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A SURVEY OF STATISTICAL STUDIES ON THE PREVALENCE AND INCIDENCE OF MENTAL DISORDER IN SAMPLE POPULATIONS [1]

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Intelligent planning for action in the field of mental hygiene requires knowledge of the magnitude of the problem. It is therefore necessary to ascertain the prevalence and incidence of mental hygiene problems in the general population. "Prevalence" is understood as referring to the number of cases active at a given moment, "incidence" to the number of new cases occurring either during an arbitrary period, usually a year, or during the life span of a group of individuals. In the latter case the rates are often referred to as "expectancies."

Attempts at complete enumeration of mental deviants have been made at various times in many countries in connection with the national censuses. Such attempts have been generally unsuccessful because of widespread failure on the part of informants and enumerators to recognize or report any but the most obvious cases.

Machinery for the general reporting of new cases of mental disorder does not exist in any country and for obvious reasons is not likely to be established. It is believed that in communities with an adequate and well established system of mental hospitals most psychotics find their way into these hospitals at some time during their lives, even though they spend a considerable part of their period of illness on the outside. For such populations rates of first admissions have been used as a substitute for incidence rates (*18, 28, 32, 41*). This method however, is not suitable for forms of mental disorder which do not as a rule require or receive institutional care.

The difficulties standing in the way of even approaching complete coverage of all cases of mental disorder in any large geographical or political unit have thus far proved insurmountable. The only practicable way yet discovered to approach the problem is to gather

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information about prevalence and incidence in population samples. Such investigations have been carried out in various parts of the world.

The present paper is a critical survey of these studies. We have endeavored to report on all major investigations conducted and published during the last 15 years. There are few earlier studies of this type and these do not furnish much information of value because psychiatric concepts have changed radically since they were made. The progressive breakdown of international scientific relations makes it somewhat uncertain that all investigations have been discovered in the literature. All studies included cover a wide range of mental hygiene problems and were made on reasonably "average" populations. Investigations of single specific problems or on highly selected populations have been omitted.

Attention will first be given to five studies of *prevalence*. The earliest of these surveys was made in 1930 by Carl Brugger (*8*) in 116 villages in Thuringia with a total population of about 38,000. Only four of these communities have over a thousand inhabitants. The area is mixed agricultural-industrial in character. Most of the people are Protestants.

In the following years Brugger made two more surveys, one in five villages of the Bavarian Allgäu (*10*) and one in six villages east of the town of Rosenheim (*11*). These surveys were part of a larger study intended to cover several areas with a total population of about 50,000 inhabitants. We have been unable to find any other publications on this investigation besides Brugger's two papers. The Allgäu and Rosenheim areas are very similar in character; both are predominantly agricultural and almost exclusively Catholic. As the same technique was used in both instances and the total population was less than 9,000 the two appear combined in this review under the name "Bavaria survey."

In 1935 Erik Strömgren (*40*) carried out a mental hygiene survey on an island in the Baltic Sea, Bornholm, which belongs politically to Denmark. It has a population of 46,000; the chief sources of income are farming, fishing, quarrying, and tourist trade. The results of Strömgren's investigation are available in book form, including analyses of both prevalence and incidence of mental disorder.

Turning now to the United States we find two large community surveys of mental hygiene problems, one in Baltimore and one in Tennessee.[2] The Baltimore survey is limited to the Eastern Health District, an area of about one square mile in the eastern part of the city. The District serves as the field laboratory of the Johns Hopkins University School of Hygiene and Public Health. Two surveys were made here,

[2] Both supported by the International Health Division of the Rockefeller Foundation.

one in 1933 (*13, 14, 15, 16*) and a second in 1936 (*20, 21, 22, 23*). All further statements in this paper refer to the survey of 1936. At this time the Eastern Health District had 55,000 inhabitants of whom 23 percent were Negroes. Among the whites there are many families of Hebrew and of Czech extraction. The area is for the most part residential, and the income level for both white and Negro families is definitely below the average for the city.

Finally there is the survey of Williamson County, Tennessee (*34*), giving information as of September 1, 1938. Williamson County is a fairly typical agricultural county in middle Tennessee with an area of 586 square miles and a population of 25,000. About 78 percent of the people are native whites, mostly of English and Scotch-Irish extraction; 22 percent are Negroes. There is only one incorporated town, Franklin, with about 4,000 inhabitants.

It will be noted that none of the surveyed populations is anything like a representative sample of the national population of which it is a part, be it Germany, Denmark, or the United States. Bornholm is the only one of the survey areas which might be called a "natural" unit. Future investigators in this field will probably spend greater efforts upon the proper selection of sample populations. A well coordinated survey, conducted simultaneously in several urban and rural areas of the United States or other large countries, should yield more complete information on the prevalence of mental disorder than has hitherto been available. The classic mental deficiency survey (*27*) made in England from 1925 to 1927 might well serve as a model.

Bona fide residents of the survey areas who have become inmates of institutions located elsewhere are included in all studies.

In the following analysis the term "case finding" is used for the basic procedures by which individuals presenting problems in the field of mental hygiene become known to the investigator. The determination of the specific nature of the problem, and of the degree of deviation, is called diagnosis. The two may be carried out either separately or as one operation.

Brugger initiated his Thuringia survey by questionnaires sent to physicians, clergymen, teachers, and mayors in the area. Additional material was obtained by oral inquiries from the relatives of patients already known and from "older inhabitants" of the several villages. The files of hospitals, institutions, and prisons were also searched, in one case as far back as 30 years. Almost all reported cases were personally seen and diagnosed by the author. He mentions that he also examined a large number of individuals described to him as normal and that he feels satisfied as to the good mental health of these persons.

The investigation in Bavaria was much more intensive. The population was prepared by publicity in the local newspapers, by

announcement from the pulpit by the parish priests, and by notices on the communal bulletin boards by the mayors. Subsequently every family in the area was visited by the psychiatrist. A fairly complete history was taken for each individual and the diagnosis made on the basis of a personal examination. Reports from hospitals, institutions, physicians, teachers, etc., were utilized in checking the information given by the family. In this study case finding and diagnosis were combined.

Procedures in the Bornholm survey were closely patterned after Brugger's investigation in Thuringia. The records of mental and general hospitals, almshouses, and nursing homes were searched and oral information obtained from physicians, aldermen, clergymen, teachers, city officials, and "older inhabitants." Most cases were visited and examined by the author.

It should be mentioned that Strömgren also carried out a very intensive survey of one village on the island with the help of the local medical practitioners. This community, however, had only 900 inhabitants and therefore this phase of his investigation is not reviewed here in detail. It may be worth mentioning that the general prevalence rate computed for this village is five to six times as high as that found for the whole island by the less inclusive general investigation. This is approximately the same ratio as between Brugger's surveys in Bavaria and Thuringia.

In the Baltimore survey there was no reporting of cases directly to the investigating group. Case finding was carried out entirely by perusal of the written records of various institutions and agencies. This procedure was made possible by the high development of health and social services in the area under study. The total number of sources was 43, including, among others, public and private mental hospitals, training schools for mental defectives and for delinquents, psychiatric clinics, social agencies, certain departments of the public school system, the juvenile court, police and criminal courts, and the National Health Survey. In many of the cases thus discovered a psychiatric diagnosis or a more or less complete description by a competent social worker was available. Others, however, were included on the basis of circumstantial evidence. Diagnosis, where not already given in the medical sources, was made from the written records after careful study of the data. No cases were personally examined by the staff psychiatrist. This is probably a serious shortcoming in the investigative technique.

The material for the Tennessee survey was partly reported by key persons in the community—physicians, nurses, teachers, ministers, judges, postmasters, country storekeepers, etc.—and partly discovered by the field workers of the study, who spent years in the town participating extensively in many community activities of various kinds.

Institutional records were also searched. Somewhat over half of the cases were interviewed or examined by one or more members of the staff which consisted of a psychiatrist, social workers, and nurses.

In addition to this general investigation, an intensive house-to-house survey was conducted in three selected areas. Details are not yet available for this phase of the study beyond the fact that the prevalence rate for all types of problems was about twice as high in these areas as in the remainder of the county.

Considerable differences exist between the five surveys as to the types of mental hygiene problems included and as to the grouping into diagnostic categories. The three European studies are limited to psychiatric conditions in the narrower sense.

The Thuringia survey covers all "psychoses"—this term as used by Brugger includes epilepsy and hysteria—and, in addition, neurasthenia, psychopathic personalities so badly maladjusted that they themselves or their families suffered severely, chronic alcoholics showing moral, social, or economic deterioration, some so-called eccentrics, a few "neurologic" patients, and, finally, imbeciles and idiots. That the cases of mental deficiency were diagnosed on the basis of clinical evidence rather than by standardized tests is evident from the statement that the mental age of the imbeciles is between 6 and 12 years and the mental age of the idiots less than 6 years. These mental ages obviously do not describe the same intelligence levels as they would in this country. So far as the major psychoses are concerned, German and American terminology appear to be reasonably comparable, at least as regards the more common diseases, such as schizophrenia, manic-depressive psychosis, general paresis, arteriosclerotic psychosis, etc.

Scope and classification in the Bavarian investigation are essentially the same except that a large group of morons ("debil") and retarded individuals is included.

Strömgren states that he enumerated only the "psychoses" in his survey of Bornholm, but from the list of diagnostic groupings it appears that the term "psychosis" again covers not only what we generally mean thereby but also epilepsy and conditions which would be classified as psychoneuroses or minor psychoses in American practice. Most of Strömgren's subgroups can be identified easily although some of the terms are unfamiliar, as for example "depressio mentis" (reactive depression), "confusio mentis" (delirium), and a few more. Mental defectives were not systematically searched for but the author believes that the majority of the more severe oligophrenics are included. These cases are described as requiring special care and would probably have been classified as idiots or imbeciles in this country.

The American surveys are more ambitious and cover a much wider range of mental hygiene problems. The Baltimore group uses the following system of classification (*20*) which is planned to designate all known maladjusted individuals.

Psychosis.
Psychoneurosis.
Psychopathic personality.
Personality disorder in adults:
  Psychotic traits.
  Neurotic traits.
  Psychopathic traits.
  Behavior deviation.
Behavior disorder in children:
  Neurotic traits.
  Conduct problems.
Minor or possible disorder in adults and children.
Epilepsy.
Mental deficiency (I. Q. less than 70).
School progress problems without mental deficiency.
Adult delinquency without other information.

Under the title "personality disorders in adults" four different groups of cases are combined. The first three of the groups may be termed subclinical—that is, they include individuals in whom the clinical picture was not complete enough to justify their placement in a more sharply defined category. The fourth group covers a wide array of severely maladjusted personalities not otherwise definable and chiefly characterized by their interpersonal difficulties. The maladjustment ranges all the way from aggressiveness to submissiveness, including traits like deception, irritability, quarrelsomeness, uncooperativeness, chronic dependency, inefficiency, shiftlessness, suggestibility, unreliability, and so on. Severe alcoholics who are not psychotic are also included here.

"Behavior disorder in children" has two subdivisions: neurotic traits and conduct disturbances. Widely different problems are covered by the term "neurotic traits," including tics, habit spasms, stuttering, temper tantrums, enuresis, nail biting, and so on. Conduct problems are chiefly juvenile delinquency and school misbehavior.

The group called "minor or possible disorder" is very heterogeneous. It contains some cases with adequate records but minor problems, and others with very scanty information suggesting serious maladjustment.

In the Tennessee survey a somewhat different system of classification (*34*) was used but it includes about the same range of mental hygiene problems as is covered in Baltimore. The only group of cases in the Tennessee tabulations which has no counterpart in Baltimore is a number of individuals who because of constitutional or environmental handicaps are considered liable to become mental

hygiene problems although they were still well enough adjusted when investigated. The material is presented in seven major groupings.

Psychosis.
Psychoneurosis.
Conduct and behavior problems.
Psychopathic traits.
Special personality types.
Mental deficiency.
Organic and miscellaneous conditions.

The "conduct and behavior problems" embrace major and minor delinquency of adults, juvenile delinquency, alcoholism, marital maladjustment, sexual promiscuity, etc. "Psychopathic traits" are such adult personality types as the schizoid, cyclothymic, and hysterical, and also the so-called neurotic traits of childhood, tics, enuresis, temper tantrums, etc. The group of "special personality types" includes, in addition to various minor deviations, many persons of borderline intelligence. Among the "organic and miscellaneous" conditions we find the epileptics, patients suffering from various diseases of the brain and nervous system, persons with endocrine and other general diseases and congenital abnormalities, cripples, and individuals living in an unfavorable home environment. The large majority of cases in this group are listed only as potential mental hygiene problems.

By definition a study of prevalence is based upon the number of cases active on a given day which may be called the census day for the particular survey. For certain types of problems in the field of mental hygiene the determination of activity status presents great difficulties, both practical and theoretical. The situation is simple in conditions of a permanent nature like mental deficiency where a case known to be present on census day must also be active. It is less simple in psychoses and similar illnesses; by careful investigation, however, it is possible to determine the time of onset or recovery within reasonable limits. But how long is a person a "delinquent" before, after, or between his criminal acts? This conundrum can only be answered arbitrarily.

Brugger does not discuss the question of activity status in his papers, but it appears that he counts as psychotics all individuals who have been mentally disordered at any time during their lives. This attitude probably reflects the importance attached to the constitutional factor by the German school of psychiatry.

Strömgren presents separately the numbers of active and recovered cases only for his total series of "psychotics" which includes epileptics and many psychoneurotics. The distinction is not made for each diagnostic group separately.

The Baltimore investigation includes all cases active at some time

during the survey year, and no others with the exception that an effort was made to ascertain the number of residents who had previously suffered from a psychosis. Such individuals, however, are not counted as active. The prevalence rates of the Baltimore survey are one-year rather than one-day rates. They cannot be converted easily into true prevalence rates.

In Tennessee it was possible to follow up all reported cases and to verify not only their continued residence in the county on census day but also to determine their activity status at that time. Among the active cases a further distinction was made between personal problems affecting only the patient and his immediate family and social problems involving the community at large. In each of these categories, severe, moderate, and minor deviations are distinguished. Such tabulations are available for the seven major diagnostic groups.

The possibilities of reaction inherent in the human personality are so manifold that it is small wonder that many individuals presenting mental hygiene problems require double or multiple diagnoses. This becomes particularly apparent in the two American prevalence surveys with their broad conception of the field. In both instances the difficulty has been overcome by the establishment of a rank order of diagnostic groups, descending, by and large, from more severe to less severe deviations. Each case with multiple diagnoses is assigned to the highest ranking group represented. This is called the leading classification or primary diagnosis and is generally, but not always, the most important condition as far as the individual is concerned. In addition there is available for certain diagnostic groups the total number of cases falling into that group irrespective of primary diagnosis. Among these groups is mental deficiency which often exists coincidentally with other conditions.

Brugger's papers report only a few cases with double diagnoses and those are listed individually. The Bornholm survey includes three duplications but no details are available.

It cannot fall into the scope of this review to reproduce in detail the findings of each survey. For complete information the reader is referred to the original publications. It does seem proper, however, to present in summary form the numbers of cases found in each diagnostic group and the crude prevalence rates per 1,000 general population, using the author's own system of classification. Later—and with considerable hesitation—the attempt will be made to rearrange the material for purposes of comparison. In all tables the range of sampling variation is indicated by 95 percent confidence limits.

Table 1 summarizes the findings of Brugger's two surveys in Thuringia and Bavaria. Although the population covered in the latter study was only one-fourth of that in the former, the number of cases found is larger. The prevalence rate for the aggregate of all forms of

mental disorder is almost five times as high. This difference is partly due to the inclusion of morons and persons with borderline mental deficiency and partly to the fact that a personal investigation was made by the psychiatrist of every family included in the Bavaria survey. This is suggested by the fact that the discrepancy appears largest for those types of mental disorder which are most likely to escape recognition and reporting by lay persons.

TABLE 1.—*Cases of mental disorder in the Thuringia and Bavaria surveys*

[Population: Thuringia survey 37,561; Bavaria survey 8,628]

	Number of cases		Rate per 1,000		95 percent confidence limits	
	Thuringia	Bavaria	Thuringia	Bavaria	Thuringia	Bavaria
Schizophrenia	73	22	1.9	2.5	1.5–2.4	1.5–3.6
Manic-depressive	20	12	.5	1.4	.3–.8	.6–2.2
Epilepsy	26	12	.7	1.4	.4–1.0	.6–2.2
Cerebral arteriosclerosis	13	3	.3	.3	.2–.5	.0–.7
Hysteria	32	7	.9	.8	.6–1.1	.2–1.4
Infectious psychosis	11	----	.3	----	.1–.5	----
Undiagnosed psychosis	16	7	.4	.8	.2–.6	.2–1.4
Neurasthenia	15	7	.4	.8	.2–.6	.2–1.4
Psychopathic personality	25	24	.7	2.8	.4–.9	1.7–3.9
Alcoholism	15	22	.4	2.5	.2–.6	1.5–3.6
Eccentrics	6	14	.2	1.6	.0–.3	.8–2.5
Imbeciles and idiots	201	137	5.4	15.9	4.6–6.1	13.2–18.5
Morons	----	158	----	18.3	----	15.5–21.2
Retarded	----	88	----	10.2	----	8.1–12.3
Miscellaneous conditions [1]	36	12	1.0	1.4	.6–1.3	.6–2.2
Total	479	517	12.8	59.9	11.6–13.9	54.8–65.1
Duplications	10	8	----	----	----	----

[1] General paresis, cerebral syphilis, senile and presenile dementia, climacteric and reactive depression, puerperal psychosis, postencephalitic states, brain tumor, sequelae to concussion of the brain, migraine, postoperative tetany, and exogenous oligophrenia. None of these groups had over 10 cases in either survey.

Strömgren's figures for Bornholm are presented in table 2. His material does not include psychopathic personalities, alcoholics, and eccentrics and is therefore smaller in scope than Brugger's; otherwise the picture seems to be reasonably similar.

TABLE 2.—*Active and recovered cases of mental disorder in the Bornholm survey*

[Population: 45,930]

	Number of cases	Rate per 1,000	95 percent confidence limits
Schizophrenia	150	3.3	2.7–3.8
Manic-depressive	122	2.7	2.2–3.1
Epilepsy	47	1.0	.7–1.3
Psychogenic psychoses	34	.7	.5–1.0
Hysterical psychoses	35	.8	.5–1.0
Paranoid psychosis	13	.3	.1–.4
Confusio mentis	15	.3	.2–.5
Depressio mentis	49	1.1	.8–1.4
Other psychoses [1]	22	.5	.3–.7
Atypical psychoses	13	.3	.1–.4
Undiagnosed psychoses	28	.6	.4–.8
Oligophrenia	191	4.2	3.6–4.7
Total	716	15.6	14.4–16.7
Duplications	3	----	----

[1] General paresis; psychoses with organic brain disease; senile, presenile, and arteriosclerotic dementia; and alcoholic psychoses. There were less than 10 cases in each of these groups.

The data for the Eastern Health District of Baltimore shown in table 3 introduce a quite different type of coverage, reaching far beyond the ranks of individuals manifestly mentally disordered. The psychotics, psychoneurotics, and psychopathic personalities who may together be called the "clinical" group furnish only 17 percent of all cases and even the inclusion of the "subclinical" types does not raise this proportion to more than 20 percent. It should be noted that table 3 presents the cases active in 1936 by leading classification. A complete tabulation would reveal hundreds of cases with double

TABLE 3.—*Active cases of mental disorder in the Baltimore survey*

[Population: 55,129]

Leading classification	Number of cases	Rate per 1,000	95 percent confidence limits
Psychosis	367	6.7	6.0- 7.3
Schizophrenia	158	2.9	2.4- 3.3
Manic-depressive	41	.7	.5- 1.0
Senile and arteriosclerotic	38	.7	.5- .9
Alcoholic	15	.3	.1- .4
Syphilitic	29	.5	.3- .7
With mental deficiency	28	.5	.3 .7
Other [1]	27	.5	.3- .7
Undiagnosed	31	.6	.4- .8
Psychoneurosis	171	3.1	2.6- 3.6
Psychopathic personality	30	.5	.4- .7
Personality disorder in adults	218	4.0	3.4- 4.5
Psychotic traits	26	.5	.3- .7
Neurotic traits	60	1.1	.8- 1.4
Psychopathic traits	13	.2	.1- .4
Behavior deviation	119	2.2	1.8- 2.5
Behavior disorder in children	449	8.1	7.4- 8.9
Neurotic traits	162	2.9	2.5- 3.4
Conduct problems	287	5.2	4.6- 5.8
Minor and possible disorder in adults and children	651	11.8	10.9-12.7
Epilepsy	75	1.4	1.1- 1.7
Mental deficiency	375	6.8	6.1- 7.5
School progress problems without mental deficiency	434	7.9	7.1- 8.6
Adult delinquency without other information	567	10.3	9.4-11.1
Total active cases [2]	3,337	60.5	58.5-62.6

[1] Involutional, with epilepsy, post traumatic, and deliria not due to alcohol.
[2] Active+inactive cases: 3,416=62.0 per 1,000.

or multiple diagnosis, indicating a much more comprehensive analysis than was undertaken by Brugger and Strömgren. Some groups would expand spectacularly. The total number of epileptics, for instance, was 126 or 2.3 (1.9–2.7) per 1,000, that of mental defectives 694 or 12.6 (11.7–13.5) per 1,000 general population.

Table 4 summarizes the basic information about the active and inactive cases in the Tennessee survey. Again the full-fledged psychoses and psychoneuroses are very definitely in the minority. Mentally defective individuals not presenting a definite social or personal problem are listed as inactive here. The total number of mental defectives is 376 or 15.2 (13.6–16.7) per 1,000.

TABLE 4.—*Active and inactive cases of mental disorder in the Tennessee Survey*

[Population: 24,804]

Primary diagnosis	Number of cases			Rate per 1,000 (total cases)	95 percent confidence limits
	Active	Inactive	Total		
Psychosis	121	35	156	6.3	5.3- 7.3
Schizophrenia			43	1.7	1.2- 2.3
Affective			41	1.7	1.1- 2.2
Senile			23	.9	.5- 1.3
With mental deficiency			15	.6	.3- .9
Other [1]			24	1.0	.6- 1.4
Undiagnosed			10	.4	.2- .7
Psychoneurosis	89	10	99	4.0	3.2- 4.8
Conduct and behavior disorder	285	129	414	16.7	15.1-18.3
Psychopathic traits	152	34	186	7.5	6.4- 8.6
Special personality traits	208	127	335	13.5	12.1-15.0
Mental deficiency	19	184	203	8.2	7.1- 9.3
Organic and miscellaneous conditions	40	288	328	13.2	11.8-14.7
All types	914	807	1,721	69.4	66.1-72.7

[1] General paresis, other organic states, posttraumatic, with alcoholism, and with epilepsy.

Is there any legitimate possibility for comparison of findings between the five surveys reviewed in this paper? They were made by four different investigators (or groups of investigators) in three countries. The widely divergent methods and practices employed in each study for case finding and classification has been set forth in the preceding pages as well as the great variations in scope. Nevertheless there is a strong temptation to seek a basis for comparison. It is realized that such a comparison cannot be exact; that it cannot give more, in fact, than a very general idea nor be more than a very slim basis for generalizations. Apart from the inevitable sampling variation, the range of which is indicated in the tables, a difference of prevalence rates between two surveys may be due to differences in scope, in case finding, in diagnosis, or to actual variations in the true prevalence of the various types of mental disorder. At the present state of our knowledge no valid conclusions can yet be drawn from the differences between the observed prevalence rates. On the other hand if the rate is found reasonably near the same level in all surveys, then the suspicion seems justified that we may be on the track of a numerical relationship of wider applicability.

The prevalence rates computed from the total numbers of active and inactive cases included in each survey are 12.8 per 1,000 general population for Thuringia, 15.6 for Bornholm, 59.9 for Bavaria, 62.0 for Baltimore, and 69.4 for Tennessee. In view of what has been said before it is obvious that the marked differences are due mainly to variations in scope and that at least some of the apparent similarities of rates must be entirely coincidental.

A fairly good picture of the prevalence of the major forms of mental disorder may be obtained from a combination of the psychoses and psychoneuroses, covering what might be called the field of "clinical"

or "traditional" psychiatry. A clear-cut separation of the two groups is not feasible in the three European surveys. Likewise it is necessary to include both active and inactive cases as this distinction cannot be made in Brugger's papers. The aggregate prevalence rate is 6.4 (5.6–7.2) per 1,000 general population in Thuringia, 8.7 (6.7–10.7) in Bavaria, 10.3 (9.0–11.5) in Tennessee, 11.4 (10.5–12.4) in Bornholm, and 11.8 (10.9–12.7) in Baltimore.[3] It should be borne in mind, however, that the comparability is by no means absolute, all epileptics, for instance, being included in Thuringia, Bavaria, and Bornholm, but only epileptics with psychosis in the American surveys. Nevertheless the statement is probably not far off the mark that about 1 percent of the general population is or has been suffering from major mental disorder, that is from a psychosis or psychoneurosis. Among these persons there seem to be considerably more psychotics than psychoneurotics. Such would, of course, not be the case if all individuals with any "neurotic" manifestations were included.

Table 5 presents a synopsis of prevalence rates for two supposedly uniformly defined groups. Active and inactive cases are included in the figures for the two "endogenous" psychoses and it will also be

TABLE 5.—*Active and recovered cases of schizophrenia and manic-depressive psychosis in five surveys*

	Schizophrenia	Manic-depressive	Schizophrenia and manic-depressive
Number of cases:			
Thuringia	73	20	93
Bavaria	22	12	34
Bornholm	150	122	272
Baltimore [1]	193	62	255
Tennessee	43	41	84
Rate per 1,000:			
Thuringia	1.9	.5	2.5
Bavaria	2.5	1.4	3.9
Bornholm	3.3	2.7	5.9
Baltimore [1]	3.5	1.1	4.6
Tennessee	1.7	1.7	3.4
95 percent confidence limits:			
Thuringia	1.5–2.4	.3–.8	2.0–3.0
Bavaria	1.5–3.6	.6–2.2	2.6–5.3
Bornholm	2.8–3.8	2.2–3.1	5.2–6.6
Baltimore [1]	3.0–4.0	.8–1.4	4.1–5.2
Tennessee	1.2–2.2	1.1–2.2	2.6–4.1

[1] One-day estimate made on the basis of the known numbers of hospitalized and nonhospitalized patients and of postpsychotic individuals in each diagnostic group.

noted that the aggregate rates present a more regular pattern than the constituent parts. No other groups appear comparable throughout all five surveys. Unfortunately the numbers of cases underlying many of the rates in table 5 are quite small.

Turning now to attempts at estimating the *incidence* of mental disorder for sample populations we find a number of papers using a

[3] The Baltimore figure does not include inactive cases of psychoneurosis. In the Tennessee study there were only 10 such individuals, corresponding to a rate of 0.4 per 1,000. Figures in parentheses indicate 95 percent confidence limits. Apparent inconsistencies with the tables are due to multiple diagnoses.

method inaugurated by Professor Rüdin (*33*) of the German Research Institute for Psychiatry at the Kaiser Wilhelm Institute in Munich. Some of these studies were conducted and published under the auspices of the Institute; others were made independently but conform to the technique worked out there.

In each of them the procedure consists of three phases; first, construction of the sample population, second, case finding and diagnosis, and third, statistical analysis. The construction of the sample population starts with the selection of a group of propositi. These must meet a number of requirements which are often hard to reconcile. The group should be of adults and as large as can be handled, of average social-economic status, accessible to the psychiatrist but unbiased as far as disposition to mental disorder is concerned. Actually most of the groups of propositi studied number between 100 and 200 persons. They fall by type of origin into three classes; first, wives and husbands of patients with organic psychoses; second, medical and surgical patients themselves; and third, nonpatient material collected on a geographic or occupational basis.

The next step is to obtain a roster of all siblings of the propositi. In order to get complete information this must be done with great thoroughness and often the help of interested members in the family of the propositus is enlisted. Corroborative evidence is obtained from church and civil authorities, schools, etc. Psychiatric case finding is very closely connected with the genealogic work on the sample population. The informants are questioned about illnesses, commitments to mental institutions, outstanding personality traits, and other pertinent facts. Wherever possible the opinions of several observers about the same individual are checked against each other. The picture is rounded out by hospital records, physicians' statements, and other documents. Most of the authors have endeavored to see personally as many individuals in the families of the propositi and in particular as many of the mentally abnormal cases reported to them as feasible. In every study, however, some of the siblings are dead, some live in remote places, and a few are uncooperative. Therefore some of the psychiatric diagnoses must be made on the basis of descriptions by lay persons.

The German school has made conscious efforts to keep diagnostic practice and terminology as uniform as possible. Some groupings appear to be comparable to their counterparts in American psychiatry. This is true for schizophrenia, manic-depressive psychoses, general paresis, and idiopathic epilepsy. In some cases distinctions are somewhat unsatisfactory as, for instance, between senile dementia and cerebral arteriosclerosis and perhaps also between hysteria and psychopathic personality. The latter term apparently is used for a much wider range of conditions in Germany than in this country.

The greater number of the genealogic studies covers only institutionalized cases of psychopathic personality. Data on mental deficiency are likewise not directly comparable to American and English studies because our highly standardized testing procedures are not used and diagnoses are made on the basis of social history and clinical observation. The term "oligophrenia" covers idiots and imbeciles. For mental deficiency of a lesser degree the expression "debil" is used, but many of the papers do not attempt to report these cases. Of alcoholics, only such individuals are included who show evident moral, social, or economic decline or at least lack of progress which ordinarily would be expected (*24*). This criterion is applicable on all occupational and cultural levels.

Of prime importance for a successful estimate of the incidence of mental disorder from genealogical data is of course the cooperativeness of the propositi, their relatives, and other informants. It must be made clear to them why such information is sought; the disinclination to reveal abnormalities in the family has to be overcome and they must be convinced that the investigation will not lead to any discrimination against them. It is reported that after the enactment of the German sterilization laws people became quite reluctant to assist in genealogical studies of their own families (*4*, *6*). We have been unable to find any papers of the type described published after 1937. It may well be that the work had to be discontinued because it was felt that the results had become too unreliable.

The final step is the statistical analysis. Incidence is given in terms of expectancy, expectancy being defined as the chance of developing or acquiring a specific disease if the individual lives through the age period of susceptibility. It is obvious that a rate thus defined is significant for conditions that have their onset at birth, in youth, or middle life, but that it cannot be used for instance for senile dementia because here the period of susceptibility has no upper age limit. The German group responsible for the method was and probably still is chiefly interested in the heredity of mental disorder and has not paid much attention to the psychoses of advanced age.

The actual computations of expectancy are usually carried out for the major psychoses by the abridged method of Weinberg (*42*). This consists in putting into the numerator the number of cases and into the denominator the total number of siblings who have passed through the period of susceptibility plus one-half of those who have entered but not passed it. The age of susceptibility is assumed to be 16 to 40 years for schizophrenia, 20 to 50 years for manic-depressive psychosis, and 30 to 50 years for general paresis. For mental deficiency, epilepsy, and other forms of mental disorder the number of cases is as a rule simply related to the number of siblings who have passed their tenth

birthday. These approximations seem close enough for most purposes. More complicated formulae, though sometimes used, appear unjustified in view of the scanty basic data.

In general there has been a marked tendency on the part of the German workers to overestimate the statistical validity of their findings. As early as 1928 when only two studies had been published, Luxenburger wrote as follows: "The expectancy of dementia praecox, manic-depressive psychoses, epilepsy, and general paresis seems to be *practically established* for a predominantly urban average population (Munich): this expectancy is for dementia praecox 0.85 percent, for manic-depressive psychosis 0.41 percent, for epilepsy 0.29 and for general paresis 1.73 percent. The figures for dementia praecox and paresis in particular are stable enough to be considered as *standard rates*" (*24*). The italics are Luxenburger's. These rates were carried from one publication to the other and often uncritically accepted as more or less official. It is not generally known that these so-called standard rates are based on eight cases of paresis, five of schizophrenia, and two each of manic-depressive psychosis and epilepsy. In subsequent years when one paper after the other appeared in the Zeitschrift für die gesamte Neurologie und Psychiatrie the authors could not always resist the temptation to compare their individual findings with those of others. Practically all these comparisons are worthless because of the small numbers in each sample. From the scientific point of view, it would appear that a better way of utilizing the genealogical method would be to make as many studies as possible with the same technique and to combine them into one large series. Such compilations have been made from time to time in Germany at least for certain diagnostic groups (*12*, *17*, *37*, *38*).

Table 6 presents a synopsis based upon 15 papers published between 1927 and 1937. In four (*7*, *24*, *31*, *35*) the propositi are wives and husbands of patients with organic psychoses, in six (*2*, *3*, *5*, *6*, *36*, *43*) they are medical and surgical patients and in the remaining five (*1*, *4*, *9*, *19*, *25*) a nonpatient group has been used. Four (*5*, *24*, *35*, *36*) groups of propositi were investigated in Munich, four (*9*, *19*, *25*, *43*) in the rural part of Bavaria, two (*4*, *6*) in Silesia, one each in Berlin (*31*) and Saxony (*1*), and three in Switzerland (*2*, *3*, *7*). Northern Germany is definitely under-represented. The total number of propositi in the 15 studies is 2,090 and the total number of siblings 10,684. Table 6 presents in summary form the number of cases of mental disorder found among these siblings and the expectancies calculated from them. Weinberg's abridged method is used for schizophrenia, manic-depressive psychosis, and general paresis; all other forms of illness are related to persons over 10 years of age, except alcoholism where those over 20 are used as a population base. The confidence limits indicate that the sample is not as numerically adequate as one

would like to have it, apart from the question of representativeness. The almost complete absence of senile dementia and cerebral arteriosclerosis—one case of either is included among the "other psychoses"—is of course due to the age distribution of the siblings. Only 15 percent of them are over 50 years of age and very few over 60.

TABLE 6.—*Mental disorder found among a total number of 10,684 siblings of 2,090 propositi in 15 papers from Germany and Switzerland*

	Bibliography No.															Total	Rate per 1,000	95 percent confidence limits
	1	2	3	4	5	6	7	9	19	24	25	31	35	36	43			
Schizophrenia	7	6	2	3	4	1	6	3	----	3	2	1	2	2	----	42	7.7	5.4–10.1
Manic-depressive	3	1	----	1	----	1	----	1	----	1	----	1	1	----	----	10	2.3	.9– 3.8
General paresis	2	----	----	----	1	----	----	----	----	4	1	----	4	----	----	12	3.5	1.5– 5.5
Epilepsy	6	4	3	3	1	2	1	1	2	1	2	3	1	2	1	33	4.2	2.8– 5.7
Hysteria	6	5	----	----	----	----	----	----	2	1	2	----	----	----	1	17	2.2	1.1– 3.2
Other psychoses	----	----	----	----	1	1	----	2	----	----	----	----	3	----	----	7	.9	.2– 1.6
Undiagnosed psychoses	----	----	----	1	1	----	1	1	----	2	----	----	----	1	----	7	.9	.2– 1.6
Oligophrenia	9	14	5	12	6	6	3	6	5	1	1	2	2	2	2	76	9.7	7.5–11.9
Morons ("debil")	(1)	(1)	(1)	(1)	(1)	(1)	7	3	6	(1)	3	13	(1)	2	13	[1]47	15.5	11.0–19.9
Psychopathic personalities:																		
Institutionalized	----	----	----	3	3	2	2	----	----	----	----	2	1	3	----	16	2.0	1.0– 3.0
Not institutionalized	34	2	(1)	12	(1)	2	5	(1)	(1)	(1)	(1)	26	(1)	4	(1)	[1]85	18.8	14.8–22.8
Alcoholism	1	20	6	----	4	----	4	2	5	5	3	1	6	3	----	60	8.6	6.4–10.8

[1] Morons ("debil") and psychopathic personalities, not institutionalized, are included in only 7 papers each.

Luxenburger was quite lucky in the case of schizophrenia with his original "standard rate" of 0.85 percent based on five cases, but he was less successful concerning manic-depressive psychosis and epilepsy and quite off the mark in general paresis.

The combined incidence for all forms of psychosis and psychoneurosis—excluding the disorders of advanced age but including epilepsy—appears to be about 20 per 1,000 individuals living through the age period of susceptibility. This is reasonably compatible with the figures on prevalence previously presented.

Outside Germany and Switzerland, the genealogic method has been used by Eliot Slater (*39*) in England, who used a group of surgical patients as propositi and considers his results as most unsatisfactory, and by Strömgren (*40*) in his investigation of Bornholm. Strömgren's findings based on a material of 427 propositi with 1,927 siblings are in line with the German figures, but the number of cases is of course quite small. No such studies have been made in the United States. Any undertaking of this type would be beset with great difficulties in a country where general registration of population is not practiced.

The expectancies based on genealogic studies conducted in Germany and Switzerland may be compared with estimates for New York State based on first admissions to mental hospitals (*41*). This com-

parison seems justified for schizophrenia, manic-depressive psychosis, and general paresis. Using a suitable life table the German figures can be converted to incidence rates in terms of persons born rather than of persons surviving the period of susceptibility. The reduction is carried out in table 7. The German rates are consistently much lower than the rates for New York State. This may be entirely due to incomplete case finding in the genealogical material but it is also possible that the incidence of the three psychoses is actually higher in New York. Several considerations point in this direction. Almost two-thirds of the population of New York State live in the metropolitan area of the largest city of the world; only five percent live on farms. The groups from which the German samples are drawn are much less urbanized and most psychoses seem to be more common in urban than in rural areas. It is also likely that the presence of three million foreign-born tends to elevate the incidence rate for New York. There is evidence that psychoses occur more often among migrants—both interstate and intercontinental—than in nonmigrant populations (*26, 29, 30*). On the other hand it must not be forgotten that the estimates for New York are based upon first admissions and do not include cases who at no time receive intramural care. This limitation does not apply to the genealogic sample studies.

TABLE 7.—*Expectancy per 1,000 born for three major psychoses in Germany and New York State*

	Germany	New York
Schizophrenia	6.8	16.0
Manic-depressive	2.0	5.0
General paresis	2.9	4.4

In summary, then, it appears that poor selection of sample populations and insufficient numbers of cases as well as differences in investigative methods, differences in fundamental concepts, and differences in diagnosis and classification tend to make the available studies of prevalence and incidence of mental disorder basically incomparable. In this sense the result of this "survey of surveys" is disappointing. At the same time it furnishes a challenge to continue investigation and to make effort to correct the shortcomings of the science in which we work.

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DEATHS DURING WEEK ENDED DECEMBER 18, 1943

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Dec. 18, 1943	Corresponding week, 1942
Data from 88 large cities of the United States:		
Total deaths	11,379	9,449
Average for 3 prior years	8,927	
Total deaths, 50 weeks of year	451,285	419,868
Deaths under 1 year of age	657	672
Average for 3 prior years	570	
Deaths under 1 year of age, 50 weeks of year	32,064	29,140
Data from industrial insurance companies:		
Policies in force	66,117,272	65,272,092
Number of death claims	12,220	12,006
Death claims per 1,000 policies in force, annual rate	9.6	9.6
Death claims per 1,000 policies, 50 weeks of year, annual rate	9.6	9.1

PREVALENCE 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

REPORT FROM STATES FOR WEEK ENDED DECEMBER 25, 1943

Summary

A total of 83,973 cases of influenza was reported for the week, as compared with 82,951 for the preceding week. However, omitting Kentucky, which reported 34,148 cases for the week ended December 18, stated to be based on estimates in some localities, the figures for reported cases for the 2 weeks are 48,803 and 81,753, respectively. These figures probably provide a more nearly accurate index to the trend. In 44 States (excluding Kentucky and 3 New England States which reported no cases) increases were recorded currently in 32 States, decreases in 11 States, and the same number reported in 1 State. Reported cases for these States for weeks ended November 27, and December 4, 11, 18, and 25 are as follows: 2,464, 4,486, 18,330, 48,801 ,and 81,753. For the corresponding weeks of 1940 the figures for all States reporting were as follows: 1,332, 3,014, 9,663, 29,864, and 42,457. In the mild epidemic of that season, the peak was reached during the week ended January 18, 1941, with 107,270 reported cases.

An index to the corresponding increase in mortality is given by the following figures:

	Week ended—				
	Nov. 27	Dec. 4	Dec. 11	Dec. 18	Dec. 25
Deaths from influenza and pneumonia in 39 scattered cities:					
1943	254	381	459	832	1,063
1942	299	294	332	378	387
3-year average	284	292	304	334	338
Total deaths in 90 large cities	8,677	9,846	10,373	11,524	12,646
Percentage increase	−3.3	13.5	5.4	11.1	9.7

For the current week, the number of cases of poliomyelitis declined from 89 to 39. The 5-year median is 48. This is the first week since April that the incidence has been below the median.

A total of 361 cases of meningococcus meningitis was reported, as compared with 281 last week and a 5-year (1938–42) median of 34. The incidence increased in all of the nine geographic areas except the South Atlantic and Mountain. A total of 2,932 cases has been reported since the beginning of the fourth quarter of the year, as compared with 916 for the same period last year, the highest comparable incidence of the past 6 years. A total of 17,459 cases has been reported to date this year.

A total of 475 cases of dysentery (amebic, bacillary, and unspecified) was reported. Cumulative totals for 51 weeks of the year and for the past 12 weeks, respectively (comparable figures for last year in parentheses), are 24,396 (19,467) and 5,650 (3,506).

New low rates will apparently be established this year for both smallpox and typhoid fever. To date, 730 cases of smallpox and 5,418 cases of typhoid fever have been reported, as compared with 801 and 6,652 cases, respectively, last year, in which year both diseases established new low incidence rates.

A total of 4,475 cases of endemic typhus fever has been reported to date, as compared with 3,662 for the same period last year, the year of highest reported incidence.

The total deaths, all causes, in 90 large cities in the United States up to and including the week ended December 25 is 469,290, as compared with 433,740 for the same period last year.

Telegraphic morbidity reports from State health officers for the week ended December 25, 1943, and comparison with corresponding week of 1942 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42
	Dec. 25, 1943	Dec. 26, 1942		Dec. 25, 1943	Dec. 26, 1942		Dec. 25, 1943	Dec. 26, 1942		Dec. 25, 1943	Dec. 26, 1942	
NEW ENGLAND												
Maine	1	1	1	62	1	1	91	13	37	4	5	1
New Hampshire	0	1	0	(1)	----	----	2	14	4	1	0	0
Vermont	0	0	0	----	----	----	1	159	25	1	0	0
Massachusetts	7	4	4	----	----	----	340	352	196	17	6	2
Rhode Island	0	0	0	35	----	----	86	1	1	6	0	0
Connecticut	1	1	0	832	2	2	6	211	67	7	2	0
MIDDLE ATLANTIC												
New York	14	19	20	[2] 475	[2] 10	[2] 14	653	243	395	43	6	3
New Jersey	6	6	7	351	12	8	473	38	38	24	4	0
Pennsylvania	10	7	17	63	3	----	455	909	678	34	6	5
E. NO. CENTRAL												
Ohio	13	8	16	6,986	7	8	1,294	46	42	12	1	1
Indiana	7	8	8	677	9	14	85	75	11	22	8	0
Illinois	4	8	27	437	7	14	147	46	46	28	0	0
Michigan [3]	6	11	8	304	1	2	539	45	206	15	1	0
Wisconsin	8	3	0	1,832	31	31	455	164	164	12	3	0
W. NO. CENTRAL												
Minnesota	7	2	2	16	1	2	442	2	31	2	1	0
Iowa	2	1	3	11,463	----	3	33	64	69	1	0	0
Missouri	0	4	10	100	3	5	35	6	6	24	1	1
North Dakota	3	2	2	1,443	24	24	230	0	12	2	0	0
South Dakota	3	0	4	39	----	----	9	147	7	0	0	0
Nebraska	1	3	2	51	5	1	3	87	8	0	0	0
Kansas	5	8	5	975	7	15	25	25	70	5	1	1
SOUTH ATLANTIC												
Delaware	0	0	0	----	----	----	12	0	1	0	0	0
Maryland [3]	3	8	8	696	11	8	36	3	3	10	8	0
District of Columbia	0	0	1	845	3	3	25	0	3	2	1	1
Virginia	5	12	14	7,584	383	152	93	12	41	6	10	0
West Virginia	3	4	9	3,747	16	18	83	6	6	1	3	3
North Carolina	9	4	38	76	2	10	96	3	145	1	2	1
South Carolina	7	3	4	1,958	204	315	41	3	3	1	1	1
Georgia	5	6	10	1,405	71	71	68	13	18	4	2	0
Florida	8	0	4	114	1	9	10	1	2	5	0	1
E. SO. CENTRAL												
Kentucky	3	3	5	[4] 2,220	18	18	9	58	12	7	0	0
Tennessee	7	6	11	982	56	52	51	13	29	5	0	1
Alabama	9	15	15	1,573	143	143	56	1	20	5	1	1
Mississippi [3]	0	5	5	----	----	----	----	----	----	2	0	1
W. SO. CENTRAL												
Arkansas	16	6	7	4,090	41	97	35	58	28	0	0	0
Louisiana	10	9	9	148	9	9	2	44	11	6	1	1
Oklahoma	2	8	8	2,022	94	97	9	103	11	4	0	0
Texas	20	21	47	9,392	823	823	59	16	35	4	2	2
MOUNTAIN												
Montana	0	0	0	2,654	15	15	126	26	26	4	0	0
Idaho	0	4	2	12	1	1	0	60	3	0	0	0
Wyoming	2	0	1	814	66	15	12	10	10	0	0	0
Colorado	8	8	11	1,041	34	36	116	27	27	0	3	3
New Mexico	0	0	1	28	3	2	4	3	10	1	0	0
Arizona	3	0	2	731	83	126	8	1	3	0	0	0
Utah [3]	0	0	0	5,723	43	43	10	261	19	1	1	0
Nevada	0	0	0	908	----	----	0	5	0	0	0	0
PACIFIC												
Washington	2	0	1	3,200	4	3	18	311	182	5	1	1
Oregon	2	2	2	2,201	13	13	62	289	37	3	11	0
California	12	20	20	3,668	30	102	87	44	190	24	0	0
Total	234	241	424	83,973	2,290	2,693	6,532	4,018	4,544	361	92	34
51 weeks	13,489	15,236	16,569	293,567	105,727	182,255	594,435	500,085	500,085	17,459	3,587	1,986

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended December 25, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever [4]		
	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42
	Dec. 25, 1943	Dec. 26, 1942		Dec. 25, 1943	Dec. 26, 1942		Dec. 25, 1943	Dec. 26, 1942		Dec. 25, 1943	Dec. 26, 1942	
NEW ENGLAND												
Maine	0	0	0	22	8	16	0	0	0	1	0	1
New Hampshire	0	0	0	2	15	9	0	0	0	0	0	0
Vermont	0	0	0	4	1	7	0	0	0	0	0	0
Massachusetts	3	0	0	210	238	145	0	0	0	0	1	1
Rhode Island	0	0	0	9	3	3	0	0	0	0	0	0
Connecticut	0	0	0	30	28	33	0	0	0	2	0	0
MIDDLE ATLANTIC												
New York	1	4	1	265	279	297	0	0	0	1	3	6
New Jersey	0	0	0	79	47	92	0	0	0	2	0	0
Pennsylvania	1	0	1	163	157	245	0	14	0	0	0	7
EAST NORTH CENTRAL												
Ohio	1	0	1	220	243	243	0	13	1	1	0	3
Indiana	0	0	0	76	68	84	0	6	5	1	3	1
Illinois	2	0	1	136	168	323	3	1	1	0	4	4
Michigan [3]	0	0	0	86	95	182	0	0	1	4	0	2
Wisconsin	0	0	1	141	204	153	0	0	1	0	0	0
WEST NORTH CENTRAL												
Minnesota	0	1	1	96	56	76	0	0	15	0	3	0
Iowa	0	1	1	97	46	70	0	0	2	0	0	1
Missouri	0	0	0	46	66	79	0	0	2	0	5	4
North Dakota	0	1	0	6	14	13	0	0	0	1	0	0
South Dakota	0	0	0	19	23	17	0	2	2	0	0	0
Nebraska	0	0	0	36	20	20	0	0	1	0	0	0
Kansas	0	0	0	60	46	85	0	0	0	0	2	0
SOUTH ATLANTIC												
Delaware	0	0	0	3	2	18	0	0	0	1	0	0
Maryland [3]	0	1	1	47	40	40	0	0	0	1	1	2
District of Columbia	0	0	0	16	12	10	0	0	0	0	0	1
Virginia	0	1	1	40	45	31	0	0	0	1	3	3
West Virginia	0	0	1	38	37	67	0	0	0	0	0	1
North Carolina	1	0	0	36	39	68	0	0	0	0	0	0
South Carolina	0	0	0	5	11	10	0	0	0	0	2	1
Georgia	0	0	0	13	35	23	0	0	0	0	0	6
Florida	0	0	0	6	5	8	1	0	0	4	0	0
EAST SOUTH CENTRAL												
Kentucky	0	1	0	43	22	59	0	1	0	4	1	2
Tennessee	0	2	0	38	58	58	0	0	0	1	1	2
Alabama	0	0	1	13	22	25	1	0	0	0	3	2
Mississippi [3]	0	2	0	10	2	8	0	0	0	0	1	1
WEST SOUTH CENTRAL												
Arkansas	0	1	1	4	4	12	0	0	0	0	1	3
Louisiana	1	0	1	6	4	11	0	0	0	3	4	4
Oklahoma	1	0	0	30	27	24	0	0	2	5	1	1
Texas	1	7	3	36	39	48	1	0	2	3	4	7
MOUNTAIN												
Montana	0	0	0	39	8	30	0	0	0	0	0	0
Idaho	0	1	0	7	4	7	0	0	0	0	0	0
Wyoming	0	0	0	4	46	11	0	0	0	0	0	0
Colorado	0	1	0	35	58	29	0	0	1	0	1	0
New Mexico	0	0	0	2	2	7	0	0	0	1	2	3
Arizona	1	2	0	5	0	4	0	0	0	0	2	1
Utah [3]	6	0	0	82	54	13	0	0	0	0	0	0
Nevada	2	0	0	2	3	0	0	0	0	0	0	0
PACIFIC												
Washington	2	0	0	74	9	44	0	0	0	2	0	0
Oregon	6	0	0	79	11	11	0	0	0	2	0	0
California	10	10	3	196	103	107	0	0	0	1	1	3
Total	39	36	48	2,712	2,527	2,979	6	37	47	42	49	89
51 weeks	12,358	4,143	7,261	137,454	123,995	152,425	730	801	2,401	5,418	6,652	9,505

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended December 25, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Whooping cough			Week ended Dec. 25, 1943								
	Week ended—		Median 1938–42	Anthrax	Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	Dec. 25, 1943	Dec. 26, 1942			Amebic	Bacillary	Unspecified					
NEW ENGLAND												
Maine	6	39	19	0	0	0	0	0	0	0	0	0
New Hampshire	0	5	7	0	0	0	0	0	0	0	0	0
Vermont	10	42	35	0	0	0	0	0	0	0	0	0
Massachusetts	54	194	194	0	0	4	0	2	0	0	0	0
Rhode Island	7	26	26	0	0	0	0	0	0	0	0	0
Connecticut	12	29	54	0	0	2	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York	125	321	410	0	2	3	0	4	1	0	0	0
New Jersey	61	130	162	0	3	0	0	1	0	0	1	0
Pennsylvania	66	253	253	0	0	0	0	0	0	0	0	0
E. NO. CENTRAL												
Ohio	38	133	133	0	0	0	0	0	0	0	2	0
Indiana	23	24	17	0	0	0	0	0	0	0	1	0
Illinois	54	89	171	0	4	3	0	0	0	0	3	0
Michigan [3]	75	191	203	0	0	1	0	1	0	0	0	0
Wisconsin	94	142	142	0	0	0	0	0	0	0	0	0
W. NO. CENTRAL												
Minnesota	12	30	42	0	4	0	0	0	0	0	0	0
Iowa	18	28	22	0	0	0	0	0	0	0	0	0
Missouri	4	11	20	0	0	0	0	0	0	0	0	0
North Dakota	31	7	4	0	0	0	0	0	0	0	0	0
South Dakota	0	1	2	0	0	0	0	0	0	0	0	0
Nebraska	3	1	2	0	0	0	0	0	0	0	0	0
Kansas	15	46	39	0	0	1	0	0	0	0	0	0
SOUTH ATLANTIC												
Delaware	2	7	4	0	0	0	0	0	0	0	0	0
Maryland [3]	28	69	49	0	0	0	1	0	0	0	3	0
District of Columbia	3	9	13	0	0	0	0	0	0	0	0	0
Virginia	60	59	59	0	0	0	27	0	0	0	2	0
West Virginia	13	4	15	0	0	0	0	0	0	0	0	0
North Carolina	48	26	85	0	0	0	0	0	0	0	0	3
South Carolina	41	4	19	0	0	3	0	0	0	0	0	1
Georgia	0	13	10	0	0	3	0	0	0	0	0	16
Florida	20	5	5	0	0	5	0	0	0	0	0	9
E. SO. CENTRAL												
Kentucky	47	19	24	0	0	1	0	0	0	0	2	0
Tennessee	19	16	19	0	1	0	0	0	0	0	0	0
Alabama	12	43	36	0	0	0	0	0	0	1	0	12
Mississippi [3]	----	----	----	0	0	0	0	0	0	0	0	2
W. SO. CENTRAL												
Arkansas	22	26	26	0	0	1	0	0	0	0	0	1
Louisiana	1	0	5	0	0	0	0	0	0	0	0	4
Oklahoma	0	15	5	0	0	0	0	0	0	0	0	0
Texas	151	128	121	0	10	375	0	0	0	0	0	34
MOUNTAIN												
Montana	6	17	6	0	0	0	0	1	0	0	0	0
Idaho	1	1	4	0	0	0	0	0	0	0	0	0
Wyoming	0	6	3	0	0	0	0	1	0	0	0	0
Colorado	22	6	32	0	0	0	0	0	0	0	0	0
New Mexico	8	9	15	0	0	0	0	0	0	0	0	0
Arizona	20	0	10	0	0	0	14	0	0	0	1	0
Utah [3]	8	14	18	0	0	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington	20	16	16	0	0	0	1	0	0	0	0	0
Oregon	18	9	12	0	0	0	0	0	0	0	0	0
California	42	192	137	0	2	4	0	1	0	0	0	0
Total	1,320	2,455	3,176	0	26	406	43	11	1	1	15	82
51 weeks	175,128	175,284	175,284	65	2,104	17,968	4,324	680	30	436	780	4,475
51 weeks, 1942	----	----	----	78	1,160	11,953	6,354	552	45	452	879	3,662

[1] Upper respiratory infections, 21.
[2] New York City only.
[3] Period ended earlier than Saturday.
[4] Including paratyphoid fever cases reported separately as follows: Michigan, 1; New York, 1; Florida 2.
[5] Later reports for Kentucky reveal that an estimated 30,000 of the more than 35,000 cases occurring in the week ended Dec. 11 (Public Health Reports, Dec. 24, 1943, p. 1901, footnote 3) were included in the telegraphic report for the week ended Dec. 18.

WEEKLY REPORTS FROM CITIES

City reports for week ended Dec. 11, 1943

This table lists the reports from 88 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	------	0	11	0	2	0	7	0	0	4
New Hampshire:												
Concord	0	0	------	0	0	0	0	0	1	0	0	0
Vermont:												
Barre	0	0	------	0	0	0	0	0	0	0	0	0
Massachusetts:												
Boston	4	0	------	0	14	10	18	1	53	0	0	25
Fall River	0	0	------	0	1	0	0	1	3	0	0	0
Springfield	0	0	------	0	17	2	3	0	7	0	0	2
Worcester	0	0	------	0	1	0	9	0	61	0	0	7
Rhode Island:												
Providence	0	0	1	0	65	3	4	0	3	0	0	19
Connecticut:												
Bridgeport	0	0	1	1	0	1	4	0	4	0	0	0
Hartford	0	0	1	0	0	1	1	0	9	0	0	2
New Haven	0	0	1	0	2	1	2	0	2	0	0	1
MIDDLE ATLANTIC												
New York:												
Buffalo	0	0	------	2	3	3	11	1	9	0	0	2
New York	13	1	70	5	444	20	89	7	185	0	4	59
Rochester	1	0	------	2	0	2	26	0	5	0	0	10
Syracuse	0	0	------	0	0	0	3	0	3	0	0	12
New Jersey:												
Camden	2	0	1	1	0	1	3	0	3	0	0	1
Newark	0	0	12	0	1	3	8	0	9	0	0	11
Trenton	0	0	1	0	2	0	3	0	11	0	0	3
Pennsylvania:												
Philadelphia	2	0	13	5	5	15	44	0	41	0	1	12
Pittsburgh	1	0	9	5	155	1	23	0	20	0	2	6
Reading	0	0	------	0	1	0	3	0	1	0	0	5
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	3	0	2	2	5	0	5	0	23	0	0	2
Cleveland	0	0	7	1	48	4	6	0	47	0	2	13
Columbus	0	0	1	1	18	0	3	0	12	0	0	1
Indiana:												
Fort Wayne	0	0	------	0	0	0	1	0	2	0	0	0
Indianapolis	6	0	------	3	2	2	18	0	18	0	0	4
South Bend	0	0	------	0	48	0	0	0	0	0	0	0
Terre Haute	0	0	------	0	0	0	3	0	0	0	0	0
Illinois:												
Chicago	2	0	120	8	8	13	42	4	67	0	1	33
Springfield	0	0	17	0	2	0	7	0	1	0	0	0
Michigan:												
Detroit	3	0	44	0	13	11	19	0	52	0	3	21
Flint	0	0	------	0	9	0	8	0	4	0	0	15
Grand Rapids	0	0	------	0	51	0	2	0	6	0	0	2
Wisconsin:												
Kenosha	0	0	------	0	1	0	0	0	5	0	0	1
Milwaukee	1	0	4	4	7	4	12	0	43	0	0	29
Racine	0	0	------	0	1	0	2	0	5	0	0	9
Superior	0	0	------	0	121	1	2	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	------	0	5	0	2	0	13	0	0	16
Minneapolis	7	0	------	2	56	2	5	0	50	0	0	5
Missouri:												
Kansas City	2	0	38	0	1	2	5	0	18	0	1	1
St. Joseph	0	0	------	0	0	0	0	0	3	0	0	0
St. Louis	0	0	40	0	5	6	12	1	14	0	0	14

City reports for week ended Dec. 11, 1943—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
North Dakota:												
Fargo	0	0	------	0	15	0	0	0	2	0	0	0
Nebraska:												
Omaha	2	0	------	0	1	0	2	0	15	0	0	0
Kansas:												
Topeka	1	0	------	0	1	0	0	0	4	0	0	6
Wichita	0	0	5	2	0	1	9	0	8	0	0	0
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	------	0	2	0	9	0	4	0	0	0
Maryland:												
Baltimore	1	0	32	3	14	3	25	0	30	0	0	23
Cumberland	0	0	------	0	0	0	0	0	0	0	0	0
Frederick	0	0	------	0	0	0	0	0	0	0	0	0
District of Columbia:												
Washington	3	0	45	4	28	1	17	0	23	0	0	6
Virginia:												
Lynchburg	0	0	------	0	242	0	1	0	1	0	0	2
Richmond	0	0	13	1	10	3	1	0	1	0	0	3
Roanoke	0	0	------	0	1	0	0	0	1	0	0	2
West Virginia:												
Charleston	0	0	------	0	5	0	0	0	0	0	0	0
Wheeling	0	0	------	0	0	0	3	0	2	0	0	2
North Carolina:												
Raleigh	0	0	------	0	0	0	0	0	0	0	0	0
Winston-Salem	0	0	------	0	65	0	0	0	3	0	0	0
South Carolina:												
Charleston	0	0	32	1	1	2	2	0	2	0	0	0
Georgia:												
Atlanta	0	0	96	0	4	1	6	1	2	0	0	1
Brunswick	0	0	------	0	16	0	3	0	0	0	0	0
Savannah	0	0	4	0	0	1	1	0	1	0	0	0
Florida:												
Tampa	0	0	------	0	0	0	3	0	0	0	0	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	0	0	44	3	1	2	8	0	6	0	0	2
Nashville	0	0	------	0	0	0	5	0	6	0	0	4
Alabama:												
Birmingham	1	0	17	1	4	0	1	0	0	0	0	0
Mobile	0	0	------	4	0	1	5	0	0	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	------	0	1	0	3	0	0	0	0	0
Louisiana:												
New Orleans	4	0	18	5	3	0	11	1	2	0	0	0
Shreveport	0	0	------	0	0	0	2	0	2	0	0	0
Texas:												
Dallas	0	0	1	1	0	1	4	1	1	0	0	6
Galveston	0	0	------	0	0	0	0	0	0	0	0	0
Houston	4	0	------	1	1	2	7	0	2	0	0	0
San Antonio	0	0	1	0	0	0	3	0	0	0	0	0
MOUNTAIN												
Montana:												
Billings	0	0	------	0	0	0	1	0	0	0	0	0
Great Falls	0	0	------	0	47	1	0	0	3	0	0	0
Helena	0	0	------	0	0	0	0	0	5	0	0	0
Missoula	0	0	------	0	0	0	3	0	1	0	0	0
Idaho:												
Boise	0	0	------	0	0	0	0	0	1	0	1	0
Colorado:												
Denver	0	0	55	2	11	0	10	0	13	0	0	12
Pueblo	0	0	------	0	130	0	2	0	1	0	0	11
Utah:												
Salt Lake City	0	0	------	1	4	1	1	1	22	0	0	1

City reports for week ended Dec. 11, 1943—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle	2	0	------	1	4	1	4	0	4	0	0	6
Spokane	0	0	1	1	22	0	1	0	22	0	0	4
Takoma	2	0	------	0	3	0	0	0	11	0	0	3
California:												
Los Angeles	4	0	44	2	5	2	3	2	37	0	0	9
Sacramento	0	0	------	0	3	1	1	1	2	0	0	0
San Francisco	0	0	1	0	2	4	13	3	12	0	0	2
Total	71	1	792	75	1,769	136	580	25	1,072	0	15	452
Corresponding week, 1942	87	0	152	53	1,073	35	440	11	847	0	8	1,048
Average, 1938–42	104	------	663	[1] 34	[2] 982	------	[1] 401	------	877	6	21	1,137

Dysentery, amebic.—Cases: New York, 1; Philadelphia, 1; Detroit, 2; Los Angeles, 1; San Francisco, 1.
Dysentery, bacillary.—Cases: Bridgeport, 1; New York, 5; Rochester, 1; Syracuse, 1; Detroit, 3; Charleston, S. C., 4; Los Angeles, 8.
Dysentery, unspecified.—Cases: San Antonio, 6.
Leprosy.—Cases: Los Angeles, 1.
Tularemia.—Cases: Reading, 1; Chicago, 1.
Typhus fever.—Cases: Winston-Salem, 1; Atlanta, 1; Brunswick, 1; Savannah, 3; Little Rock, 1; New Orleans, 1; Houston, 1; San Antonio, 15 (10 delayed reports are included); Los Angeles, 2.

[1] 3-year average, 1940–42.
[2] 5-year median.

Rates (annual basis) per 100,000 population, by geographic groups, for the 88 cities in the preceding table (estimated population, 1942, 34,443,000)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	9.9	0.0	9.9	2.5	276	44.7	106.8	5.0	373	0.0	0.0	149
Middle Atlantic	8.5	0.4	47.3	8.9	272	20.1	95.0	3.6	128	0.0	3.1	54
East North Central	8.8	0.0	113.9	11.1	195	20.4	75.9	2.3	166	0.0	3.5	76
West North Central	26.2	0.0	181.5	8.7	184	24.1	76.5	2.2	278	0.0	2.2	92
South Atlantic	6.8	0.0	379.4	15.4	663	18.8	121.3	1.7	120	0.0	0.0	67
East South Central	5.9	0.0	362.3	47.5	30	17.8	112.9	0.0	71	0.0	0.0	36
West South Central	23.5	0.0	58.7	20.5	15	8.8	88.0	5.9	21	0.0	0.0	18
Mountain	0.0	0.0	442.2	24.1	1,544	16.1	136.7	8.0	370	0.0	8.0	193
Pacific	14.0	0.0	80.4	7.0	68	14.0	38.4	10.5	154	0.0	0.0	42
Total	10.7	0.2	119.9	11.4	268	20.6	87.8	3.8	162	0.0	2.3	68

TERRITORIES AND POSSESSIONS

Hawaii Territory

Honolulu—Dengue fever.—During the week ended December 11, 1943, 34 new cases of dengue fever were reported in Honolulu, T. H., bringing the total number of cases reported to date to 1,284.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended November 27, 1943.—During the week ended November 27, 1943, cases of certain communicable 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		22		317	575	98	88	123	125	1,348
Diphtheria		13	3	64	1	4	3		7	95
Dysentery (amebic)					1				2	3
Dysentery (bacillary)				2						2
Encephalitis, infectious									1	1
German measles		1		3	16				9	29
Influenza	3	21	4		181	5			30	244
Measles		1		206	249	12	3	40	10	521
Meningitis, meningococcus			1		2	1				4
Mumps		7	2	76	196	36		27	88	432
Poliomyelitis					1	1				2
Scarlet fever		7	11	94	151	42	11	41	39	396
Tuberculosis (all forms)		6	2	70	59	6		29	41	213
Typhoid and paratyphoid fever				16	3				2	21
Undulant fever					5					5
Whooping cough		2		99	99	16	16	11	40	283

SWEDEN

Notifiable diseases—October 1943.—During the month of October 1943, cases of certain notifiable diseases were reported in Sweden as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	8	Poliomyelitis	396
Diphtheria	177	Scarlet fever	3,064
Dysentery	152	Syphilis	114
Encephalitis, epidemic	4	Typhoid fever	4
Gonorrhea	2,023	Undulant fever	7
Hepatitis, epidemic	1,001	Weil's disease	9
Paratyphoid fever	16		

SWITZERLAND

Notifiable diseases—April-June 1943.—During the months of April, May, and June 1943, cases of certain notifiable diseases were reported in Switzerland as follows:

Disease	April	May	June
Cerebrospinal meningitis	11	4	7
Chickenpox	168	160	318
Diphtheria and croup	136	117	199
Dysentery	7	11	272
German measles	32	6	33
Hepatitis, epidemic	164	272	671
Influenza	8	8	35
Lethargic encephalitis			2
Malaria	1		
Measles	309	435	964
Mumps	172	158	158
Paratyphoid fever	3	9	20
Poliomyelitis	5	6	15
Scarlet fever	133	166	213
Trachoma	1	1	
Tuberculosis	402	404	483
Typhoid fever	2	6	11
Undulant fever	20	23	20
Whooping cough	141	253	673

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place		January-September 1943	October 1943	November 1943—week ended—			
				6	13	20	27
ASIA							
Ceylon	C	50					
China: Kwangsi Province	C	[1] 1,100					
India	C	210,136	32,897				
Bombay	C	16	12				
Calcutta	C	5,028	1,307	100	67	83	
Chittagong	C	245	37	36	34		
Cochin	C	192					
Madras	C	1,003	58	6	8		
Negapatam	C	21					
Vizagapatam	C	63					
India (French)	C	55					
Chandernagor	C	8					
Karikal	C	30					
Pondichery	C	17					

[1] Cases reported up to Sept. 8, 1943, with a mortality rate of over 25 percent.

PLAGUE

[C indicates cases; D, deaths; P, present]

AFRICA							
Basutoland	C	[1] 23					
Belgian Congo	D		[2] 17				
Plague-infected rats	P						
British East Africa:							
Kenya	C	17					
Uganda	C	18					
Egypt [3]	C	14	1		3	12	
Port Said	C	6	1				
Madagascar	C	53					
Morocco (French)	C	241	1		4		
Senegal	C	244					
Dakar	C	32					
Union of South Africa	C	65	1	2			

See footnotes at end of table.

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		January–September 1943	October 1943	November 1943—week ended— 6	13	20	27
ASIA							
India	C	3,414	1,539				
Indochina	C	30	1				
Palestine	C	12					
EUROPE							
Portugal (Azores).[4]							
SOUTH AMERICA							
Ecuador: Loja Province	C		2				
Peru:							
Lambayeque Department	C	2					
Libertad Department	C	16					
Lima Department	C	11					
Lima	C	1					
Plague-infected rats		P					
Piura Department	C	2					
Venezuela	C	10					
OCEANIA							
Hawaii Territory:							
Hamakua District	D	5					
Plague-infected rats		[5] 74	1	1			

[1] Includes 12 pneumonic cases in a village south of Mafeteng.
[2] Includes 7 suspected pneumonic plague deaths.
[3] A cablegram dated Dec. 13, 1943, states that 52 cases of plague have been reported to date in Egypt, including 47 cases at Suez, 4 at Port Tewfik, and 1 at Bitter Lake. For the week ended Dec. 18, 1 case was reported at Cairo, 2 at Port Said, 1 at El Bala, and 1 at Geneifa.
[4] A report dated Nov. 19, 1943, states that during 1942 there were 54 cases of plague including 3 pneumonic cases and 2 septicemic cases among the civil population and 2 additional cases among the military population of the Azores. In 1943 the number of cases is about the same as for the year 1942.
[5] Includes 4 plague-infected mice.

SMALLPOX

[C indicates cases; D, deaths]

AFRICA							
Algeria	C	1,087	97				
Angola	C	613					
Basutoland	C	81					
Belgian Congo	C	2,975	435				
British East Africa:							
Kenya	C	1,488	448	120	145		
Mombasa	C	3					
Tanganyika	C	27	33	1			
Uganda	C		49	2	5		
Dahomey	C	141					
Egypt	C	2,848	456	67	44	61	
French Guinea	C	336	35				
Gold Coast	C	17	4				
Ivory Coast	C	144	10				
Mauritania	C	27	13				
Morocco (French)	C	848					
Mozambique	C	1					
Nigeria	C	4,660	407	106	96	58	
Niger Territory	C	221	42				
Senegal	C	74					
Sierra Leone	C	3					
Sudan (French)	C	3,440	156				
Tunisia	C	3					
Union of South Africa	C	439	2				
ASIA							
Arabia	C	1					
Ceylon	C	63	16	1	1		
India	C	34,428	3,275				
India (French)	C	10					
Indochina	C	4,397	246				
Iran	C	510	11				
Iraq	C	195	33	6			
Palestine	C	101	3				
Syria and Lebanon	C	987	24	7	8		
Trans-Jordan	C	18	1				

SMALLPOX—Continued

[C indicates cases; D, deaths]

Place		January–September 1943	October 1943	November 1943—week ended—			
				6	13	20	27
EUROPE							
Belgium	C	1					
France	C	2					
Germany	C	1					
Gibraltar	C	1					
Portugal	C	40	2		2		1
Scotland	C	1					[1] 1
Spain	C	204	5				
Switzerland	C	17					
Turkey	C	8,161	499				
NORTH AMERICA							
British Honduras	C					1	
Canada	C	6					
Guatemala	C	27					
Mexico	C	306	21				
SOUTH AMERICA							
Brazil	C	44	5				
British Guiana	C	1					
Colombia	C	316	19	2	1	6	
Ecuador	C	18	4				
Peru	D	12					
Venezuela	C	91	4				

[1] On a vessel from North Africa.

TYPHUS FEVER

[C indicates cases; D, deaths]

AFRICA							
Algeria	C	8,130	43				
Basutoland	C	18					
Belgian Congo	C	20	19				
British East Africa:							
Kenya	C	1	2	1			
Mombasa	C	1					
Uganda	C	1					
Egypt	C	39,582	292	48	46	54	
Gold Coast	C	9					
Morocco (French)	C	13,552					
Morocco (Spanish)	C	369					
Nigeria	C	9	2				
Portuguese East Africa	C		1				
Rhodesia, northern	C	10		4			
Senegal	C	2					
Dakar	C	15	4		3		
Sierra Leone	C	3					
Tunisia	C	232	20				
Union of South Africa	C	1,587	8				
ASIA							
Afghanistan	C	520					
China: Shanghai	C	12					
India	C	1,066					
Iran	C	9,158					
Iraq	C	1,421					
Palestine	C	266	30	9	1	6	8
Syria and Lebanon	C	81	8				
Trans-Jordan	C	15	2				
EUROPE							
Bulgaria	C	1,712	33				
France—Seine Department	C	2					
Germany	C	[1] 973					
Hungary	C	737	50		20	7	
Irish Free State	C	19			1		
Netherlands	C	1					
Portugal	C	9					
Rumania	C	6,960	197			81	
Slovakia	C	452	72	12	31		
Spain	C	578					
Turkey	C	8,951					

[1] For the period Jan. 1 to Apr. 30, 1943.

TYPHUS FEVER—Continued

[C indicates cases; D, deaths]

Place		January-September 1943	October 1943	November 1943—week ended—			
				6	13	20	27
NORTH AMERICA							
Cuba	C	1					
Guatemala	C	967	145				
Jamaica	C	24	5			2	
Mexico	C	902	82				
SOUTH AMERICA							
Brazil	C	1					
Chile	C	211	9	2	2	1	
Colombia	D	2					
Ecuador	C	277	42				
Peru	C	14					
Venezuela	C	17					
OCEANIA							
Australia	C	89	7	5	1		
Hawaii Territory	C	32	20	2	8	2	

YELLOW FEVER

[C indicates cases; D, deaths]

AFRICA							
Belgian Congo:							
Bondo	D	2				1	
Kinzao	D	1					
Leopoldville	C	2					
Stanleyville	D	1					
Yanonge	C	1					
British East Africa: Kenya—Misumu	C						[1] 1
Dahomey:							
Djougou District	C	[2] 2					
Natitingou	C	[2] 1					
French Guinea:							
Dubreka	D		[2] 1				
Matakang Island	D			[2] 1			
Gold Coast: Asuboi	C	1					
Ivory Coast:							
Abidjan	C		[2] 1				
Toumodi	D				[2] 1		
Portuguese Guinea.[4]							
Senegal:							
Goudiri	D					1	
Kolda	C	1					
Tambacounda	C		1				
SOUTH AMERICA							
Brazil: Para State	D	1					
Colombia:							
Boyaca Department	D		4				
Cundinamarca Department	D	3					
Intendencia of Meta	D	2					
Santander Department	D		1				

[1] For the month of November 1943.
[2] Suspected.
[3] Previously reported as having occurred at Conakry.
[4] During the week ended Nov. 13, 1943, a serious outbreak of yellow fever was reported in Portuguese Guinea. No figures are available.