procedures possible in order to provide a clean service for the individual patient and at the same time introduce *protective measures* for all workers coming in contact with infectious tuberculosis patients.

Wherever better care of tuberculous patients has been demonstrated and better protection for workers has been made easily accessible, it has become easier to recruit and retain personnel.

Cleanliness is the keystone of asepsis. An investment in hand-washing basins, up-to-date laundry and kitchen equipment, gowns and masks will prove sound because it will increase the number of nurses a sanatorium can attract and will enable the nurses to give better care to patients. Many tuberculosis hospitals fail to meet these standards, sometimes because of lack of personnel and equipment, sometimes simply because of carelessness.

Improvements in recreation and transportation can also help to increase the inducements of tuberculosis nursing. In the past, sanatoria have nearly always been located in the country, but there is now an increasing interest in building new tuberculosis wings and sanatoria close to general medical facilities. This practice will undoubtedly make it possible for additional nurses to enter tuberculosis nursing.

More student nurses will also be drawn to tuberculosis nursing if schools of nursing offer better and safer instruction in tuberculosis. In 1946, only 24 percent of all schools of nursing offered any clinical experience in tuberculosis. Some superintendents say it is difficult to find tuberculosis services to which young student nurses can be safely entrusted. Yet the only places in which clinical practice can be effectively taught are those where scrupulous communicable disease techniques are observed.

In order to raise educational standards in tuberculosis nursing, the National League of Nursing Education, in 1946, appointed a Subcommittee on Tuberculosis Nursing to prepare a basic plan of instruction. Under the co-sponsorship of the Joint Tuberculosis Nursing Advisory Service the committee has worked out a plan in which tuberculosis takes a place more nearly commensurate with its importance as a public health problem. The new instructional plan, published in July 1949, calls for 45 to 60 hours of instruction in tuberculosis in contrast to the 1937 recommendation of 11 hours. It urges that the increased hours should be accompanied by enrichment of content, pointing out that well-planned courses in tuberculosis nursing can provide a variety of experiences in epidemiology, case finding, communicable disease technique, economic and social aspects of treatment, patient education and rehabilitation. The instruction should also include a study of the magnitude of the tuberculosis problem, the part played by all nurses in the program for its eradication and a general survey of local, State, and Nation-wide antituberculosis campaigns.

Professional nurses are now being asked to assume many new responsibilities that only doctors used to carry, such as giving intravenous treatments and obtaining specimens of gastric contents. If more intensive training is given them to meet these new responsibilities, many of their less demanding duties may be conducted by practical nurses, provided an appropriate system of training and supervision is designed for them. In some communities vocational high schools are giving courses in practical nursing with clinical instruction and practice in selected community hospitals.

A training period of 9 to 12 months seems sufficient for training practical nurses. Most experts think they should be trained in general nursing and that tuberculosis hospitals should draw from this pool.

There is an increasing acceptance of minority groups and of men in nursing schools and in the profession itself. If tuberculosis nursing is made attractive enough, it will draw its share of both sexes and from minority groups.

Up to now there has been almost no systematic analysis of the different jobs to be done in a tuberculosis hospital. Until such investigations are made, workers will continue to be trained in a vacuum. No one can be properly trained for a specific job until the job itself has been defined. The present haphazard "system," with overlapping duties for graduate nurses, practical nurses, aides and orderlies, leads to inefficiency both in hospital operation and in training programs. *Job analyses are urgently needed.*

It is also important that sanatoria budget the time of their workers in such a way that they can serve as efficiently as possible. Too often nurses have to do part of the housekeeping, using valuable time that could be much more productively spent in bedside care. Every hospital, after it has made its job analyses, should try to use the talents and training of its workers to the best advantage.

Each State should determine its own nursing needs, for each has its own problems. Nurses tend to leave States where conditions are unfavorable for those where policies are more progressive. Each State should make a survey to find out how many nurses are needed for the various types of service, how many can be trained to meet the needs and how conditions of nursing can be improved so that nurses will not look elsewhere for employment when their training is finished. When a State has determined the specific steps that must be taken to make it self-sufficient in nursing services, it can proceed on a rational basis to develop them.

* * * * * * *

What then can be done to increase the number of nurses for tuberculosis nursing services in the United States? It is hoped that this

brief discussion will have pointed out many of the positive steps that can be taken: increasing job satisfaction, better precautions against infection, better instruction of nurses and auxiliaries in tuberculosis nursing, salary adjustments, better hours, increased employment of members of minority groups, job analyses, better utilization of time.

Although it is not inevitable that nursing care will become more effective as the number of nurses increases, the profession considers the quantity of nurses one index of the quality of patient care. If our society can provide enough nurses to staff its hospitals adequately, each nurse will do her utmost to give the kind of patient care for which she has dedicated herself to her profession. Tuberculosis hospitals, if they keep pace with developments, will share in the improvement of nursing services everywhere.

REFERENCES

(*1*) Brown, Esther Lucile: Nursing for the Future, a report prepared for the National Nursing Council. Russell Sage Foundation, New York, 1948.
(*2*) The National Tuberculosis Association, the American Nurses' Association, the National League of Nursing Education, and the National Organization for Public Health Nursing: A study of the nursing care of tuberculosis patients. Am. J. Nursing, Vol. 38, No. 9, September 1938.
(*3*) McNett, Esta H.: The face mask in tuberculosis. Am. J. Nursing, Vol. 49, No. 1, January 1949.

Characteristics of Commercial X-ray Screens and Films—VIII

By WILLARD W. VAN ALLEN, B. Sc.*

This is the eighth in a series of reports on the characteristics of commercial X-ray film-screen-developer combinations. The following tables represent the accumulated and revised findings of the Electronics Laboratory to. date. An earlier issue of this journal [1] described the technical details of this investigation.

Table 1. *Speed of fluoroscopic screen-film-developer combinations* [1] [2]

Film and developer [3]	Screens								
	D sample 1	D sample 2	D sample 3	666D sample 1	666D sample 2	E-2	B sample 1	B sample 2	B-2
Ansco Fluorapid:									
Eastman X-ray	120	150	155	100	125				
Ansco Liquadol	105	125	140	-75	100				
G. E. Supermix	155	170	200	100	130				
Eastman Rapid	135	145	165	85	110				
Buck X-ray	115	125	140	75	100				
DuPont Fluorofilm:									
Eastman X-ray	95	115	130	80	100				
Ansco Liquadol	90	110	120	65	85				
G. E. Supermix	130	145	165	90	110				
Eastman Rapid	100	110	125	65	85				
Buck X-ray [4]									
Eastman Blue Photoflure:									
Eastman X-ray	95	115	130	75	100				
Ansco Liquadol	85	105	115	65	85				
G. E. Supermix	110	120	145	75	95				
Eastman Rapid	105	110	130	75	90				
Buck X-ray	140	150	175	90	115				
Eastman Green Photoflure:									
Eastman X-ray						140	60	70	95
Ansco Liquadol						120	55	55	85
G. E. Supermix						155	75	75	110
Eastman Rapid						115	50	55	80
Buck X-ray						110	50	55	75

[1] Speeds are determined with film and screen in direct contact and therefore do not represent the over-all speed of the same combinations when used in a photofluorograph.

[2] Subsequent reports will contain data on additional developers used in combination with the screens and films shown in this table; these will include Eastman Liquid X-ray and DuPont developers.

[3] Development time (as recommended by the manufacturer of the developer): Eastman X-ray Developer, 8 minutes; Ansco Liquadol, 4 minutes; G. E. Supermix, 8 minutes; Eastman Rapid, 8 minutes except Green Photoflure, 7 minutes; Buck X-ray, 8 minutes except Green Photoflure, 7 minutes. All developments at 68° F.

[4] DuPont Fluorofilm reported currently unavailable.

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[1] Pub. Health Rep. 64: 581 (1949).

Table 2. *Speed of intensifying screen-film-developer combinations* [1]

Film and developer [2]	Screens								
	Buck			Eastman			Patterson		
	Xtra speed	Mid-speed	Definition	Ultra speed	Fine grain	Definition	High speed	Par-speed	Detail
Ansco High Speed: [3]									
Ansco Liquadol	70	60	50	110	85	60	115	60	20
G. E. Supermix	75	60	50	110	85	60	115	65	20
Eastman Rapid	65	55	45	100	75	55	100	55	20
Buck X-ray	65	50	45	100	75	50	100	55	20
DuPont No. 508:									
Eastman X-ray	55	50	40	90	70	50	80	55	20
Ansco Liquadol	50	45	40	85	65	45	85	50	15
G. E. Supermix	55	45	40	80	65	45	80	50	15
Eastman Rapid	45	40	30	65	55	40	65	40	15
Buck X-ray	50	40	35	75	60	40	75	45	15
Eastman Blue Brand:									
Eastman X-ray	85	70	60	140	110	80	120	90	25
Ansco Liquadol	90	75	65	145	110	75	130	80	25
G. E. Supermix	90	75	65	145	105	75	135	80	25
Eastman Rapid	75	65	55	120	90	65	105	60	25
Buck X-ray	85	70	60	140	105	70	130	80	25

[1] Subsequent reports will contain data on additional developers used in combination with the films and screens shown in this table; these will include Eastman Liquid X-ray and DuPont developers.
[2] Development time (as recommended by the manufacturer of the developer): Eastman X-ray, 4½ minutes; Ansco Liquadol, 3 minutes; G. E. Supermix, 3 minutes; Eastman Rapid, 3½ minutes; Buck X-ray, 3 minutes.
[3] Speeds with Eastman X-ray developer to be reported in a subsequent issue.

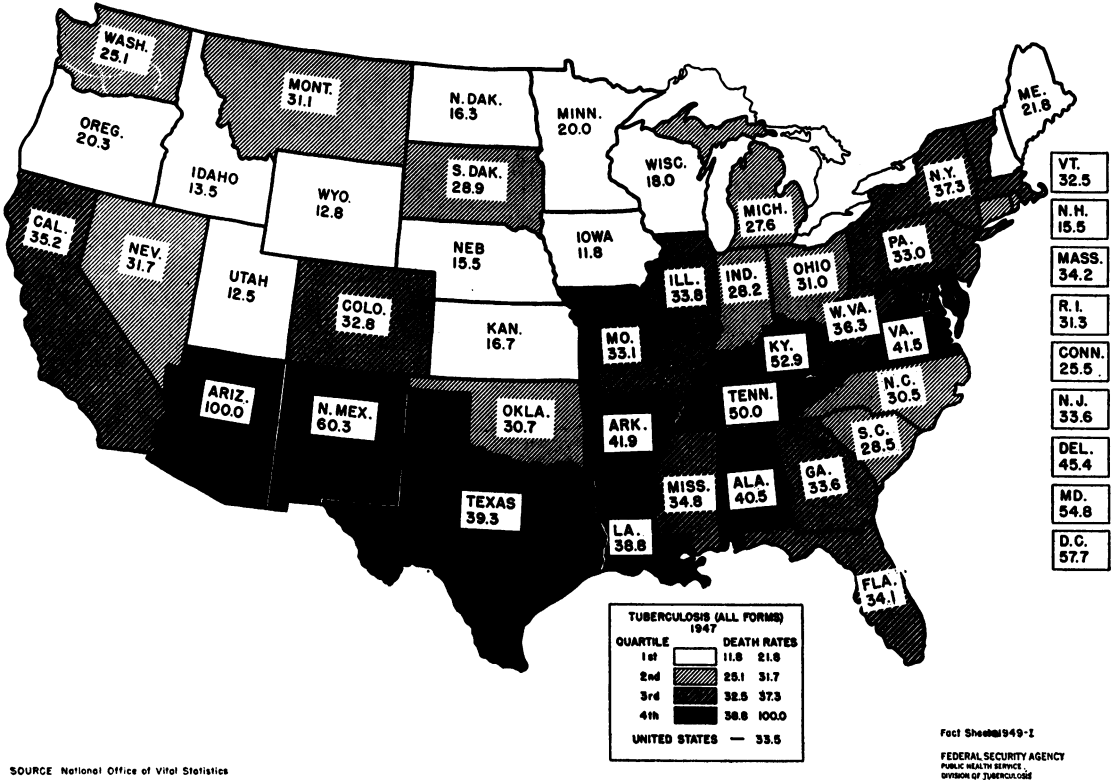
Table 3. *Average value of fog and contrast (gamma)* [1]

Film	Fog densities					Contrast (gamma)				
	Developer [2]					Developer [2]				
	Eastman X-ray	Ansco Liquadol	G. E. Supermix	Eastman Rapid	Buck X-ray	Eastman X-ray	Ansco Liquadol	G. E. Supermix	Eastman Rapid	Buck X-ray
Photofluorographic:										
Ansco Fluorapid	0.08	0.09	0.23	0.12	0.25	2.1	1.8	2.1	2.0	1.9
DuPont Fluorofilm	.21	.15	.40	.20	[3]	1.9	2.0	2.1	1.9	[3]
Eastman Blue Photoflure	.07	.04	.09	.05	.15	1.8	1.8	1.9	1.7	1.8
Eastman Green Photoflure	.10	.11	.28	.09	.26	2.0	2.1	2.3	2.2	2.4
Roentgenographic:										
Ansco High Speed	------	.10	.10	.04	.07	------	2.8	2.8	2.3	2.3
DuPont No. 508	.18	.20	.04	.04	.07	2.6	2.7	2.6	2.2	2.2
Eastman Blue Brand	.06	.08	.06	.05	.07	2.8	3.0	------	3.2	2.9

[1] Values obtained with open-tank development and continuous mechanical agitation at 68° F. Values for fog densities obtained in open tank without agitation have been found generally lower.
[2] Development time as given in tables 1 and 2. Similar data for other developers will appear in subsequent issues.
[3] DuPont Fluorofilm reported currently unavailable.

TUBERCULOSIS (ALL FORMS) DEATH RATES PER 100,000 POPULATION – UNITED STATES, 1947

(BY PLACE OF RESIDENCE)



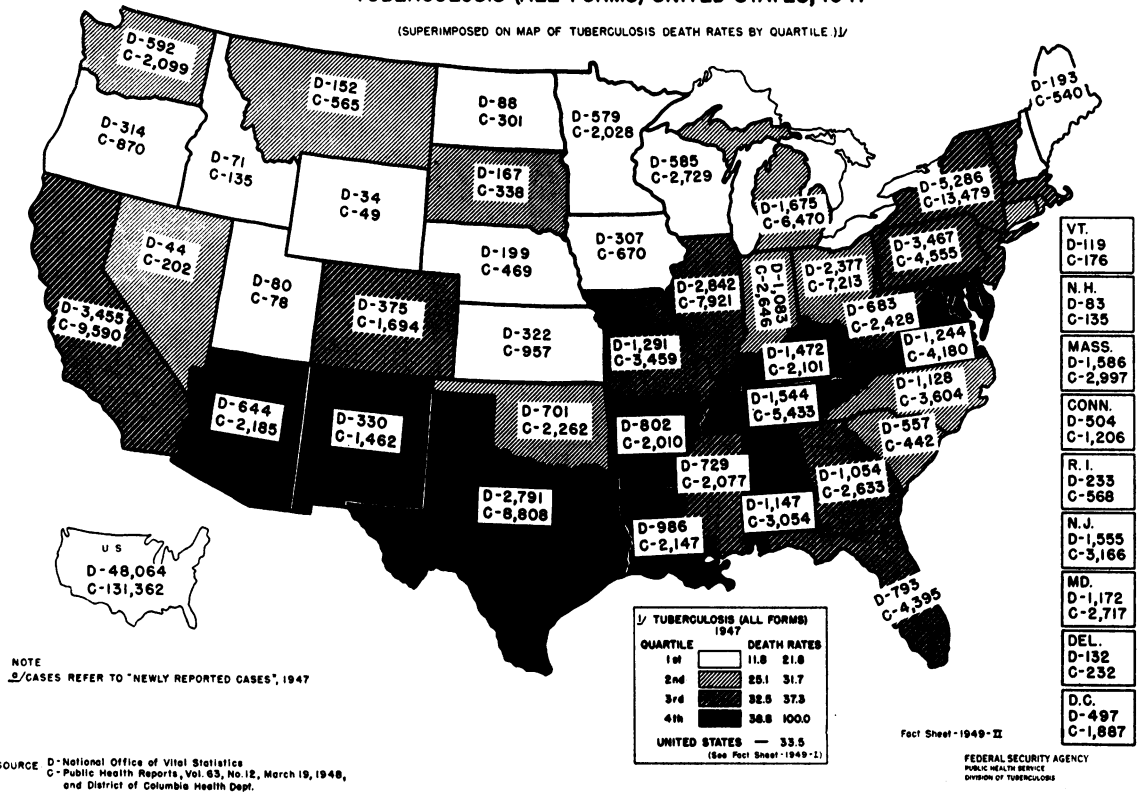
SOURCE National Office of Vital Statistics

Fact Sheet 1949-I

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
DIVISION OF TUBERCULOSIS

NUMBER OF DEATHS AND CASES 2/
TUBERCULOSIS (ALL FORMS) UNITED STATES, 1947

(SUPERIMPOSED ON MAP OF TUBERCULOSIS DEATH RATES BY QUARTILE.) 1/



VT.	D-119 C-176
N.H.	D-83 C-135
MASS.	D-1,586 C-2,997
CONN.	D-504 C-1,206
R.I.	D-233 C-568
N.J.	D-1,555 C-3,166
MD.	D-1,172 C-2,717
DEL.	D-132 C-232
D.C.	D-497 C-1,687

NOTE
2/CASES REFER TO "NEWLY REPORTED CASES", 1947

SOURCE D - National Office of Vital Statistics
C - Public Health Reports, Vol. 63, No. 12, March 19, 1948, and District of Columbia Health Dept.

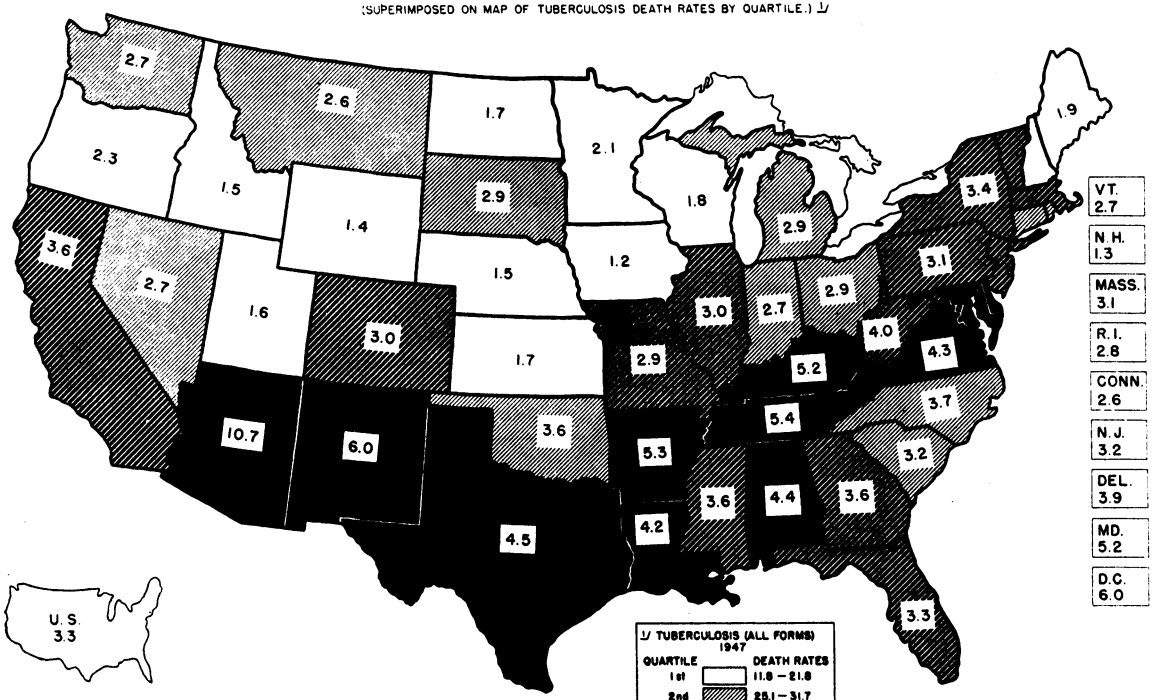
Fact Sheet-1949-II

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
DIVISION OF TUBERCULOSIS

TUBERCULOSIS PROPORTIONATE MORTALITY — UNITED STATES, 1947

TUBERCULOSIS DEATHS PER 100 DEATHS ALL CAUSES

(SUPERIMPOSED ON MAP OF TUBERCULOSIS DEATH RATES BY QUARTILE.) 1/



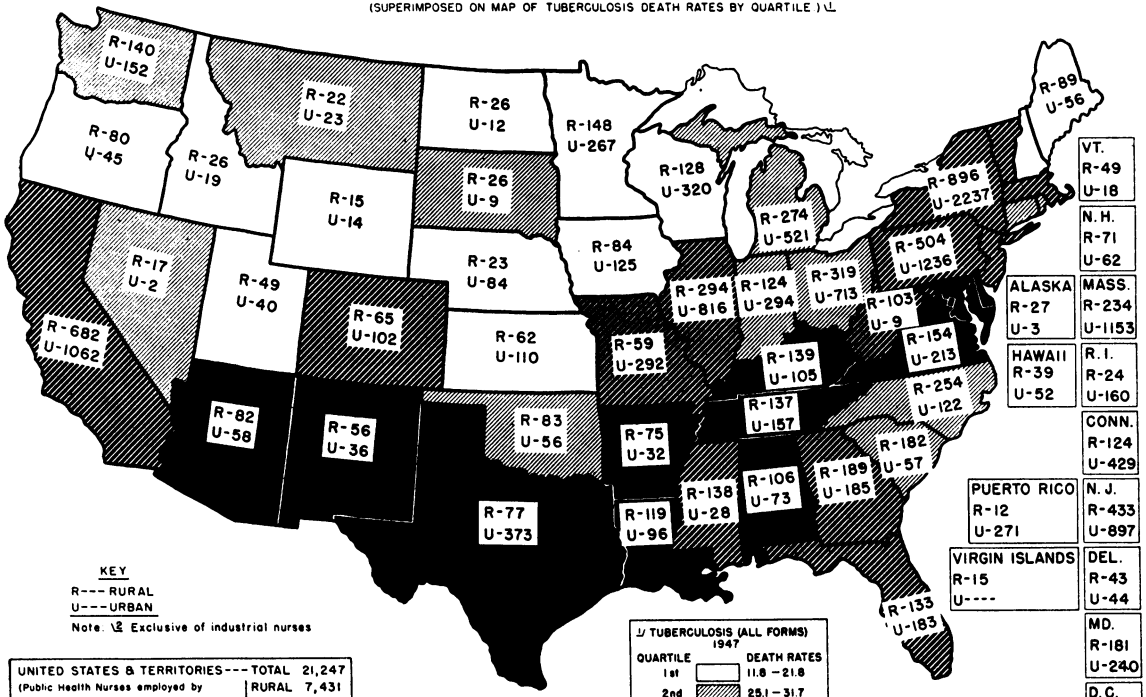
SOURCE NOVS News Release, 12-15-48

Fact Sheet - 1949 - XI

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
DIVISION OF TUBERCULOSIS

NUMBER OF RURAL AND URBAN PUBLIC HEALTH NURSES[2], JANUARY 1, 1948

(SUPERIMPOSED ON MAP OF TUBERCULOSIS DEATH RATES BY QUARTILE)[1]



VT. R-49 U-18	N.H. R-71 U-62		
ALASKA R-27 U-3	MASS. R-234 U-1153		
HAWAII R-39 U-52	R.I. R-24 U-160		
	CONN. R-124 U-429		
PUERTO RICO R-12 U-271	N. J. R-433 U-897		
VIRGIN ISLANDS R-15 U----	DEL. R-43 U-44		
	MD. R-181 U-240		
	D.C. R---- U-153		

KEY

R---RURAL

U---URBAN

Note: [2] Exclusive of industrial nurses

UNITED STATES & TERRITORIES---TOTAL 21,247 (Public Health Nurses employed by Departments of Health, Boards of Education, other official and non-official agencies. Nurses in State Agencies (1003), in schools of Nursing (133) and Universities (222) are not included)	RURAL 7,431
	URBAN 13,816

[1] TUBERCULOSIS (ALL FORMS) 1947

QUARTILE	DEATH RATES
1st	11.8 – 21.8
2nd	25.1 – 31.7
3rd	32.5 – 37.3
4th	38.8 – 100.0

UNITED STATES — 33.5

(See Series 1947-A)

Fact Sheet-1949-V

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
DIVISION OF TUBERCULOSIS

SOURCE PHS, Office of Public Health Nursing

INCIDENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JULY 16, 1949

A total of 1,016 cases of poliomyelitis was reported, as compared with 684 last week (an increase of 48.5 percent), and a 5-year (1944–48) median of 427. Current totals by geographic divisions (last week's figures in parentheses) are as follows: New England 45 (24), Middle Atlantic 93 (24), East North Central 166 (76), West North Central 174 (101), South Atlantic 36 (31), East South Central 66 (57), West South Central 295 (271), Mountain 40 (32), Pacific 101 (68). The 18 States reporting more than 15 cases each (last week's figures in parentheses) are as follows: *Increases*—Massachusetts 19 (8), New York 72 (16), Ohio 22 (12), Indiana 52 (24), Illinois 55 (19), Michigan 32 (11), Minnesota 51 (38), Iowa 30 (8), Missouri 40 (17), North Dakota 16 (5), Kentucky 20 (13), Mississippi 17 (13), Arkansas 101 (70), California 83 (58); *decreases*—Kansas 19 (25), Texas 112 (121); *no change*—Tennessee 21, Oklahoma 74. The total reported since March 19 (average week of seasonal low incidence) is 3,971 cases, as compared with 3,251 for the same period last year and a 5-year median of 1,489.

Of 17 cases of Rocky Mountain spotted fever reported (last week 20, 5-year median 32), 10 occurred in 4 South Atlantic States (5 in Virginia, 3 in North Carolina), 2 in Alabama, and 1 case each in Pennsylvania, Indiana, Montana, Colorado, and Oregon. The total to date is 275, same period last year 252, 5-year median 220.

Included in the total of 104 cases of typhoid and paratyphoid fever reported (last week 112, 5-year median 133), are 17 cases in Texas (including 5 paratyphoid fever), 11 in Louisiana, 7 in Pennsylvania (last week 10), and 6 each in Virginia, Arkansas, and Oklahoma. The total since March 19 (average week of seasonal low incidence) is 1,049, same period last year 1,187, 5-year median 1,346.

Deaths recorded during the week in 94 large cities in the United States totaled 8,320, as compared with 9,359 last week, 8,674 and 8,319, respectively, for the corresponding weeks of 1948 and 1947, and a 3-year (1946–48) median of 8,319. The total for the year to date is 264,454, as compared with 267,301 for the same period last year. Infant deaths totaled 617, last week 695, 3-year median 654. The cumulative figure is 18,167, same period last year 18,889.

Telegraphic case reports from State health officers for week ended July 16, 1949

[Leaders indicate that no cases were reported]

Division and State	Diphtheria	Encephalitis, infectious	Influenza	Measles	Meningitis, meningococcal	Pneumonia	Poliomyelitis	Rocky Mountain spotted fever	Scarlet fever	Smallpox	Tularemia	Typhoid and paratyphoid fever [a]	Whooping cough	Rabies in animals
NEW ENGLAND														
Maine				20		9	13		3				9	
New Hampshire							2							
Vermont				16					9				1	
Massachusetts	8			90			19		20			1	119	
Rhode Island				6		2			1					
Connecticut				111	1	13	11		7			2	20	
MIDDLE ATLANTIC														
New York	5		[b] 1	503	8	160	72		[d] 31			3	199	4
New Jersey		1	1	393	2	31	[1] 14		5				78	
Pennsylvania	4		[(b)]	302	4		7	1	14			7	79	
EAST NORTH CENTRAL														
Ohio	5		1	480	3	43	22		25			2	81	5
Indiana	4	1		25			52	1	5			3	17	17
Illinois		2	1	223	3	60	55		20		1	1	120	1
Michigan [a]	2	2	1	247	3	29	32		32			1	74	7
Wisconsin				532		2	5		20				75	
WEST NORTH CENTRAL														
Minnesota		1		57	1		51		4			1	2	
Iowa				19		2	30		3				9	5
Missouri	1			10	1	4	40		7			5	3	
North Dakota	1	1		22	1		16		2				3	
South Dakota				2			5							
Nebraska				4			13							
Kansas	1			25	1	5	19		1				3	
SOUTH ATLANTIC														
Delaware				9			2						6	
Maryland [a]	5			31		14	2	1	[d] 5			1	17	
District of Columbia				23	1	11	1		2				1	
Virginia	1		75	117	1	27	4	5	7		2	6	41	3
West Virginia	1			4			9	1	4				13	
North Carolina	5			137	2		5	3	7				28	
South Carolina	1		13	87		13	1		1			2	3	4
Georgia	7		1	76	2	28	11		2			5	4	8
Florida	3		5	46		4	3		2				1	

EAST SOUTH CENTRAL														
Kentucky	2			35		20	20		5			3	17	8
Tennessee	3		4	15		35	21					5	36	
Alabama	2		5	15		29	8	2				1	5	3
Mississippi [a]	1	1	3	5	1	8	17		3	(1)	1	2		
WEST SOUTH CENTRAL														
Arkansas			1	20		20	101		2		6	6	26	1
Louisiana			1	10	1	19	8				1	11		3
Oklahoma	3		6	17	3	7	74		6		3	6	2	5
Texas	9		252	97	6	147	112		11		2	17	137	17
MOUNTAIN														
Montana			5	34		1		1	1		1	1	2	
Idaho	1		6	30		2	14		[d] 2			3	5	
Wyoming				4		6						1		
Colorado	2		1	45		13	12	1	1				4	
New Mexico				18		1	6		1			1		1
Arizona	1		15	27		4	3		3			1	18	
Utah [a]				42		4	2		1				26	
Nevada							3							
PACIFIC														
Washington			2	45		1	12		5				9	
Oregon	1		1	30		5	6	1	2			1	22	
California	5	1		211	6	29	83		[d] 35			5	87	
Total	84	10	401	4,317	51	808	1,016	17	317		17	104	1,402	
Median, 1944–48	151	11	584	3,390	81		427	32	855	5	28	133	2,203	
Year to date 28 weeks	3,852	289	75,113	578,930	2,097	51,759	[1] 4,895	275	57,287	[1] 39	676	1,509	30,168	
Median, 1944–48	6,435 (27th)	248	189,238 (30th)	533,201 (35th)	4,110 (37th)		1,752 (11th)	220	83,792 (32d)	254 (35th)	531	1,821 (11th)	53,039 (39th)	
Seasonal low week ends	July 9		July 31	Sept. 4	Sept. 18		Mar. 19		Aug. 14	Sept. 4		Mar. 19	Oct. 2	
Since seasonal low week	84		111,383	631,323	2,941		[1] 3,971		79,985	[1] 49		1,049	40,201	
Median, 1943–48 [b]	151		333,425	569,415	5,614		1,489		122,363	337		1,346	83,683	

[a] Period ended earlier than Saturday.
[b] The median of the 5 preceding corresponding periods; for diphtheria poliomyelitis and typhoid fever, the corresponding periods are 1944–45 to 1948–49.
[c] New York City and Philadelphia only, respectively.
[d] Including cases reported as streptococcal infection and septic sore throat.
[e] Including paratyphoid fever; currently reported separately, as follows: New York 1, Virginia 2, South Carolina 1, Georgia 2, Louisiana 2, Oklahoma 1, Texas 5, California 1.
Cases reported as Salmonella infection, not included in the table, were as follows: Massachusetts 1, New York 1.
Leprosy: California 1.
Relapsing fever: California 1.
[1] Correction: Poliomyelitis, New Jersey, week ended May 7, 3 (instead of 5 cases). Smallpox, Mississippi, week ended June 11, 0 (instead of 1 case).
Alaska: Pneumonia 1.
Hawaii Territory: Measles 19, lobar pneumonia 1.

FOREIGN REPORTS

CANADA

Provinces—Notifiable diseases—Week ended June 25, 1949.—During the week ended June 25, 1949, cases of certain notifiable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		13		119	384	25	116	31	100	788
Diphtheria				1	1				1	3
Dysentery:										
Amebic					1					1
Bacillary				1						1
Encephalitis, infectious					2		1			3
German measles		14		89	50	1	26	57	22	259
Influenza		16				3				19
Measles		27	1	224	266	191	307	235	409	1,660
Meningitis, meningococcal				1						1
Mumps		25	1	22	188	15	2	14	92	359
Poliomyelitis				2	5	2			4	13
Scarlet fever		1		44	44	1		4	14	108
Tuberculosis (all forms)		14	11	85	43	25	21		58	257
Typhoid and paratyphoid fever				4		1			3	8
Undulant fever				1	3			1		5
Venereal diseases:										
Gonorrhea		11	5	68	70	35	23	38	70	320
Syphilis		2	9	66	29	4	5	5	17	137
Whooping cough		4		40	20	12			3	79

NORWAY

Notifiable diseases—March 1949.—During the month of March 1949, cases of certain notifiable diseases were reported in Norway as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	12	Mumps	830
Diphtheria	27	Paratyphoid fever	4
Dysentery, unspecified	1	Pneumonia (all forms)	2,730
Erysipelas	317	Poliomyelitis	10
Gastroenteritis	1,996	Rheumatic fever	121
Gonorrhea	300	Scabies	1,886
Hepatitis, epidemic	112	Scarlet fever	330
Impetigo contagiosa	2,029	Syphilis	88
Influenza	4,338	Tuberculosis (all forms)	480
Laryngitis	12,159	Typhoid fever	1
Lymphogranuloma, inguinale	1	Whooping cough	3,183
Measles	4,068		

JAMAICA

Notifiable diseases—4 weeks ended June 25, 1949.—For the 4 weeks ended June 25, 1949, cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox	14	29	Leprosy	----	3
Diphtheria	3	----	Puerperal sepsis	----	1
Dysentery	----	1	Tuberculosis (pulmonary)	50	43
Erysipelas	1	1	Typhoid fever	4	20

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

Note.—The following reports include only items of unusual incidence or of special interest and the occurrence of these diseases, except yellow fever, in localities which had not recently reported cases. All reports of yellow fever are published currently.

A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

CHOLERA

Burma—Bassein.—During the period June 12–25, 1949, 11 cases of cholera were reported in Bassein, Burma. The Government of Burma declared Bassein to be infected with cholera on May 8, 1949.

India—Calcutta–Cawnpore–Madras.—During the two weeks ended July 9, 1949, 125 cases of cholera were reported in Calcutta, 13 cases in Cawnpore, and 37 cases in Madras.

Pakistan—Chittagong.—During the week ended July 9, 1949, 2 cases of cholera were reported in Chittagong.

PLAGUE

Belgian Congo—Costermansville and Stanleyville Provinces.—On July 2 a fatal case of plague was reported in the village of Rweso, northeast of Lubero, Costermansville Province, and on July 4 a fatal case was reported in the village of Ndoangu, northwest of Blukwa, Stanleyville Province, both localities being new foci of the disease.

SMALLPOX

Colombia—Antioquia Department.—During the month of May 1949, 50 cases of smallpox were reported in the Department of Antioquia, Colombia.

Egypt—Alexandria.—During the week ended June 24, 1949, 3 cases of smallpox were reported in Alexandria, Egypt.

Java—Batavia.—The smallpox incidence continues high in Batavia, with 268 cases reported during the week ended July 2, 1949, and 254 cases during the week ended July 9.

Mexico—Mexico City (D. F.).—During the period June 19–July 2, 1949, 7 cases of smallpox were reported in Mexico City (D. F.).

Venezuela—Puerto La Cruz.—During the week ended July 2, 1949, 1 case of smallpox (alastrim) was reported in Puerto La Cruz, Venezuela.

TYPHUS FEVER

Ethiopia.—During the period May 1–28, 1949, 117 cases of typhus fever were reported in Ethiopia, of which 74 cases occurred in Shoa between May 3 and 16.

Colombia—Antioquia Department.—During the month of May 1949, 125 cases of typhus fever, with 1 death, were reported in the Department of Antioquia, Colombia.

YELLOW FEVER

No reports of yellow fever were received during the week.

DEATHS DURING WEEK ENDED JULY 9, 1949

[From the Weekly Mortality Index, issued by the National Office of Vital Statistics]

	Week ended July 9, 1949	Corresponding week, 1948
Data for 94 large cities of the United States:		
Total deaths	9,359	8,483
Median for 3 prior years	8,810	
Total deaths, first 27 weeks of year	256,134	258,627
Deaths under 1 year of age	695	612
Median for 3 prior years	747	
Deaths under 1 year of age, first 27 weeks of year	17,548	18,249
Data from industrial insurance companies:		
Policies in force	70,327,350	71,000,401
Number of death claims	9,750	10,508
Death claims per 1,000 policies in force, annual rate	7.2	7.7
Death claims per 1,000 policies, first 27 weeks of year, anual rate	9.4	9.8