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## THE RURAL MIDWIFE: HER SOCIAL AND ECONOMIC BACKGROUND AND HER PRACTICES AS OBSERVED IN BRUNSWICK COUNTY, VA.<sup>1</sup>

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### INTRODUCTION

It is not infrequently stated that the midwife has seriously impeded the progress of the practice of obstetrics, and that her incompetence is a contributory cause of high infant and maternal mortality. Indeed she was for sometime designated a necessary evil. In connection with previous investigations conducted by the United States Public Health Service in the rural county of Brunswick, Va., it was observed that almost 75 percent of the births reported in the county<sup>2</sup> are regularly attended by midwives and that a comparatively high infant and maternal mortality prevailed. Because of these conditions the question of a study dealing with the rural midwife was raised. Since the State and county departments of health were in sympathy with public health investigations generally, and the midwives themselves were accustomed to supervision by the county health department and were always cooperative, the decision was made to initiate a study of the rural midwife in Brunswick County.

More specifically, it was purposed to determine the social and economic background of the rural midwife; to ascertain her current practices, first, by means of direct observation of her performances, and, second, by means of interviews with mothers following the termination of midwife care; and, finally, from the collected information to develop a set of criteria for the future selection and instruction of the rural midwife.

A list of 42 Brunswick County midwives was supplied by the Brunswick-Greenville bicounty health department. At the initial

<sup>1</sup> From the Office of Child Hygiene Investigations, United States Public Health Service.

<sup>2</sup> The total number of reported births in 1933 was 511. Of these physicians reported 128; midwives, 373, and friends and neighbors, 10. (Bureau of Vital Statistics, Virginia State Department of Health.)

visit to the home of each midwife a brief explanation of the purpose of the study was made; data concerning the midwife, her equipment, and her license to practice were obtained; and she was informed that the investigator (J. L. D.) desired to see her at work and that this required the investigator to be present as a silent observer. During this visit, furthermore, an appointment was made for a return visit to observe whatever type of case the midwife might have at that time.

In the matter of the direct observation of midwife practices the same difficulty arises as in all other investigations requiring the observation of human beings at work, namely, possible changes in practices caused by the presence of the investigator. To have the observed practices correspond as closely as possible with those performed without observation, it is essential that any embarrassment or fear of criticism on the part of the observed be dispelled by the previous establishment of an amicable relationship between the investigator and those whose practices are to be observed. In the present study this relationship was easily established, because the midwives immediately identified the investigator with the county nurses whom they regarded with admiration and affection; thus it is believed that the practices as observed were probably closely similar to those performed under ordinary circumstances.

#### PERSONAL DATA, EQUIPMENT, AND LICENSES OF 42 MIDWIVES

*Age, color, marital status, and birthplace.*—The ages of the 42 midwives ranged from 38 to about 88 years, with 35 approximately equally distributed among the 3 decades included between 50 and 80 years. Forty were colored. All had been married at least once. Two have had no children, 21 have had from 2 to 9, and 19 have had from 10 to 21. One midwife was born in Germany, 30 were born in Brunswick County, and the remainder were born within a radius of 200 miles of the county.

*Morals.*—Certain moral requirements have been set down by the Virginia State Department of Health. These concern conscientiousness, responsibility, and disposition. All of the 42 midwives are conscientious and faithful insofar as their limited knowledge extends. They are willing to attend women in labor, oftentimes walking long distances at night with the knowledge that they will receive little or no pay for their services. Their reasons for practicing are also indicative of their conscientiousness—because the physicians or neighbors need her; “to help others”; her own experiences during childbirth; and “called by the Lord.”

*Education, training, and experience.*—Over half of the midwives said that they could neither read nor write. Of the 19 who attended school, 11 had gone through the fourth grade. All members of the group stated that they had attended classes in midwifery conducted by the health department of the State or the county. The number of classes attended could not be ascertained. In respect of experience, over half had practiced midwifery for 30 or more years; none had practiced less than 8 years.

*Health.*—None stated that she had had a physical examination. Of the 38 who had had a Wassermann test, 4 were positive.

*Cleanliness.*—According to the judgment of the county nurse, about half of the group was "clean", and the same proportion of homes was considered "clean."

*Economic status.*—It was estimated that 1 was comfortable, 30 were moderate, 10 were poor, and 1 was very poor.

*Equipment.*—Three of the 35 who had bags, had equipment that was complete, clean, and ready for use.

*Licenses.*—Twenty-nine had a Virginia license to practice midwifery, 6 who were interviewed away from their homes had their bags with them, but no licenses, 6 stated the license was lost, and 1 midwife was not recorded.

#### WHAT THE MIDWIFE SAID THAT SHE TEACHES HER PRENATAL PATIENT

Each midwife was asked what she teaches her prenatal patients regarding preparation for delivery, diet, elimination, rest, exercise, clothes, and breast care. No effort was made to determine where she obtained her knowledge. This information was obtained from 41 midwives, one interview being incomplete.

*Preparation.*—Of the 41 midwives, 35 mentioned delivery pads, "pieces" or perineal pads, baby's layettes, basins, or delivery linen.

*Diet.*—Cereal was mentioned by 10, milk by 11, water and vegetables by 12, fruit by 4, and 6 advised no meat.

*Elimination.*—Bowel elimination was believed important by 20 midwives. The remedy suggested by almost all was salts.

*Rest, exercise, and clothes.*—A negligible one or two considered these of any importance.

*Breast care.*—About one-third advised washing, pulling out the nipples, or rubbing with cold cream.

#### FORTY-SIX PRENATAL VISITS BY 14 DIFFERENT COLORED MIDWIVES

*Personal data.*—The para of the 46 mothers visited ranged from 1 to 15. Fifteen were expecting their first baby and 1 her fifteenth. Thirty-nine were colored. Three were unmarried and 2 had been married since the beginning of the prenatal period. Few midwives made any reference to the month of pregnancy, and many of the mothers were confused when they were asked the date of the last menstruation. The investigator estimated that 1 pregnancy was in the fifth month, 26 in the sixth to the eighth, and 19 were very near the delivery date.

Eleven of the 46 mothers were living with their parents, the remainder having homes of their own. In respect of economic status, 1 was classified as comfortable, 14 as moderate, 26 as poor, and 5 as very poor.

Since the particular visit observed might have been influenced by previous visits and by the reasons for reporting the pregnancy, data were collected regarding these two subjects. In respect of the first, it was found that 26 of the 46 had been seen one or more times prior to the observation visit and 18 were seen for the first time; no data were recorded for 2. With regard to the reasons for reporting the pregnancy, 31 mothers were "engaged for delivery," 3 had not reported the pregnancy to the midwife but the midwife had heard of the pregnancy and she solicited the case at the observation visit, 3 lived in the household of the midwife, and 2 reported their condition to the midwife because they felt badly; data for 2 were not recorded.

*Preparation for delivery.*—Two of six mothers were advised to have a clean room. One was advised to have a crib available. Nineteen were advised to make delivery pads; 1 midwife gave a demonstration of how they should be made. Gowns were advised to 3, "pieces" or perineal pads to 8, absorbent

cotton to 5, safety pins to 5, sanitary belt, douche pan, and pitchers were each mentioned once, and basins were advised to 2. Rubber sheeting or oilcloth, lysol, or an enema can were not mentioned once.

With regard to supplies for the baby, 11 mothers were advised to have shirts, 8 were given advice regarding binders, 6 regarding wrappers or slips, and 10 regarding diapers. It must be recalled in this connection that 15 of the 46 mothers were expecting their first baby.

*Diet.*—References to diet were made to 33 mothers. Milk was suggested to 17, 1 midwife explaining to 1 mother that milk would make the baby have "good bones and good teeth." Vegetables were suggested to 16, fruit to 5, cereals to 2, and no meat to 7.

*Elimination.*—Of the 46 mothers, 35 were asked or advised about bowel elimination. Salts were suggested to 24, vegetables to 1, and fruit to 3. Six mothers were questioned, but nothing was advised. Sixteen were advised to drink water.

*Rest, sleep, exercise, and clothes.*—More rest was advised to seven mothers. Sleep was discussed with 3, 1 of whom was advised to sleep with windows open. Exercise was mentioned to 21. Fifteen were told not to work too long or to do heavy work. Two were advised not to "reach up." Almost all midwives believe that a pregnant woman should never put her hands over her head, since this causes the cord to wind around the unborn child. Walking every day was suggested to 3, "even though you don't feel good, 'cause it makes an easier birth." The wearing of loose clothing was advised to three; no reason was given to the mother for this advice.

*Breast care.*—Three were advised to bathe the nipples daily during the prenatal period because "when the baby comes and takes hold, it won't feel like he is pulling your toe nails out."

*Teeth.*—Three mothers were referred to a dentist because they were suffering from aching teeth. No reference was made to dental prophylaxis.

*Danger signals.*—Among the 46 mothers visited with the midwife, 6 showed some danger signal of pregnancy. One mother each complained of headache, dizziness, spots, and vaginal bleeding; feeling badly all of the time; swelling and bleeding; constant headaches; constant stomach pain; and vaginal bleeding. Two mothers were referred to a physician because of these complaints. The other four should have been but were not.

*Attitude of mother toward her pregnancy.*—The attitude of each mother toward her pregnancy was recorded because of its possible influence on the midwife's approach to her problem. Five mothers appeared afraid, 29 accepted it as a natural consequence of marriage, 11 appeared happy, and 1 mother neither expressed nor displayed emotion.

*Attitude of midwife toward her patient.*—Forty-one of the mothers were treated with genuine interest which was extended to the mother in a maternal manner. To the other five mothers only tolerance was shown; these were either extremely poor, with a home crowded with children or the baby expected was illegitimate.

#### THREE DELIVERIES PERFORMED BY THREE DIFFERENT MIDWIVES

The three midwives had a basin of water and washed their hands prior to delivery, but in all three cases the hands were contaminated before the birth of the child. This same basin was used for washing the perineum in all cases, and in one home the basin was on the floor, which enabled the cat to drink water periodically. Two midwives added lysol to the water and used a handbrush. One midwife wore a white uniform, the second a clean gingham dress, and the third a dirty woolen dress without an apron. All three mothers wore nightgowns;

two were clean and the other was dirty. Two mothers had not been bathed; the third was bathed before the investigator's arrival. One bed had only a dirty mattress which was protected with dirty brown wrapping paper and a dirty cotton blanket; the mother was delivered on her hands and knees; the placenta was delivered after the mother had gotten up on a slop jar. The second mother was delivered on her hands and knees on the floor beside the bed; a folded quilt covered with newspapers protected a bare floor; the placenta was delivered spontaneously after the mother had gotten up on the slop jar; after the delivery of the child and the placenta, the mother was washed and helped into a clean bed. The third mother delivered both child and placenta in a clean, well-protected bed.

No vaginal examination was observed. In the three cases, labor lasted from 2 to 12 hours. No medications were observed to be given, nor injections into the birth canal. Two midwives placed drops of silver nitrate in the eyes after bathing the baby, which was done after the mother had been cleaned and made comfortable in bed. The third midwife placed the drops immediately after cutting the cord. All three births were reported to the local registrar.

#### CARE OF 20 POSTNATAL CASES AS GIVEN BY 13 DIFFERENT COLORED MIDWIVES

Visits that were observed by the investigator occurred during the first 17 days after delivery, the mean being 6 days. The length of the visit ranged from 15 minutes to 2 hours. Seventeen of the 20 mothers had been visited one or more times by the midwife before delivery; 11 of the 17 appeared to have inadequate supplies.

*Condition of baby and mother.*—Eighteen babies were living and 2 were dead. Twelve mothers were in bed; of the 8 that were not in bed, 3 were less than 7 days postpartum.

*Care of mothers in bed.*—Two mothers were given a bed bath and perineal care; 3 were given only perineal care; 7 had had a bath; and 4 reported that they had given their own perineal care before the arrival of the midwife. Neither a bath nor perineal care was mentioned to 2 of the mothers. The two bed baths observed were thorough, and perineal care followed the instructions given in the State department of health manual.

*Advice given.*—Breast care was not mentioned to 17 mothers, although 1 of this number had lost her baby at birth and needed special advice regarding care; 3 were advised to bathe the nipples with water before each nursing. One mother was questioned regarding kidney elimination. Six received advice regarding diet.

*Care of 12 babies less than 8 days old.*—Of 12 babies less than 8 days old at the time of the observation visit, 7 were given a full bath and the cords were dressed. The cords of 3 babies were dressed without a bath. Four babies had been bathed, and 1 mother reported care of the cord before the arrival of the midwife. In the majority of cases a clean cloth was scorched on a shovel or on top of the stove for a cord dressing; several midwives had sterile dressings from the State department of health, and 1 used gauze. Baby talcum was generously used under the dressing because, according to the majority of midwives, "it keeps down smells." Three mothers were advised to nurse their babies at regular hours, but no reasons were given. One baby was given a dose of calomel during the visit and the mother was advised to give castor oil the following morning.

*Delivery complications.*—Five of the 20 mothers had had one or more complications and a physician had been called. One mother had retained the afterbirth; 4 had long, hard labor with little or no progress; and in 1 case the physician was called a second time to retie the bleeding cord.

INTERVIEWS OF 50 MOTHERS FOLLOWING TERMINATION OF MIDWIFE CARE<sup>3</sup>

This material is concerned chiefly with what 50 mothers reported regarding the care given them by 20 different colored midwives during the delivery and postnatal periods. An effort was made also to interview the attendant—a mother, sister, or neighbor—who was present at the delivery; this was possible in about half of the cases. The days of interview occurred at some time between the sixth and about the fortieth day following delivery.

*Engagement of midwife prior to confinement, why she was engaged, and in what month of pregnancy.*—Of the 50 mothers, 38 had engaged a midwife before delivery. In 24 instances the reason given by the mother was "to be sure of her services", in 4 the midwife urged it, in 3 the reason was "prenatal care", in 2 the mothers "didn't know anyone else", in 1 the public health nurse urged it, and in 4 the mothers answered "don't know." Of these 38 mothers 17 had engaged the midwife within the last month of pregnancy, 17 within 2 to 4 months before delivery, 1 at the beginning of pregnancy, and for 3 this information is unknown.

*Time of arrival of midwife.*—The midwife arrived before the baby was born in 33 instances, while in 17 instances the baby was delivered spontaneously. Late arrival on the part of the midwife might be explained by the long distances—sometimes 10 miles—frequently required to be covered on foot.

*Preparation for delivery by the midwife.*—Of the 33 mothers who reported that the midwife arrived before the baby was born, 27 mentioned that the midwives washed their hands prior to delivery, 5 did not know, and 1 said that the midwife did not wash her hands. Eight mothers reported that the field was not washed prior to delivery, and 25 stated that the midwives did wash the field. In 10 cases the midwives gave a vaginal examination to determine progress or position.

*Delivery and complications.*—Of the 50 mothers, 43 reported normal spontaneous deliveries. Seven required medical aid; in 2 cases, both convulsions, it was not obtainable because of lack of funds. The physician was called at the suggestion of the family in 3 cases, and at the suggestion of the midwife in 4. The complications were 4 cases of long labor and 2 of convulsions; 1 case was apparently normal, but the husband wished medical care for his wife.

*Care of eyes.*—The eyes of 44 infants were treated with silver nitrate; the mother could not report in 3 cases; in 2 cases the mother or attendant was certain that drops were not used; and 1 infant died soon after birth. In 5 cases the eyes were treated immediately after birth, in 34 while the baby was being dressed, in 1 on the following day, and in 4 the time could not be stated.

*Care of cord.*—The cords of the 49 infants that lived were dressed as follows: In 15 cases a scorched cloth was used, in 7 a special dressing or cotton, in 5 some gauze, in 4 a clean cloth, and in 11 the kind of dressing was not known. Vaseline, powder and vaseline, lard, olive oil and powder, powder and nutmeg were used on 38 infants; 4 were dressed dry, and 7 were unknown.

*Advice given by midwife before leaving the patient.*—Of the 50 mothers, 45 were advised regarding bowel elimination, 21 regarding breast care, and 48 were told to wash the perineum.

*Return visit of the midwife during the lying-in period.*—Of the 50 mothers, 41 stated that the midwife returned during the time that they were in bed. Of the 41, 12 were visited once, 12 were visited 2 or 3 times, 6 were visited 4 or 5 times, 7 were visited 6 times, 2 were visited 8 times, 1 was visited each morning for 9 days, and 1 midwife stayed for 2 weeks and took full charge of the home.

<sup>3</sup> These interviews were made in connection with a midwife study (unpublished) by the Office of Investigations of Public Health Methods, U. S. Public Health Service; the field work was performed by the same investigator (J. L. D.) and in the same county.

It is unfortunate that data regarding the distance between the home of the patient and that of the midwife were not recorded. It is the opinion of the investigator that when the distance was less than a half mile the midwife did make regular visits for 8 or 9 mornings.

*Type of midwife care given the 41 mothers who had return visits.*—Of the 41 mothers, 17 were given complete care, 6 were given only perineal care, and 18 were given no care.

*Type of midwife care given to 40 babies.*—Of the 40 babies visited by the investigator, 32 were given complete care including dressing of the cord, 6 were given a cord dressing only, and 2 were given no care.

#### SUMMARY AND CONCLUSIONS WITH CRITERIA FOR THE FUTURE SELECTION AND INSTRUCTION OF THE RURAL MIDWIFE

It is evident that the practice of midwifery in the rural county of Brunswick, Va., must continue; society demands it and the physicians agree that it is essential. A large number of the midwives now practicing there are physically and mentally unfit to practice. Since many of the midwives are not dependent on midwifery as a means of livelihood, the older ones might be encouraged to return their permits and discontinue practice. Since, however, most of the women stated that they entered midwifery because their services were needed, it is probably true that they would not discontinue practice so long as they are needed in the community. Health workers, therefore, should definitely plan to train a younger woman in the neighborhood of each older one in order to meet that social "need" of midwifery and thus gradually eliminate the unfit midwife.

The selection of a younger woman to train for midwifery should be based on the following criteria: (1) Natural aptitude for midwifery. It is essential that she possess a genuine fondness for her fellow women and sincerely like to give nursing care. (2) An appreciation of cleanliness and its relationship to good health. This appreciation should be demonstrated in the cleanliness of herself, her children, and her home. (3) A physically strong and healthy individual. This should be confirmed by a complete physical examination, including a Wassermann test and vaginal smear. (4) Education at least through the eighth grade. It is assumed that a person who has satisfied this minimum educational requirement can read and write, and that she will understand selected literature pertaining to general health as well as to maternity and infancy.

If the young woman selected possesses the foregoing qualities, she can be taught, in addition to bedside care and simple nursing procedures, the following basic knowledge: (1) Scientific facts regarding the growth of the infant in the uterus. This knowledge would explain the purpose and the importance of prenatal care, the physical examination by a physician, diet, elimination, rest, exercise, proper clothing, and the preparation of supplies for both mother and infant.

(2) Prenatal care, including the recognition of danger signals requiring the services of a physician. (3) Technique of sterilization of supplies and the procedure for a surgically clean delivery. Postnatal care and dressing the cord of the new-born. (4) The recognition of danger signals during labor requiring the immediate services of a physician. (5) Daily new-born and postnatal care until the mother is strong enough to assume the daily care of the infant. (6) The importance of the pelvic examination by a physician at the end of 6 weeks to determine the normal size and position of the uterus, as well as freedom from lacerations.

From the data presented in this paper it is evident that what the midwives said they taught their patients did not agree with what they taught on the observation visits. Apparently much of the knowledge that the group obtained from nearly 12 years of instruction and supervision was not of sufficient importance in their eyes to merit application.

The data furthermore present evidence that cleanliness, not to mention sterilization, was not considered of importance. Postnatal and new-born care were practically nonexistent, although the infant received somewhat better care than the mother.

The interviews of 50 mothers after midwife care had terminated revealed that little postnatal and new-born care had been given. Vaginal examinations are still in vogue, and there was little evidence of the practice of cleanliness.

Since it is impossible to select and train qualified persons for the practice of midwifery in a short period of time, the present instruction and supervision of those already practicing must meanwhile continue. For the future instruction and supervision of the present group of practicing midwives the following is suggested:

1. A record for each midwife should be kept by either the State or county workers. It should include the results of the various contacts made with the midwife either in the midwife classes or in her home. In particular, the subjects and their mode of presentation, together with the midwife's response, should be recorded. Such a record should determine the kind of future instruction and supervision. After a reasonable length of time has lapsed and the midwife has shown no progress, her license should be revoked on recommendation of the county health officer to the State registrar.

2. With regard to group instruction, it would be necessary that the group, because of its educational level, be small in number, say, five or six. This size would insure almost individual instruction and would certainly allow for individual participation. Equipment for demonstrations must be simple and practical, such as is found in the homes that are served by the midwives. It cannot be hoped to teach bacteriology, but it was observed that the home demonstration agents



have been successful in teaching the principles of sterilization in connection with canning. Could not this knowledge be related to the cleanliness that is of such importance in delivery, postpartum, and new-born care? The group should be impressed with the importance of care during the lying-in period; and should any midwife be unable to make daily visits because, for example, she lives too far away from her patient, she must not accept the case. Charts showing the anatomy of the pregnant woman might be used for instruction purposes.

3. In connection with individual instruction, it might be of value to make a simple questionnaire having for its object the determination of the knowledge of the principles of midwifery actually possessed by each midwife. The answers would determine the course of instruction to be followed. Furthermore, it would be desirable to make demonstrations of adequate prenatal and postnatal visits, followed by return visits with the midwife for the purpose of observing her progress.

4. In teaching and supervising this group of midwives, their low educational level must be borne in mind constantly; all material should be presented concretely in order that they may learn not only by hearing but also by seeing, touching, and doing. The same material should be presented time and time again until the knowledge of it is as much a part of them as the putting of one foot before the other in walking down the country road.

#### ACKNOWLEDGMENT

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### A STATISTICAL STUDY OF THE FERGUSON FORM BOARD TEST

By M. J. PESCOR, *Assistant Surgeon (R), United States Public Health Service, United States Northeastern Penitentiary, Lewisburg, Pa.*

This survey was undertaken principally to determine correlations between the Ferguson Form Board Test, the Stanford Revision of the Binet-Simon Intelligence Test and the New Stanford Achievement Test. A descriptive account of the first may be found in Ferguson's original article (1), Bronner et al. (2), or in Public Health Bulletin No. 206 (3); a description of the second, in Terman's text (4); and of the third, in a manual of instructions issued by the copy-right owners of the test (5).

The Ferguson and Stanford-Binet data were obtained from the files of the United States Northeastern Penitentiary Hospital, and the

Stanford Achievement data were furnished through the courtesy of R. A. McGee, Director of Education at the Northeastern Penitentiary. The 1,000 inmates selected for this study were chosen from the 1,787 individuals admitted to the institution from February 12, 1932, to May 22, 1934. The rejected group included 371 inmates who were received by transfer from other institutions, and had been given the Army Alpha or some test other than the Stanford-Binet and Ferguson tests, 154 individuals who were transferred to some other institution, together with all their records, and 262 subjects who were unable to take the Stanford-Binet Test either because of language difficulty or illiteracy.

The selected individuals were drawn almost entirely from the northeastern section of the United States, including all of New England, New York, New Jersey, Delaware, Maryland, Pennsylvania, and parts of Ohio and West Virginia. They range in ages from 17 to 66 years, with an average age of 33.29 years. Nordics comprise 49.4 percent of the group, Latins 19.7 percent, Semitics 15.2 percent, Negroes 9.3 percent, Slavs 5.2 percent, and the remaining 1.2 percent consists of miscellaneous races, such as Indians, Chinese, and Filipinos. More than half of the group (59.8 percent) attended grade school only, 31.1 percent attended high school, and 9.1 percent gave a history of attending college. Unskilled laborers constitute 38.4 percent of the group, skilled 27 percent, and clerical or professional 34.6 percent. About 38 percent were convicted of passing counterfeit money, 16 percent were sentenced for violation of postal laws (chiefly using the mails to defraud), about 12 percent for violation of the narcotic law, and the remaining 34 percent for sundry offenses, including violation of the Interstate Commerce Act, Prohibition law, Internal Revenue Act, and other Federal laws. Those convicted for the first time form 62.5 percent of the group, and recidivists account for 37.5 percent.

Before proceeding with the main discussion, a word of explanation is necessary concerning the two methods of scoring the Ferguson Test, both of which were employed in this investigation. In the original Ferguson method, each board is scored alike on a simple 5, 4, 3, 2, 1 ratio, based on the time required to complete each board. Thus the maximum score on each board is 5, and the maximum total score 30. In the Shimberg modification, scoring is weighted for each board and the total raw scores are converted to corresponding mental ages.

As a matter of expediency, a minor addition was made to the tentative norms of Shimberg, as presented by Bronner et al. (2). These norms do not extend beyond the age of 16, which corresponds to a raw score of 54, nor below the mental age of 9, which corresponds to a raw score of 12. A perfect score is 60. For each additional year between the ages of 9 and 16 there is a uniform increment of 6 in the raw score. From 54 to 60 there is also an increment of 6. Therefore, for the purpose of correlation, it seems justifiable to consider a score

of 60 as corresponding to a mental age of 17. Accordingly, this change was adopted as a part of our routine scoring procedure. Changes were also made at the lower end of the scale by assuming a mental age of 6 as corresponding to a raw score of zero, a mental age of 7 years 6 months to a raw score of 3, and a mental age of 8 years to a raw score of 6. These are arbitrary figures, not based on actual experimental data. At any rate, there were so few scores

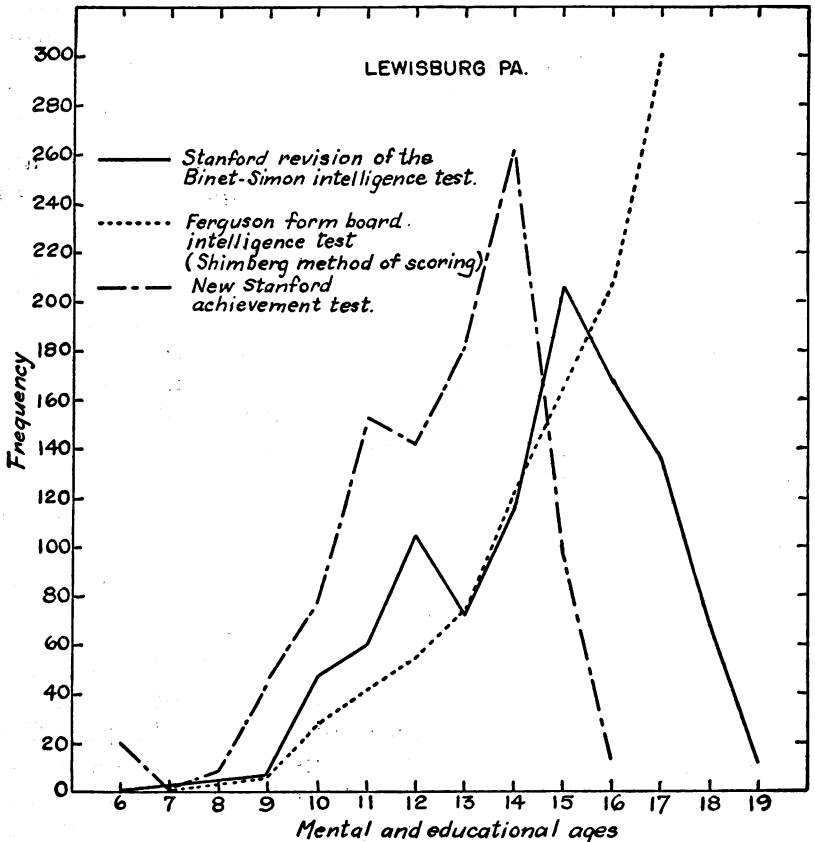


FIGURE 1.—Distribution of mental and educational ages of 1,000 inmates of the U. S. Northeastern Penitentiary, Lewisburg, Pa.

below the mental age of 9 that they can have very little effect on the validity of the results.

The Stanford Achievement norms may be expressed either in terms of educational grade status or educational age. Thus an educational grade status of 4.1 indicates the equivalent of 1 month of a fourth grade education. The corresponding educational age of 9 years 11 months indicates the average age of pupils who attend such a grade.

Distribution curves were first plotted for all three tests. Figure 1 presents the comparative distribution of the following: (1) Mental

ages obtained by the use of the Stanford-Binet Test; (2) mental ages obtained by the use of the Ferguson Test, employing the Shimberg method of scoring; (3) educational ages determined by the use of the Stanford Achievement Test. Figure 2 presents the distribution of raw scores in the Ferguson Test, based on the original method of scoring.

It is quite obvious that, of the two methods of scoring the Ferguson Test, the original shows a much better type of distribution at the

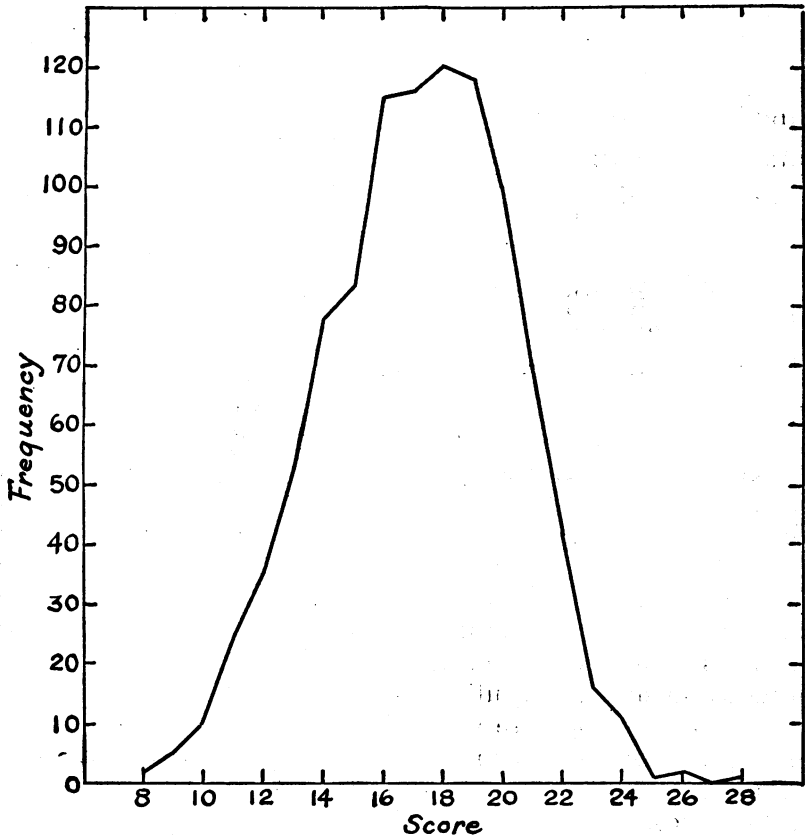


FIGURE 2.—Distribution of scores made by 1,000 inmates of the U. S. Northeastern Penitentiary on the Ferguson Form Board Test, using Ferguson's original method of scoring.

upper mental age levels than the Shimberg modification. Too many individuals make a perfect score on the latter, and no individual makes a perfect score on the former, the highest being 28—two short of perfection. The Stanford, Binet and Stanford Achievement curves, on the other hand, resemble each other quite closely, except that the peak of the former is at the 15-year age level and of the latter at the 14-year age level.

Coefficients of correlation between the three tests were next determined for the group as a whole. Correlations were also calculated for two subgroups of 500 each, based on the distribution of Stanford-Binet mental ages, the first consisting of those individuals below the median mental age, and the second above the median mental age. The results are presented in table 1.

TABLE 1.—*Coefficients of correlation, together with probable errors, between the Stanford-Binet, Ferguson, and Stanford Achievement Tests*

Tests correlated	Correlations		
	Group I <sup>1</sup>	Group II <sup>2</sup>	Total <sup>3</sup>
Stanford-Binet <i>v.</i> Ferguson:			
A. Shimberg scoring .....	0.22±.04	0.05±.04	0.30±.03
B. Ferguson scoring .....	.18±.04	.10±.04	.29±.03
Stanford Achievement <i>v.</i> Ferguson:			
A. Shimberg scoring .....	.18±.04	.11±.04	.28±.03
B. Ferguson scoring .....	.21±.04	.12±.04	.29±.03
Stanford-Binet <i>v.</i> Stanford Achievement .....	.58±.03	.41±.04	.73±.02

<sup>1</sup> Group I represents 500 individuals whose mental ages are below the median mental age of 15, as determined on the basis of the Stanford-Binet Test.

<sup>2</sup> Group II represents 500 individuals whose mental ages are above the median mental age of 15, as determined on the basis of the Stanford-Binet Test.

<sup>3</sup> Total represents 1,000 cases; i. e., groups I and II combined.

On the assumption that a nonlinear relationship existed between the Stanford-Binet and the Ferguson Tests, a test for linearity was applied according to the Pearson method as outlined by Chaddock.<sup>1</sup> The correlation ratios were found to be .35 and .36, with standard errors of .003 and .004, respectively. The observable difference between the correlation coefficient of .30 and the correlation ratios is, therefore, .05 and .06. Since three times the standard error is less than the observable difference in both instances, it indicates that there is a slight nonlinear relationship between the Ferguson and Stanford-Binet Tests, but not sufficient to disprove the findings by the product deviation method of computing correlations.

The most striking observation is the relatively high correlation existing between the Stanford-Binet and the Stanford Achievement Tests. This means that either education has a decided influence on the Stanford-Binet, or else individuals who have a high intelligence rating according to the latter test are more likely to continue with their formal education, and hence make a better showing on the Stanford Achievement Test. Probably both factors are responsible.

<sup>1</sup> "The product-deviation method ( $r$ ) of measuring the degree of association between two variables is based upon the hypothesis that a straight line fits most closely the means of the columns and the rows in a correlation table, and therefore describes the association in the best possible manner. But sometimes the means conform more closely to some other form of curve \* \* \*. When the line of the means is nonlinear, the degree of association may be high and yet  $r$  will not reveal it \* \* \*. A low value for  $r$  does not prove that the degree of association is really small or that the two variables are correlated." (6)

This relationship is more marked in the group who have a mental age below 15 years, which may indicate that education influences an individual's score on the Stanford-Binet up to a certain point and then gradually loses its effect. On the other hand, the correlations between the Ferguson and Stanford Achievement Tests are low. Although educational attainment has slightly more influence on the group with lower mental ages than the one with the higher, it would appear from the results that the Ferguson Test measures native intelligence more accurately than does the Stanford-Binet.

There may be some criticism for using the Stanford Achievement Test as the criterion for establishing the relationship between education and intelligence, on the grounds that it may measure intelligence rather than educational attainment. However, the choice was made for two definite reasons. In the first place, unconfirmed statements by inmates regarding their educational careers are not reliable. For example, one individual claimed to be a college graduate, but on the Achievement Test he obtained an educational grade status of 3.3. His mental age was found to be 10 years 8 months on the Stanford-Binet, and 11 years 5 months on the Ferguson. Second, formal education does not take into account what the individual learns after he leaves school. For example, a man may have attended school only as far as the fourth grade, but by diligent self-application he may acquire the equivalent of a high-school education. As a matter of fact, despite these objections, the coefficient of correlation between the Stanford Achievement Test and actual professed education was found to be fairly high,  $.60 \pm .02$ .

The Stanford-Binet and Ferguson Tests were subjected to further study by subdividing the original group according to education, recidivism, occupation, race, and age, average mental ages being determined for each subgroup, as well as correlations between the Stanford-Binet and Ferguson Tests. Although the averages for the latter test were computed on the basis of both methods of scoring, the results were so nearly alike that for the sake of brevity only the averages obtained by the Shimberg scoring are shown in figure 3.

The comparative averages in figure 3 indicate that education has a decided influence on the Stanford-Binet, as indicated by the steep rise in average mental age with higher education. The Ferguson Test shows a slower rise, reaching its peak in the high-school group, and showing a slight drop in the average mental age for the college group. Recidivists tend to have a lower average mental age in both tests, with the Ferguson showing a progressive decline as the number of convictions increases. Clerical workers have the highest average mental age on the Stanford-Binet, skilled workers on the Ferguson, and the unskilled lowest in both. Negroes score lowest on both tests,

a finding which coincides with that of numerous investigators. Semitics score the highest on the Stanford-Binet, which is also a common finding. Nordics score the highest on the Ferguson. The youngest age group, 17-24, has the lowest average mental age on the Stanford-

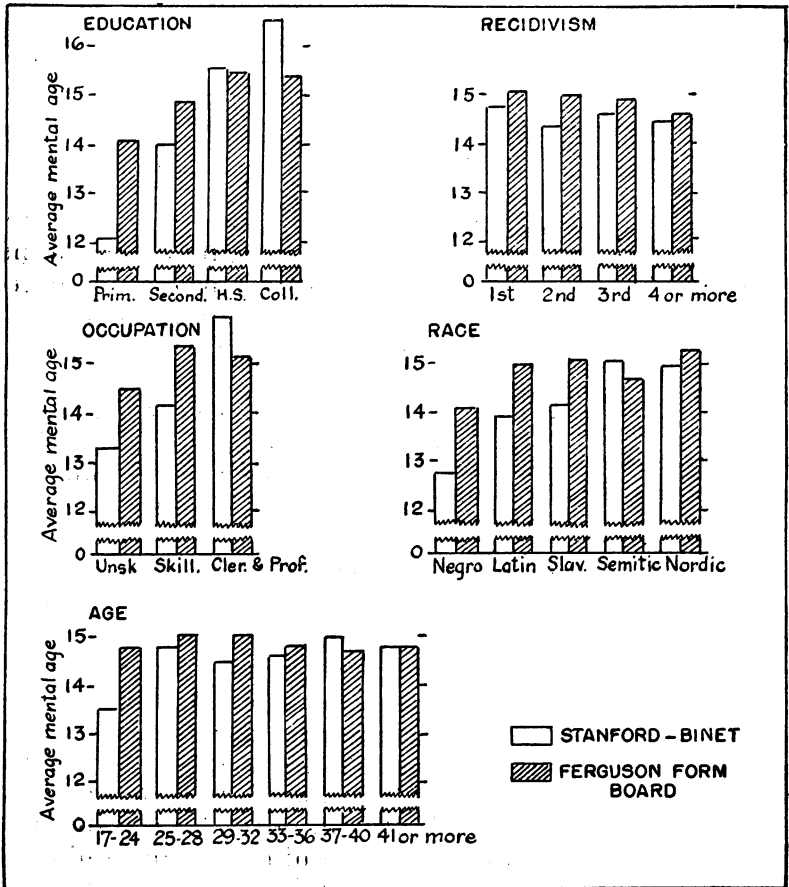


FIGURE 3.—Distribution of average mental ages according to education, recidivism, occupation, race, and age.

Binet, and the 37-40 age group has the lowest on the Ferguson. The 37-40 age group has the highest average mental age on the Stanford-Binet; the 25-28 and 29-32 age groups have the highest on the Ferguson. The latter test shows a more constant average mental age level than does the Stanford-Binet for all age groups.

TABLE 2.—Correlations, together with probable errors, between the Stanford-Binet and Ferguson Tests, subdivided into groups according to education, recidivism, occupation, race, and age

Classification	Number of cases	Correlations	Classification	Number of cases	Correlations
<b>I. Education:</b>			<b>IV. Race:</b>		
a. Primary.....	90	-0.03±.10	a. Negro.....	93	0.41±.09
b. Secondary.....	508	.27±.04	b. Latin.....	197	.19±.07
c. High School.....	311	.25±.05	c. Slav.....	52	.23±.13
d. College.....	91	.01±.10	d. Semitic.....	152	.22±.08
<b>II. Recidivism:</b>			e. Nordic.....	494	.29±.04
a. 1st Conviction.....	625	.41±.03	f. Others (Chinese, Indians, etc.).....	12	( <sup>1</sup> )
b. 2nd Conviction.....	232	.23±.06	<b>V. Age:</b>		
c. 3rd Conviction.....	91	.33±.09	a. 17-24 years.....	151	.44±.07
d. 4 or more Convictions.....	52	-.04±.14	b. 25-28 years.....	186	.36±.06
<b>III. Occupation:</b>			c. 29-32 years.....	185	.11±.06
a. Unskilled.....	384	.40±.04	d. 33-36 years.....	157	.20±.07
b. Skilled.....	270	.29±.05	e. 37-40 years.....	125	.25±.08
c. Clerical and professional.....	346	.15±.05	f. 41 years and over.....	196	.49±.05

<sup>1</sup> Too few cases.

Coefficients of correlation as shown in table 2 are relatively high for first offenders, the unskilled group, Negroes, and for the age groups 17-24, 25-28, and 41 and over. Why first offenders should show a high correlation is not understood, unless it is because they have a preponderance of individuals falling into the age groups mentioned above which also show higher correlations.

CONCLUSIONS

1. The Shimberg method of scoring the Ferguson Form Board Test does not discriminate sufficiently at the upper mental age levels, and hence does not give a satisfactory distribution curve.
2. At the upper mental age levels the original Ferguson method of scoring is preferable, because it gives a more normal distribution curve.
3. The coefficients of correlation between the Stanford-Binet Test and the Ferguson Test were found to be .30 when the latter was scored by the Shimberg method, and .29 when the latter was scored by the original method.
4. The coefficients of correlation between the Stanford Achievement Test and the Ferguson Test were found to be .28 when the latter was scored by the Shimberg method, and .29 when the latter was scored by the original method.
5. The coefficient of correlation between the Stanford-Binet and Stanford Achievement Tests was found to be .73.
6. Educational achievement apparently influences the Stanford-Binet Test to a greater extent than it does the Ferguson Test.
7. The coefficient of correlation between the Stanford Achievement Test and actual professed education is .60.
8. The average Stanford-Binet mental age is highest for individuals with a college education, clerical and professional workers, Semitics, first offenders, and those individuals falling into the age group 37-40. It is lowest for individuals with a primary grade education,



unskilled laborers, Negroes, second offenders, and individuals falling into the age group 17-24.

9. The average Ferguson mental age is highest for individuals with a high school education, skilled workers, Nordics, first offenders, and individuals in the 25-28 and 29-32 age groups. It is lowest for individuals with a primary grade education, unskilled laborers, Negroes, fourth offenders, and those in the age group 37-40.

10. Coefficients of correlation between the Ferguson and Stanford-Binet Tests are relatively high for first offenders, unskilled workers, Negroes, and those individuals in the age groups 17-24, 25-28, and 41 or over.

#### ACKNOWLEDGMENTS

Appreciation is expressed to Asst. Surg. Gen. Walter L. Treadway, without whose cooperation this study would not have been possible, to Senior Surg. J. G. Wilson for his untiring interest, and to Asst. Psychologist Barkev S. Sanders for his valuable aid. I am especially indebted to Surg. J. D. Reichard and Senior Statistician Rollo H. Britten for their many helpful suggestions.

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### DEATHS DURING WEEK ENDED DEC. 7, 1935

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

	Week ended Dec. 7, 1935	Correspond- ing week, 1934
<b>Data from 86 large cities of the United States:</b>		
Total deaths.....	8,738	8,333
Deaths per 1,000 population, annual basis.....	12.2	11.7
Deaths under 1 year of age.....	525	591
Deaths under 1 year of age per 1,000 estimated live births.....	48	55
Deaths per 1,000 population, annual basis, first 49 weeks of year.....	11.3	11.3
<b>Data from industrial insurance companies:</b>		
Policies in force.....	67,820,109	67,105,185
Number of death claims.....	12,549	12,331
Death claims per 1,000 policies in force, annual rate.....	9.6	9.6
Death claims per 1,000 policies, first 49 weeks of year, annual rate.....	9.5	9.8

# 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

### CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended Dec. 14, 1935, and Dec. 15, 1934

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Dec. 14, 1935, and Dec. 15, 1934*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934
<b>New England States:</b>								
Maine.....	2	2	2	1	179	48	1	1
New Hampshire.....	1				1	7	0	0
Vermont.....	1	6			118	7	0	0
Massachusetts.....	15	21			125	195	2	3
Rhode Island.....	1	5			79	3	0	1
Connecticut.....	5	1	5	6	134	314	0	1
<b>Middle Atlantic States:</b>								
New York.....	54	37	19	161	662	787	5	3
New Jersey.....	24	32	13	64	21	54	1	0
Pennsylvania.....	46	75			198	980	5	2
<b>East North Central States:</b>								
Ohio.....	67	97	78	60	129	271	5	1
Indiana.....	43	31	35	46	12	232	4	0
Illinois.....	76	48	35	21	29	778	10	1
Michigan.....	30	16	5	19	42	191	3	0
Wisconsin.....	2	4	79	15	68	353	1	1
<b>West North Central States:</b>								
Minnesota.....	5	31			47	812	0	2
Iowa.....	18	15	1	31	12	784	2	0
Missouri.....	51	62	95	78	5	120	4	0
North Dakota.....	5	11	10	11	2	124	0	0
South Dakota.....	4				5	38	0	1
Nebraska.....	9	9			17	42	2	1
Kansas.....	24	8			6	207	2	1
<b>South Atlantic States:</b>								
Delaware.....		2			50	1	0	0
Maryland <sup>1</sup> .....	15	19	9	12	43	81	4	0
District of Columbia.....	33	9		1	3	5	3	0
Virginia.....	44	52			15	165	2	4
West Virginia.....	37	47	52	94	13	286	2	2
North Carolina <sup>1</sup> .....	51	53	9	22	15	505	0	4
South Carolina <sup>1</sup> .....	9	5	235	419	6	4	2	0
Georgia <sup>1</sup> .....	20	13	113				0	2
Florida <sup>1</sup> .....	9	15	4			8	0	1

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Dec. 14, 1935, and Dec. 15, 1934—Continued*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934
<b>East South Central States:</b>								
Kentucky.....	36	36	24	38	14	152	3	2
Tennessee.....	31	30	72	59	1	78	3	0
Alabama <sup>1</sup> .....	26	20	88	56	10	44	3	2
Mississippi <sup>2</sup> .....	13	15					1	0
<b>West South Central States:</b>								
Arkansas.....	6	15	43	44	3	10	5	0
Louisiana <sup>1</sup> .....	19	30	25	14	13	19	2	0
Oklahoma <sup>4</sup> .....	17	10	48	98	3	1	35	0
Texas <sup>2</sup> .....	111	88	202	288	16	19	11	1
<b>Mountain States:</b>								
Montana.....	1	8	17	14	15	81	0	1
Idaho.....			2		23	5	0	0
Wyoming.....		1			4	15	0	0
Colorado.....	8	7			11	287	1	2
New Mexico.....	6			2	3	49	0	0
Arizona.....	3	2	56	18	3	5	0	0
Utah <sup>1</sup> .....				2	4	12	1	0
<b>Pacific States:</b>								
Washington.....		3	3		259	37	1	1
Oregon.....			17	36	408	27	2	0
California.....	43	63	29	41	253	171	7	2
<b>Total.....</b>	<b>1,021</b>	<b>1,055</b>	<b>1,425</b>	<b>1,671</b>	<b>3,079</b>	<b>8,371</b>	<b>135</b>	<b>43</b>
<b>First 50 weeks of year.....</b>	<b>36,393</b>	<b>38,757</b>	<b>115,554</b>	<b>611,177</b>	<b>716,637</b>	<b>713,044</b>	<b>5,378</b>	<b>2,186</b>

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934
<b>New England States:</b>								
Maine.....	3	2	29	35	0	0	0	3
New Hampshire.....	0	0	16	8	0	0	1	0
Vermont.....	0	0	16	27	0	0	1	1
Massachusetts.....	6	0	217	170	0	0	3	2
Rhode Island.....	0	0	22	13	0	0	0	0
Connecticut.....	1	0	59	39	0	0	2	1
<b>Middle Atlantic States:</b>								
New York.....	8	1	623	429	1	0	19	16
New Jersey.....	3	0	163	129	0	0	2	5
Pennsylvania.....	4	2	555	542	0	0	27	20
<b>East North Central States:</b>								
Ohio.....	1	4	485	549	1	5	4	19
Indiana.....	1	6	190	203	1	3	7	4
Illinois.....	4	0	622	558	8	3	6	16
Michigan.....	6	1	320	283	0	0	10	7
Wisconsin.....	1	2	424	487	4	17	0	2
<b>West North Central States:</b>								
Minnesota.....	0	0	376	137	1	6	1	0
Iowa.....	1	1	180	60	1	1	1	3
Missouri.....	1	0	140	84	0	2	1	9
North Dakota.....	0	0	62	59	4	0	0	1
South Dakota.....	0	0	66	19	15	6	2	1
Nebraska.....	0	0	256	29	45	20	0	1
Kansas.....	0	1	186	77	2	2	5	2
<b>South Atlantic States:</b>								
Delaware.....	0	0	11	20	0	0	1	0
Maryland <sup>1</sup> .....	0	1	76	117	0	0	7	6
District of Columbia.....	0	0	19	17	0	0	6	0
Virginia.....	0	0	75	119	0	14	5	12
West Virginia.....	0	1	74	153	1	0	5	21
North Carolina <sup>2</sup> .....	4	0	68	84	0	0	6	4
South Carolina <sup>3</sup> .....	1	0	3	3	0	0	1	1
Georgia <sup>2</sup> .....	0	0	33		0	0	9	11
Florida <sup>2</sup> .....	0	0	11	4	0	0	4	2

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Dec. 14, 1935, and Dec. 15, 1934—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934	Week ended Dec. 14, 1935	Week ended Dec. 15, 1934
<b>East South Central States:</b>								
Kentucky.....	2	0	71	66	0	0	19	11
Tennessee.....	1	1	72	61	1	1	6	12
Alabama <sup>2</sup> .....	0	0	14	22	0	1	2	15
Mississippi <sup>1</sup> .....	0	1	17	24	0	1	7	2
<b>West South Central States:</b>								
Arkansas.....	0	0	12	19	0	9	5	13
Louisiana <sup>3</sup> .....	0	0	23	21	1	0	13	8
Oklahoma <sup>4</sup> .....	0	0	25	27	1	1	9	15
Texas <sup>3</sup> .....	0	0	134	78	0	1	14	42
<b>Mountain States:</b>								
Montana.....	0	3	143	37	22	1	0	2
Idaho.....	0	0	60	2	1	0	0	6
Wyoming.....	0	0	98	18	2	1	0	0
Colorado.....	1	0	94	245	0	1	1	1
New Mexico.....	1	0	28	20	1	0	5	10
Arizona.....	1	0	25	10	0	0	0	6
Utah <sup>1</sup> .....	0	0	108	37	0	1	0	1
<b>Pacific States:</b>								
Washington.....	3	8	69	44	23	52	1	2
Oregon.....	5	1	59	82	1	0	3	2
California.....	7	14	337	260	3	16	16	5
<b>Total</b> .....	<b>66</b>	<b>50</b>	<b>6,766</b>	<b>5,527</b>	<b>140</b>	<b>165</b>	<b>237</b>	<b>323</b>
<b>First 50 weeks of year</b> .....	<b>10,641</b>	<b>7,197</b>	<b>240,108</b>	<b>204,501</b>	<b>7,134</b>	<b>4,907</b>	<b>17,201</b>	<b>20,609</b>

<sup>1</sup> New York City only.

<sup>2</sup> Week ended earlier than Saturday.

<sup>3</sup> Typhus fever, week ended Dec. 14, 1935, 23 cases, as follows: North Carolina, 1; South Carolina, 1; Georgia, 9; Florida, 2; Alabama, 3; Louisiana, 1; Texas, 6.

<sup>4</sup> Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
<i>October 1935</i>										
Wisconsin.....	6	23	166	-----	228	-----	5	1,406	40	20
<i>November 1935</i>										
Georgia.....	11	206	70	284	5	22	3	160	0	32
Iowa.....	7	88	12	1	23	-----	6	418	10	43
Maine.....	2	4	17	-----	507	-----	13	105	0	9
Massachusetts.....	5	36	-----	3	303	-----	58	756	0	7
Michigan.....	12	104	6	9	95	-----	26	802	-0	20
New Jersey.....	5	81	36	1	69	-----	28	368	0	20
Wyoming.....	3	8	-----	-----	32	-----	0	257	7	3

<i>October 1935</i>		<i>November 1935</i>		<i>November 1935</i>	
Wisconsin:	Cases	Chicken pox:	Cases	Dysentery:	Cases
Chicken pox.....	1,917	Georgia.....	33	Georgia (amoebic).....	17
Dysentery (amoebic).....	1	Iowa.....	354	Georgia (bacillary).....	4
Epidemic encephalitis.....	2	Maine.....	385	Massachusetts (amoebic).....	1
German measles.....	82	Massachusetts.....	861	Massachusetts (bacillary).....	1
Mumps.....	1,805	Michigan.....	1,974	Michigan (amoebic).....	2
Septic sore throat.....	10	New Jersey.....	1,030	Michigan (bacillary).....	2
Tularaemia.....	1	Wyoming.....	91		
Undulant fever.....	10	Conjunctivitis, infectious:			
Whooping cough.....	878	Georgia.....	1		
Anthrax:		Dengue:			
Massachusetts.....	1	Georgia.....	2		

November 1935		November 1935		November 1935	
Epidemic encephalitis:	Cases	Paratyphoid fever:	Cases	Trichinosis:	Cases
Massachusetts	1	Georgia	1	Maine	6
Michigan	2	Massachusetts	2	Massachusetts	3
New Jersey	4	New Jersey	1	New Jersey	3
German measles:		Rabies in animals:		Tularaemia:	
Iowa	1	Massachusetts	19	Georgia	1
Maine	56	Michigan	1	Iowa	1
Massachusetts	94	New Jersey	19	Michigan	1
Michigan	23	Rabies in man:		Typhus fever: <sup>1</sup>	
New Jersey	33	Georgia	1	Georgia	50
Hookworm disease:		Screw worm infection:		Undulant fever:	
Georgia	549	Georgia	2	Georgia	2
Lead poisoning:		Septic sore throat:		Iowa	4
Maine	1	Georgia	28	Maine	1
Massachusetts	2	Iowa	3	Massachusetts	2
Michigan	1	Maine	3	Michigan	8
Mumps:		Massachusetts	9	New Jersey	4
Georgia	24	Michigan	60	Vincent's infectino:	
Iowa	443	Wyoming	7	Maine	8
Maine	478	Tetanus:		Michigan	14
Massachusetts	674	Massachusetts	2	Whooping cough:	
Michigan	205	Michigan	1	Georgia	29
New Jersey	432	Trachoma:		Maine	145
Wyoming	84	Georgia	1	Massachusetts	274
Ophthalmia neonatorum:		Massachusetts	2	Michigan	1,382
Massachusetts	68	New Jersey	2	New Jersey	658
New Jersey	2			Wyoming	35

<sup>1</sup> The report of 1 case of typhus fever in Nevada in October, Public Health Reports Dec. 13, 1935, p. 1771, is incorrect, no case of the disease having occurred.

### EPIDEMIC MENINGITIS IN KIOWA COUNTY, OKLA.

For the week ended December 14, 1935, the Commissioner of Health of Oklahoma reported 35 cases of epidemic meningitis in the State of Oklahoma, 27 of which were in Kiowa County.

### CASES OF VENEREAL DISEASES REPORTED FOR OCTOBER 1935

These reports are published monthly for the information of health officers in order to furnish current data as to the prevalence of the venereal diseases. The figures are taken from reports received from State and city health officers. They are preliminary and are therefore subject to correction. It is hoped that the publication of these reports will stimulate more complete reporting of these diseases.

#### Reports from States

	Syphills		Gonorrhea	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Alabama	584	2.15	98	0.36
Arizona	31	.68	77	1.68
Arkansas	209	1.11	150	.80
California	1,597	2.59	1,639	2.66
Colorado <sup>1</sup>				
Connecticut	230	1.39	183	1.11
Delaware	166	6.86	45	1.86
District of Columbia	173	3.48	177	3.56
Florida	288	1.83	136	.86
Georgia	1,159	3.98	645	2.22
Idaho	0		0	
Illinois	1,380	1.75	1,255	1.59
Indiana	141	.43	158	.48
Iowa <sup>2</sup>	102	.41	180	.72
Kansas	86	.45	56	.29
Kentucky	286	1.08	283	1.07
Louisiana	152	.70	132	.61
Maine	49	.61	40	.50
Maryland	870	5.21	289	1.73
Massachusetts	511	1.18	595	1.37
Michigan	455	.89	489	.96
Minnesota	353	1.36	381	1.46
Mississippi	1,211	5.89	1,954	9.50
Missouri	2,134	5.80	1,084	2.95
Montana <sup>2</sup>	56	1.04	51	.95
Nebraska	49	.35	79	.57
Nevada <sup>1</sup>				
New Hampshire	18	.38	20	.43
New Jersey	541	1.28	340	.80
New Mexico <sup>2</sup>	93	2.13	125	2.86

See footnotes at end of table.

Reports from States—Continued

	Syphilis		Gonorrhoea	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
New York <sup>1</sup> .....	5,499	4.21	1,243	.95
North Carolina.....	1,126	3.41	381	1.15
North Dakota.....	38	.55	87	1.26
Ohio <sup>2</sup> .....	504	.74	212	.31
Oklahoma <sup>3</sup> .....	143	.58	139	.56
Oregon.....	70	.71	210	2.12
Pennsylvania.....	330	.34	244	.25
Rhode Island.....	107	1.52	68	.96
South Carolina <sup>2</sup> .....	246	1.41	367	2.10
South Dakota.....	5	.07	55	.78
Tennessee.....	1,130	4.22	473	1.77
Texas.....	268	.44	69	.11
Utah <sup>1</sup> .....				
Vermont.....	22	.61	33	.91
Virginia.....	422	1.73	273	1.12
Washington.....	131	.81	160	1.00
West Virginia.....	291	1.63	157	.88
Wisconsin <sup>3</sup> .....	44	.15	161	.54
Wyoming <sup>1</sup> .....				
Total.....	23,300	1.87	14,993	1.20

Reports from cities of 200,000 population or over

Akron, Ohio.....	22	0.81	13	0.48
Atlanta, Ga.....	252	8.78	194	6.73
Baltimore, Md.....	504	6.11	196	2.33
Birmingham, Ala.....	125	4.43	61	2.10
Boston, Mass.....	205	2.59	210	2.63
Buffalo, N. Y.....	190	3.21	82	1.39
Chicago, Ill.....	747	2.09	793	2.22
Cincinnati, Ohio.....	68	1.46	43	.92
Cleveland, Ohio.....	191	2.05	124	1.33
Columbus, Ohio.....	37	1.21	4	.13
Dallas, Tex.....	93	3.21	24	.83
Dayton, Ohio.....	11	.53	0	
Denver, Colo.....	109	3.37	104	3.51
Detroit, Mich.....	234	1.35	320	1.83
Houston, Tex <sup>4</sup> .....	183	5.46	47	1.40
Indianapolis, Ind.....	57	1.51	46	1.22
Jersey City, N. J. <sup>5</sup> .....				
Kansas City, Mo.....	43	1.02	18	.43
Los Angeles, Calif.....	369	2.79	358	2.50
Louisville, Ky.....	192	5.93	138	4.26
Memphis, Tenn.....	223	8.35	77	2.88
Milwaukee, Wis.....	6	.10	21	.34
Minneapolis, Minn.....	103	2.12	155	3.19
Newark, N. J.....	151	3.26	86	1.86
New Orleans, La. <sup>1</sup> .....				
New York, N. Y.....	4,600	6.30	1,002	1.37
Oakland, Calif.....	23	.76	34	1.12
Omaha, Nebr.....	19	.86	14	.64
Philadelphia, Pa.....	306	1.54	161	.81
Pittsburgh, Pa.....	25	.41	70	1.02
Portland, Oreg.....	37	1.18	139	4.43
Providence, R. I.....	65	2.51	30	1.16
Rochester, N. Y.....	57	1.69	84	2.49
St. Louis, Mo.....	655	7.84	497	5.95
St. Paul, Minn.....	48	1.70	42	1.49
San Antonio, Tex. <sup>1</sup> .....				
San Francisco, Calif.....	146	2.18	145	2.16
Seattle, Wash.....	84	2.21	100	2.63
Syracuse, N. Y. <sup>6</sup> .....	24	1.10	36	1.63
Toledo, Ohio.....	47	1.54	25	.82
Washington, D. C. <sup>7</sup> .....	173	3.48	177	3.56

<sup>1</sup> Not reporting.

<sup>2</sup> Incomplete.

<sup>3</sup> Only cases of syphilis in the infectious stage are reported.

<sup>4</sup> Data for Jefferson Davis and Herman hospitals; physicians of Houston are not compelled to report venereal diseases.

<sup>5</sup> No report for current month.

<sup>6</sup> Reported by dispensary and clinics.

<sup>7</sup> Reported by Social Hygiene Clinic.

## WEEKLY REPORTS FROM CITIES

City reports for week ended Dec. 7, 1935

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
<b>Maine:</b>											
Portland	0		0	0	1	3	0	0	3	19	25
<b>New Hampshire:</b>											
Concord	0		0	0	0	1	0	1	0	0	11
Manchester	0		0	0	3	6	0	0	0	0	26
Nashua	0			0		0	0		0	0	
<b>Vermont:</b>											
Barre	0		0	0	0	0	0	0	0	0	4
Burlington	1		0	0	0	0	0	0	0	0	13
Rutland	0		0	0	0	3	0	0	0	0	6
<b>Massachusetts:</b>											
Boston	2		3	31	18	42	0	7	1	7	220
Fall River	0		0	0	1	3	0	0	0	0	24
Springfield	0		0	0	5	2	0	0	0	11	21
Worcester	0		0	0	2	29	0	1	0	0	36
<b>Rhode Island:</b>											
Pawtucket	0		0	0	0	1	0	0	0	0	15
Providence	0		0	0	2	11	0	1	0	14	59
<b>Connecticut:</b>											
Bridgeport	1	3	2	1	2	1	0	2	0	2	31
Hartford	0	0	0	0	3	4	0	1	1	8	45
New Haven	0		0	0	3	1	0	0	0	14	30
<b>New York:</b>											
Buffalo	0		1	25	18	49	0	5	0	6	148
New York	45	13	6	103	111	140	0	73	5	140	1,470
Rochester	1		0	3	4	2	0	0	0	4	71
Syracuse	0		0	0	3	3	0	1	0	10	45
<b>New Jersey:</b>											
Camden	1		0	0	0	7	0	0	1	1	21
Newark	0	8	0	1	8	25	0	4	0	37	87
Trenton	0		0	0	8	2	0	3	1	1	42
<b>Pennsylvania:</b>											
Philadelphia	5	4	3	67	39	81	0	24	6	114	556
Pittsburgh	3	3	0	11	26	46	0	4	0	17	187
Reading	0		0	2	0	0	0	3	0	0	20
Scranton	1		0	1		8	0		0	0	
<b>Ohio:</b>											
Cincinnati	8		2	0	8	17	0	7	0	2	160
Cleveland	3	23	0	2	21	21	0	11	1	46	190
Columbus	3	2	2	1	11	20	0	2	1	1	103
Toledo	0	2	2	23	7	11	0	2	0	10	81
<b>Indiana:</b>											
Anderson	1		0	0	2	1	0	0	0	1	7
Fort Wayne	0		0	0	1	8	0	0	0	0	20
Indianapolis	2		0	6	16	26	0	6	1	17	115
Muncie	1		0	1	3	0	0	1	0	0	12
South Bend	1		0	1	3	2	0	0	0	0	15
Terre Haute	0		0	0	0	0	0	0	0	0	14
<b>Illinois:</b>											
Alton	8		1	0	1	6	0	0	0	0	9
Chicago	12	10	7	13	67	210	0	33	0	121	736
Elgin	1		0	0	0	3	0	0	0	2	11
Moline	1		0	0	1	1	0	0	0	0	14
Springfield	0		0	1	5	10	0	0	0	0	24
<b>Michigan:</b>											
Detroit	14	5	1	7	36	68	0	25	0	185	266
Flint	1		0	1	5	30	0	2	1	11	29
Grand Rapids	0		0	1	2	12	0	0	0	4	29
<b>Wisconsin:</b>											
Kenosha	0		0	0	0	5	0	0	0	4	6
Milwaukee	0	1	1	1	3	48	0	2	0	88	92
Racine											
Superior	0		0	0	0	4	0	0	0	0	9
<b>Minnesota:</b>											
Duluth	0		0	3	1	1	0	0	0	10	23
Minneapolis	2		0	6	7	89	0	0	0	8	85
St. Paul	0		0	7	13	36	0	4	0	3	75
<b>Iowa:</b>											
Cedar Rapids	0			1		3	0		0	0	
Davenport	1			0		7	0		0	0	
Des Moines	2			0		11	0		3	1	29
Sioux City	1			1		11	0		0	0	
Waterloo	3			1		12	0		1	1	

City reports for week ended Dec. 7, 1935—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Missouri:											
Kansas City	4		1	1	13	7	0	3	0	4	89
St. Joseph	6		0	0	0	2	0	0	0	0	11
St. Louis	12		0	1	13	41	0	6	1	3	259
North Dakota:											
Fargo	0		0	0	1	2	1	0	0	0	9
Grand Forks	0		0	0		1	0	0	0	1	
Minot	0		0	1	0	2	0	0	0	0	9
South Dakota:											
Aberdeen	0			0		0	0		0	0	
Nebraska:											
Omaha	3		0	1	6	107	14	3	0	1	58
Kansas:											
Lawrence	0		0	0	0	0	0	0	0	0	10
Topeka	0		0	0	2	9	0	0	0	9	10
Wichita	1		0	1	5	11	0	0	0	6	26
Delaware:											
Wilmington	0		0	0	3	1	0	0	0	0	22
Maryland:											
Baltimore	5	5	2	4	25	35	0	15	2	8	245
Cumberland	3		0	0	0	0	0	0	0	0	12
Frederick	1		0	0	1	0	0	0	0	0	4
District of Columbia:											
Washington	33	4	3	3	13	12	0	12	2	3	174
Virginia:											
Lynchburg	2		0	0	1	1	0	0	0	5	14
Norfolk	3		0	0	3	2	0	1	0	8	37
Richmond	3		1	0	0	4	0	3	0	1	52
Roanoke	1		0	0	4	4	0	0	0	1	16
West Virginia:											
Charleston	1		0	0	4	3	0	0	0	0	30
Huntington	1					3	0	0	0	0	
Wheeling	0		0	1	2	1	0	0	0	0	19
North Carolina:											
Gastonia	0		0	0	1	0	0	0	0	0	8
Raleigh	0		0	0	0	0	0	2	0	0	10
Wilmington	0		0	0	1	0	0	0	0	0	6
Winston-Salem	2		0	1	4	0	0	1	0	0	19
South Carolina:											
Charleston	0	7	0	0	3	3	0	1	0	2	21
Columbia											
Florence	0		0	0	1	0	0	0	0	0	4
Greenville	0		0	0	0	0	0	0	0	0	8
Georgia:											
Atlanta	8	22	2	1	13	15	0	3	1	0	100
Brunswick	0		0	0	0	0	0	0	0	0	3
Savannah	0	11	0	0	6	2	0	1	0	4	51
Florida:											
Miami	1		1	0	0	2	0	4	1	0	30
Tampa	0		0	0	2	1	0	2	0	0	31
Kentucky:											
Ashland	2			0		0	0		0	0	
Covington	2		0	0	2	5	0	1	0	0	
Lexington	0		0	0	2	0	0	2	2	0	19
Tennessee:											
Knoxville	7	3	1	0	2	1	0	0	1	0	27
Memphis	3		1	0	15	14	0	7	0	8	101
Nashville	0		2	0	8	3	0	4	0	0	63
Alabama:											
Birmingham	3	12	0	0	5	1	0	3	0	0	64
Mobile	2	2	0	0	4	1	0	1	0	0	25
Montgomery	0			1		1	0		1	0	
Arkansas:											
Fort Smith	0			0		1	0		0	0	
Little Rock	0		1	0	4	3	0	2	0	0	11
Louisiana:											
Lake Charles	2		0	0	1	2	0	0	0	0	10
New Orleans	12	2	2	2	21	6	0	8	1	8	179
Shreveport	3		0	0	6	2	0	4	0	0	41
Oklahoma:											
Oklahoma City	2	14	0	0	3	0	0	2	0	0	40
Texas:											
Dallas	7		0	0	6	7	0	4	0	0	68
Fort Worth	7		0	0	9	6	0	2	0	0	37
Galveston	2		0	0	2	1	0	1	0	0	20
Houston	17		2	1	11	2	0	7	0	0	94
San Antonio	4		9	0	9	1	0	7	0	0	81



City reports for week ended Dec. 7, 1935—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Montana:											
Billings.....	0	0	0	0	0	19	0	0	0	1	4
Great Falls.....	0	0	0	0	2	1	0	0	0	2	9
Helena.....	0	0	0	0	2	0	0	0	0	0	3
Missoula.....	0	0	0	0	3	36	0	0	0	0	8
Idaho:											
Boise.....	0	0	0	0	3	0	0	0	0	0	9
Colorado:											
Colorado Springs.....	0	0	0	0	1	6	0	0	0	2	9
Denver.....	2	0	6	10	14	0	6	0	2	2	96
Pueblo.....	0	0	0	1	12	0	0	0	3	3	6
New Mexico:											
Albuquerque.....	0	0	0	1	7	0	1	0	2	9	9
Utah:											
Salt Lake City.....	0	0	0	7	41	0	0	0	2	46	46
Nevada:											
Reno.....											
Washington:											
Seattle.....	0	0	1	3	10	21	0	5	1	2	87
Spokane.....	0	1	21	7	2	3	1	0	1	1	35
Tacoma.....	0	0	0	2	2	0	0	0	0	0	25
Oregon:											
Portland.....	0	1	68	7	19	0	4	0	0	0	91
Salem.....	0	0	0	0	1	0	0	0	0	0	0
California:											
Los Angeles.....	19	15	1	25	14	48	0	17	0	14	344
Sacramento.....	3	1	1	0	3	25	0	1	1	9	35
San Francisco.....	3	2	2	38	18	25	0	9	0	20	170

State and city	Meningococcus meningitis		Poliomyelitis cases	State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
Maine:				Missouri:			
Portland.....	0	0	1	Kansas City.....	0	1	0
Massachusetts:				St. Joseph.....	1	0	0
Boston.....	0	0	2	St. Louis.....	0	0	1
Worcester.....	0	0	1	Nebraska:			
Connecticut:				Omaha.....	1	1	0
Hartford.....	0	0	1	Maryland:			
New York:				Baltimore.....	5	1	0
New York.....	7	3	2	District of Columbia:			
Pennsylvania:				Washington.....	2	0	0
Philadelphia.....	4	2	2	Virginia:			
Ohio:				Norfolk.....	2	2	0
Cincinnati.....	1	0	0	Roanoke.....	1	0	0
Toledo.....	2	0	0	Alabama:			
Indiana:				Birmingham.....	0	1	0
Indianapolis.....	0	0	1	Mobile.....	1	0	0
South Bend.....	1	0	0	Louisiana:			
Illinois:				New Orleans.....	0	0	2
Alton.....	0	1	0	Shreveport.....	0	2	0
Chicago.....	3	3	0	Texas:			
Moline.....	1	0	0	Galveston.....	3	1	0
Springfield.....	1	0	0	San Antonio.....	1	0	0
Michigan:				Colorado:			
Detroit.....	2	0	0	Colorado Springs.....	2	0	0
Wisconsin:				Oregon:			
Kenosha.....	0	0	1	Portland.....	2	1	0
Superior.....	1	0	0	California:			
Minnesota:				Los Angeles.....	1	0	1
Minneapolis.....	1	0	0	Sacramento.....	0	0	1
Iowa:				San Francisco.....	1	1	0
Sioux City.....	1	0	0				

*Epidemic encephalitis*.—Cases: Trenton, 2; Baltimore, 1; San Francisco, 1.  
*Pellagra*.—Cases: Boston, 1; Cincinnati, 1; Columbus, 1; Washington, 1; Atlanta, 3; Savannah, 1; Memphis, 2; New Orleans, 1; San Francisco, 2.  
*Rabies in man*.—Bridgeport, Conn., 1 death.  
*Typhus*.—Cases: Norfolk, 1; Atlanta, 2; Montgomery, 4.

# FOREIGN AND INSULAR

## BRITISH INDIA

*Vital statistics—1933—Comparative.*—Following are vital statistics for British India for the years 1933 and 1932.

	1933	1932		1933	1932
Live births.....	9,678,876	9,054,506	Deaths from:		
Live births per 1,000 population.....	36	34	Cholera.....	68,318	67,219
Stillbirths.....	189,081		Diarrhea and dysentery.....	246,164	222,804
Number of deaths.....	6,096,787	5,805,666	Fevers.....	3,530,299	3,456,144
Deaths per 1,000 population.....	22.4	21.6	Plague.....	42,631	46,504
Deaths under 1 year of age.....	1,650,973		Respiratory diseases.....	443,305	405,924
Deaths under 1 year of age per 1,000 live births.....	171	169	Smallpox.....	103,641	44,925
			Other causes.....	1,662,429	1,562,146

## CANADA

*Provinces—Communicable diseases—2 weeks ended November 30, 1935.*—During the 2 weeks ended November 30, 1935, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis.....			1	1	2					4
Chicken pox.....	1	24	3	320	1,020	155	105	21	204	1,853
Diphtheria.....		5	10	60	21	14	3	2	2	117
Dysentery.....				2						2
Erysipelas.....				11	7	8	1		2	29
Influenza.....		7			32	5			8	52
Lethargic encephalitis.....					1					1
Measles.....	2	13	261	329	1,377	28	235	30	424	2,699
Mumps.....		47			942	230	1,299	17	193	2,728
Paratyphoid fever.....					3					3
Pneumonia.....		3			20		3		17	43
Poliomyelitis.....	1			1	1					3
Scarlet fever.....		23	12	320	626	75	39	40	75	1,210
Smallpox.....							1	1	1	3
Trachoma.....							1		9	10
Tuberculosis.....	3	54	26	95	65	19	2	4	41	309
Typhoid fever.....		1	3	56	11	4	2		3	80
Undulant fever.....				1	2					3
Whooping cough.....		41	5	118	412	25	70	24	15	710

## GERMANY

*Vital statistics—Second quarter 1935.*—Following are vital statistics for Germany for the second quarter of 1935:

Number of marriages.....	192,095	Total deaths.....	201,190
Number of marriages per 1,000 inhabitants.....	11.5	Deaths per 1,000 inhabitants.....	12.0
Number of live births.....	329,791	Deaths under 1 year of age.....	22,736
Number of live births per 1,000 inhabitants.....	19.7	Deaths under 1 year of age per 100 live births.....	6.9
Number of stillbirths.....	8,257		

## GREAT BRITAIN

*England—Liverpool—Plague-infected rats.*—Two plague-infected rats, 1 on December 4, and 1 on December 5, 1935, were reported in the docks zone in Liverpool, England, near ships loaded with grain from South America and the Orient.

*England and Wales—Infectious diseases—13 weeks ended September 28, 1935.*—During the 13 weeks ended September 28, 1935, cases of certain infectious diseases were reported in England and Wales as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	12,392	Puerperal pyrexia.....	1,453
Ophthalmia neonatorum.....	1,141	Scarlet fever.....	22,803
Pneumonia.....	5,540	Typhoid fever.....	780
Puerperal fever.....	501		

*England and Wales—Vital statistics—Third quarter, ended September 30, 1935.*—During the quarter ended September 30, 1935, 155,615 live births and 100,060 deaths were registered in England and Wales. The following statistics are taken from the Quarterly Return of Births, Deaths, and Marriages, issued by the Registrar General of England and Wales. The figures are provisional.

*Birth and death rates in England and Wales, quarter ended September 30, 1935*

Annual rates per 1,000 population:	Annual rates per 1,000 population—Continued:
Live births..... 15.30	Deaths from—Continued.
Stillbirths..... .62	Diphtheria..... 0.06
Deaths, all causes..... 9.80	Influenza..... .04
Deaths under 1 year of age..... 144.00	Measles..... .02
Deaths from:	Scarlet fever..... .01
Diarrhea and enteritis (under 2 years of age)..... 16.50	Violence..... .52
	Whooping cough..... .03

<sup>1</sup> Per 1,000 live births.

## JAMAICA

*Communicable diseases—4 weeks ended November 30, 1935.*—During the 4 weeks ended November 30, 1935, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chicken pox.....	1	55	Leprosy.....		2
Dysentery.....	10	11	Tuberculosis.....	37	60
Erysipelas.....		1	Typhoid fever.....	27	107



	June 1935			July 1935			August 1935			September 1935			October 1935	
	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-30
Philippine Islands: C														
Occidental Negros Province..... D	1													
Rizal Province..... D	3													
D	1													
Siam: C														
Ang Thoeng Province..... D														
Ayudhaya Province..... D														
Bangkok..... D														
Bejruri Province..... D														
Kanchanapuri Province?..... D														
Nagara Pathom Province..... C														
Nondupuri Province..... C														
Pradumdhani Province..... C														
Rajpuri Province..... C														
Sarapuri Province..... C														
Singhapuri Province..... C														
Smudprakar Province..... C														
Smudsagara Province..... C														
Smudsongram Province..... C														
Subarnpuri Province..... C														
On vessels: C														
S. S. <i>Bediant</i> at Calcutta..... C														
S. S. <i>Baron Napier</i> at Calcutta..... C														
S. S. <i>Barjora</i> at Calcutta..... C														
S. S. <i>Rajula</i> at Penang..... C														
S. S. <i>Rajput</i> at Calcutta..... C														
S. S. <i>Santha</i> at Rangoon from Calcutta..... C														
S. S. <i>Kuala</i> at Penang from Moumein..... C														
S. S. <i>Cape St. Francis</i> at Rangoon from Calcutta..... C														
S. S. <i>Cape St. Andrew</i> at Calcutta..... C														

Place	June 1935			July 1935			August 1935			September 1935			October 1935	
	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-30
Indo-China (French) (see also table above):														
Cambodia <sup>1</sup> ..... C	8	9	6											
D	3	6	1											
C	7	5	11	2		2								
D	7	3	3											
Cochin-China <sup>4</sup> ..... D														

<sup>1</sup> Imported.  
<sup>2</sup> During the period Apr. 20 to July 9, 1935, 98 cases of cholera with 95 deaths were reported in Kanchanapuri Province, Siam.  
<sup>3</sup> Suspected.  
<sup>4</sup> Reports incomplete.



Egypt:																						
Alexandria.....	C	1	P																			
Plague-infected rats.....																						
Asyut.....	C	12	P	3	1																	
Girga.....	C	1																				
Minya.....	C	3	P	3																		
Qena.....	C	1																				
Great Britain—England—Liverpool. <sup>1</sup>																						
Hawaii Territory: Plague-infected rats—																						
Hawaii Island—Hamakua district.....	C	1																				1
Hamakua Mill.....																						
Kalapa.....			3		1																	2
Kukaihu.....																						
Pauahu.....			1							1												1
Pauhau.....																						
Maui Island—Makawao district—Kahu- lui (9–10 miles from).....	C	2,570	261	176	947	312	330	291	500	454	528	754	599									
India.....	D	2,087	183	111	483	110	133	124	266	210	373	329	316	1								
Bassein.....	C	4	4	4	1		1	2														
Plague-infected rats.....							38	43	27	55	116	80	46	33	71							1
Bombay Presidency.....	C	83	14	68	162	79	27	23	16	28	60	82	64	28	22	46						
Central Provinces and Berar.....	D	46	8	36	70	27	141	121	127	94	131	25	308	229	351	323	366					382
Madras Presidency.....	C	71	5	9	6	255	18	35	21	37	33	31	37	20								
Moulmein.....	D	2	2	2	21	9	13	12	12	15	16	27	15									
Punjab.....	D	1																				
Rangoon.....	D	548	40																			
Plague-infected rats.....																						
Indo China (see also table below):	D	327	31	8	6	1	1	1	1	1												
Longxuyen.....	C	1	2	2	1																	
Pnom-Penh.....	C	1	1																			
Salgon and Cholon.....	C	1	2		2																	
Tayinh.....	C	1	1																			

<sup>1</sup> Including plague in the United States and its possessions.

<sup>2</sup> A report dated Aug. 8, 1935, states that 4 cases of plague occurred at Leventue, Pampa Territory, Argentina, during 2 months.

<sup>3</sup> A report dated Aug. 2, 1935, states that plague-infected rats were present at San Luis, Argentina.

<sup>4</sup> Reports of plague in Brazil have been received under the dates indicated, as follows: July 25, 1935, 4 cases at Vicosa, Alagoas State; July 2, about 16 deaths in Fiera Santanna, Bahia State since Jan. 1; Oct. 15, 7 cases near Bonfim, Bahia State, during September, during October 1935, 3 cases at Tangurino, Santa Barbara, Bahia State; July 26, 10 cases in Ceara State since Jan. 1; Sept. 10, 204 cases with 72 deaths in Pernambuco State up to Aug. 24; Oct. 8, 4 cases and 1 death at Paulista, Piahy State.

<sup>5</sup> Imported.

<sup>6</sup> A report dated July 4, 1935, states that 76 cases of plague with 58 deaths were reported at Chuanshow, Provinces of Fukiang, China.

<sup>7</sup> A report dated Oct. 28, 1935, states that up to Oct. 25, 185 deaths from plague were reported in the provinces of Kirin, Lungkiang, Fengtien, and South Hsingan, Manchuria, China.

<sup>8</sup> During the week ended Dec. 7, 1935, 2 plague-infected rats were reported at Liverpool, England, in the docks zone near cereal-laden ships from South America and the Orient.

<sup>9</sup> During the week ended Dec. 7, 1935, 1 plague-infected rat was reported at Kukaihu, Hamakua District, Hawaii Island, Hawaii Territory.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

PLAGUE 1—Continued

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

Place	Apr. 28- May 25, 1935	May 26-June 29, 1935	June 30-July 28- July 27, Aug. 31, 1935	Week ended—														
				September 1935			October 1935				November 1935							
				7	14	21	28	5	12	19	26	2	9	16	23	30		
Iraq:																		
Bahged	C	3	1	2			1											
Bahged Province	C	1																1
Libya: Province of Tripoli—Tagiura	C			1														
Madagascar. (See table below.)																		
Morocco:																		
Draa boundaries—Tighmert	C		7															
Mogador	C		9															
	D		3															
Mogador	C																	
Saffi Region	C																	
Saffi Region	D	1																
Ferru. (See table below.)																		
Senegal. (See table below.)																		
South-West Africa. (See table below.)	C		1	2	2			2						2				
Tunisia: Tunis.	D		1	1				3	4	3								1
			2	2				1	1									1
Plague-infected rats.				7				10 2			10 4			10 14			10 2	10 5
Union of South Africa:																		
Cape Province.	C		17															
Orange Free State	C		6															
Transvaal	C		1															
United States:																		
California—Plague-infected ground squirrels:																		
Lassen County.		2	1															
Modoc County.		26	65															
San Luis Obispo County.		11	1															
Montana — Dillon — Plague-infected ground squirrels				1														
Oregon—Plague-infected ground squirrels:																		
Grant County				7														
Lake County																		
Wallowa County.		2	1	11 6														
Wallowa County															11 2			
On vessel: S. S. Ipanema at Marseille	C																	

<sup>10</sup> For 2 weeks. <sup>11</sup> Plague-infected wood rat. <sup>12</sup> Includes 1 suspected plague-infected squirrel. <sup>13</sup> One of these cases was a member of the crew and the other was a stevedore believed to have worked on the vessel. Several plague-infected rats were reported found on board the vessel.



Place	May 1935	June 1935	July 1935	August 1935	September 1935	October 1935
Argentina (see also table above):						
Jujuy Province.....			1			
Pampa Territory—Victoria.....		2				
Santiago de Estero Province—Frias.....		2				
Azores.....		1				
Bolivia.....				3		
China: Kwangchowan.....				14	4	
Ecuador: Loja Province.....	7					
India-China (see also table above):	9					
Cambodia.....	4					
Cochin-China.....						
Madagascar (central region).....	1					
Senegal:	128	9	112	138	232	
Baol <sup>15</sup> .....	124	92	102	133	227	
Dakar <sup>15</sup> .....						
Louga <sup>15</sup> .....						
Rufisque <sup>15</sup> .....						
Tuelis <sup>15</sup> .....						
Tivaouane <sup>15</sup> .....						
South-West Africa: Ovamboland.....						
Peru:						
Lambayeque Department.....	10	4	4	10	3	1
Libertad Department.....	1					
Lima Department.....	3					
Callao.....	6	4	2	6	1	1
Plague-infected rats:						
Lima.....						
Plague-infected rats:						
Lima.....	6	1	1	6	2	
Plague-infected rats:	4	1		2		
Senegal:						
Baol <sup>15</sup> .....	10	19	25	16	8	
Dakar <sup>15</sup> .....	8	13	15	2		
Louga <sup>15</sup> .....	1			1		
Rufisque <sup>15</sup> .....						
Tuelis <sup>15</sup> .....	10	8	2	4		
Tivaouane <sup>15</sup> .....	19	20	17	22		
South-West Africa: Ovamboland.....	30	48	42	46	11	1
Senegal:	15	34	24			

<sup>15</sup> For 2 months.

<sup>16</sup> Incomplete reports.

<sup>14</sup> Suspected.







Niger Territory. (See table below.)																				
Nyasaland. (See table below.)																				
Faestine.																				
Ferri. (See table below.)																				
Poland.																				
Portugal (see also table below):																				
Lisbon.																				
Oporto.																				
Portuguese East Africa.																				
Salvador. (See table below.)																				
Saudi Arabia.																				
Siam: Bangkok.																				
Sierra Leone.																				
Freetown.																				
Spain.																				
Straits Settlements: Singapore.																				
Sudan (Anglo-Egyptian).																				
Syria: Tripoli.																				
Tunisia.																				
Turkey. (See table below.)																				
Union of Soviet Socialist Republics. (See table below.)																				

On vessels:																				
S. S. <i>Nagasaki Maru</i> at Nagasaki from Shanghai.....																				
S. S. <i>Kara</i> at Singapore from Calcutta.....																				
S. S. <i>Asama</i> at Singapore from Hong Kong.....																				
S. S. <i>Cramer</i> at Singapore from Amoy.....																				
S. S. <i>San Heizer</i> at Singapore from Amoy.....																				
S. S. <i>Chioze Maru</i> at Nagasaki from Dairen.....																				

S. S. <i>Perla</i> at Aden from Massawa.....																				
S. S. <i>Expisign</i> at Rangoon from Gopalpore.....																				
S. S. <i>Hong Kieny</i> at Singapore from Amoy.....																				
S. S. <i>Zarrafata</i> at Gibraltar.....																				
S. S. <i>Tuamoa</i> at Rangoon from Madras.....																				

† For 2 weeks.  
 ‡ A report dated June 11, 1935, states that 10 deaths from smallpox had occurred at Mizuma Migitu Prefecture, Japan.  
 § For 3 weeks.

† For 2 weeks.  
 ‡ A report dated June 11, 1935, states that 10 deaths from smallpox had occurred at Mizuma Migitu Prefecture, Japan.  
 § For 3 weeks.









	May 1935	June 1935	July 1935	August 1935	Septem-ber 1935	October 1935
Pern. (See table below.)	C	597	445	175	33	30
Poland	D	42	21	10	2	4
Portugal. (See table below.)						
Rumania. (See table below.)						
Saudi Arabia	C	3			1	
Straits Settlements: Singapore	C	2				
Trans-Jordan	C	11	13			
Tunisia:						
Tunis	C	9	3	1	1	15
Provinces	C	158	115	88	17	16
Turkey (See table below.)						
Union of South Africa (See table below.)						
Union of Soviet Socialist Republics. (See table below.)						
Yugoslavia (See table below.)	C					
On vessel: S. S. <i>Arauzmamon</i> at London.	C					

Place	May 1935	June 1935	July 1935	August 1935	Septem-ber 1935	October 1935	Place	May 1935	June 1935	July 1935	August 1935	Septem-ber 1935	October 1935
Bolivia	C	127	111	114	150	140	Mexico—Continued						
China: Manchuria—Harbin	C	43	25	40	31	17	Oaxaca State						
Chosen	C	284	135	33	3	1	Puebla State						
Czechoslovakia	C	8	11	5	1	4	Puebla						
France	C	2		5	1		Quereqaro State						
Greece	C	7	6	22	24	43	San Luis Potosi State						
Guatemala	C	4		1			San Luis Potosi						
Latvia	C			1			Sonora State						
Mexico (see also table above):							Vera Cruz State						
Aguascalientes	C		1				Vera Cruz						
Coahuila State	C						Panama Canal Zone						
Durango State	C			1			Peru						
Guajalato State	C		3	9	7	3	Portugal						
Leon	C		1	6	6	6	Rumania						
Hidalgo State	C		6	6	8	8	Turkey						
Jalisco State	C		3	1	1	1	Union of South Africa:						
Guadalajara	C		3	1	1	1	Cape Province						
Mexico State	C		95	173	139	155	Natal						
Mexico, D. F.	C		91	170	153	163	Orange Free State						
Mexico City	C		1				Transvaal						
Michoacan State	C						Union of Soviet Socialist Re- publics						
Nayarit State	D				6	6	Yugoslavia						

1 For 3 weeks.  
 2 For 2 weeks.  
 3 For 4 weeks.  
 4 For the week ended Mar. 9, 1935, 11 cases of typhus fever were reported at San Jose nitrate camp about 42 miles from Iquique, Chile.  
 5 A report dated June 25, 1935, states that about 400 cases of typhus fever occurred at Harbin, Manchuria, China.  
 6 During the week ended Nov. 23, 1935, 1 case of typhus fever was reported at Youghal District No. 2, Waterford County, Irish Free State.  
 7 Includes 3 imported cases.  
 8 Imported.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**  
**YELLOW FEVER**

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

Place	Apr. 26- May 15, 1935	May 26- June 29, 1935	June 30- July 27, 1935	Week ended—												
				August 1935			September 1935			October 1935			November 1935			
				3	10	17	24	31	7	14	21	28	5	12	19	26
Bolivia: Santa Cruz Department—Chuchio: 1																
Brazil:																
Goyaz State.....		6														
Maranhao State.....	6	1														
Mato Grosso State.....		2	9													
Minas Geraes State.....		14	6													
Para State.....		9	8													
Sao Paulo State.....		1	1													
Colombia:																
Intendencia of Meta.....																
Acacias.....																
Restrepo.....																
Dahomey:																
Parakou.....																
Porto Novo.....		1														
Gold Coast:																
Bawku.....																
Cape Coast.....																
Tamsale.....																
Ivory Coast: Abidjan: 1																
Sudan (French): Koutiala.....																
Togo:																
Agoneve.....		1														
Kouma.....		1														
Sokode.....		1														

1 During the month of June 1935, 1 case of yellow fever was reported at Chuchio, Santa Cruz Department, Bolivia.  
 2 Suspected  
 3 During the week ended Nov. 23, 1935, 1 case of yellow fever was reported at Abidjan, Ivory Coast.