

## MONTHLY BULLETIN

# Indiana State Board of Health.

[Entered as second-class matter at the Indianapolis Postoffice.]

VOLUME V.

INDIANAPOLIS, DECEMBER, 1903.

NUMBER 12.  
25 Cents a Year.

W. N. WISHARD, M. D., PRESIDENT ..... Indianapolis.  
CLARK COOK, M. D., VICE-PRESIDENT ..... Fowler.  
T. HENRY DAVIS, M. D. .... Richmond.  
C. M. EISENBEISS, M. D. .... Elkhart.  
J. N. HURTY, M. D., PHAR. D., SECRETARY ..... Indianapolis.

The MONTHLY BULLETIN will be sent to all health officers and deputies in the State. Health officers and deputies shall carefully read and file each copy for future reference. This is very important, for we expect to print instructions, rules and general information, which it will be necessary for officers to preserve.

### ABSTRACT OF MORTALITY STATISTICS FOR DECEMBER, 1903.

The total number of deaths reported for the month was 2,848, which is an annual rate of 13.3. In the corresponding month last year 2,634 deaths were reported, which is a rate of 12.3. By this comparison, an increase appears for this month. In the preceding month there were 2,518 deaths, which is an annual rate of 12.2, and by this comparison also, an increase appears. The deaths by important ages were: Under 1 year, 391 or 15 per cent. of the total; 1 to 5 years of age, 201; 5 to 10 years of age, 88; 10 to 15 years of age, 49; 15 to 20 years of age, 100; 65 and over, 805 or 30.1 per cent. of the total. In the corresponding month last year 17.4 per cent. of the total number of deaths was under 1 year of age, and 28.4, 65 and over.

Some important causes of death were as follows: Consumption 337, a rate of 158 per 100,000 population; typhoid fever 65; diphtheria 54; scarlet fever 34; measles 8; pneumonia 392; diarrhoeal diseases 23; cerebro-spinal meningitis 34; influenza 35; puerperal fever 10; cancer 91; violence 153, smallpox 2.

**SANITARY SECTIONS:** THE NORTHERN SANITARY SECTION, having a population of 839,835, and numbering 31 counties reports 988 deaths, a rate of 13.8. This is .5 higher than the rate for the whole State. In the corresponding month last year this section reported 835 deaths, a rate of 11.7.

THE CENTRAL SANITARY SECTION, having a population of 1,024,729 and numbering 33 counties, reports 1,172 deaths, a rate of 13.4. In the corresponding month last year this section reported 1,104 deaths, a rate of 12.7.

THE SOUTHERN SANITARY SECTION, having a population of 951,836, and numbering 28 counties, reports 688 deaths, a rate of 12.4. In the corresponding month last year this section reported 695 deaths, a rate of 12.5.

**COMPARISON OF SANITARY SECTIONS:** The Southern Sanitary Section, for the first time in the year,

shows a lower death rate than the other sections. The consumption death rate is highest in the Southern Section and least in the Northern Section. The highest death rate from typhoid fever occurred in the Central Section, and the highest diphtheria rate in the Southern Section. Pneumonia was more destructive in the Central Section, and influenza in the Southern Section.

**COUNTIES:** The counties showing a death rate over 15 were: Carroll 20.1; Cass 16.3; Grant 17.9; Howard 19.8; Lake 16.1; Laporte 19; Porter 17.8; St. Joseph 19.4; Decatur 15.1; Hamilton 15.7; Marion 19; Monroe 15.8; Vermillion 17; Vigo 15.4; Dearborn 15.4; Floyd 20.3; Greene 15.7; Ohio 24.9; Pike 16.1; Vanderburgh 17.9. The cities of the State representing a population of 857,840, report 1,309 deaths, a rate of 18. This is 4.7 higher than the rate for the whole State. In the corresponding month last year the cities reported 1,061 deaths, a rate of 14.5. The cities show a higher death rate, as compared with the average for the whole State, in the following diseases: Tuberculosis, diphtheria, typhoid fever, pneumonia, cerebro-spinal meningitis, influenza, cancer, violence, smallpox.

**COUNTRY:** The deaths reported in the country numbered 1,536, a rate of 10.9. In the corresponding month last year these figures were 1,573, a rate of 11.1. The deaths under 1 year of age showed a rate greater than the cities. The consumption rate is very much less, namely, 100.5 in the 100,000. Pneumonia prevailed to only about one-half the extent that it did in the cities. This is also true of influenza and cancer. There were also fewer deaths from violence in the country than in the cities.

**CITIES BY CLASSES:** CLASS A, having over 50,000 population, a total population of 228,171, including Indianapolis and Evansville, reports 380 deaths, a rate of 19.6. This is 6.3 higher than the rate for the whole State. In the corresponding month last year this class reported 301 deaths, a rate of 15.5. The Indianapolis death rate for the month was 20.2, and the Evansville rate 17.7.

CLASS B, having from 25,000 to 50,000 population, total population 117,787 reports 191 deaths, a rate of 19.1. This class includes Ft. Wayne, rate 16.2, South Bend, rate 20.3, Terre Haute, rate 21.5. In the corresponding month last year, this class reported a rate of 16.6.

CLASS C, having from 10,000 to 25,000 population, total population of 218,623, including 14 cities, reports

347 deaths, a rate of 18.7. In the corresponding month last year, this class had a rate of 13.7.

CLASS D, having from 5,000 to 10,000 population, total population 161,751, reports 238 deaths, a rate of 17.3. This class in the corresponding month last year reported 192 deaths, a rate of 14.

CLASS E, having under 5,000 population, total population 131,508 and including 40 cities, reports 153 deaths, a rate of 13.7. In the corresponding month last year this class reported 147 deaths, a rate of 13.1. The chart showing deaths by Sanitary Sections will be found on page 153.

### THE MONTHLY STATISTICS FURNISH THE FOLLOWING SUMMARIES FOR DECEMBER.

Tonsilitis was reported as the most prevalent disease, and the next in order was pneumonia. Bronchitis was the first and rheumatism the second in November. Rheumatism is always with us and very rarely drops lower than the fifth place in area of prevalence. The regular order of prevalence for this month was: Tonsilitis, pneumonia, rheumatism, bronchitis, influenza, scarlet fever, measles, typhoid fever, diphtheria and croup, pleuritis, erysipelas, diarrhoea, intermittent fever, inflammation of bowels, whooping cough, puerperal fever, cholera morbus, cerebrospinal meningitis, cholera infantum, dysentery.

SMALLPOX: Five hundred and twenty-three cases of smallpox, with two deaths in forty counties, occurred in December. In the preceding month there were three hundred and twenty-four cases with one death in thirty-three counties. In December, last year, there were 642 cases, and 17 deaths in 41 counties. We have, therefore, to record an increase as compared with the the preceding month, but a decided decrease as compared with the same month last year. The counties infected this month were: Allen 37 cases, Benton 12, Carroll 1, Clay 212, Crawford 2, Daviess 49, Dearborn 1, Dekalb 7, Delaware 1, Dubois 3 cases, 1 death; Fountain 2 cases, Fulton 1, Grant 28, Hancock 1, Harrison 1, Jasper 3, Jennings 3, Laporte 2, Lawrence 5, Madison 1, Marion 1, Marshall 6, Martin 10, Miami 1, Orange 22, Parke 11, Perry 1, Porter 1, Pulaski 5, Putnam 1, Tippecanoe 20, Vanderburgh 9, Vigo 28, 1 death; Wabash 17 cases, Warren 1, Warrick 8, Washington 1, Wells 1, White 10, Whitley 4.

From several of the counties we have received reports which plainly tell that smallpox is still frequently unrecognized. This occurs mostly in the rural districts. Nearly all of the physicians in the centers of population have now become more or less informed in regard to smallpox and mistakes are not so general in diagnosis. In last month's bulletin we had an article which was headed, "Very Sad." Under this heading we presented the fact that certain county Health Officers had reported smallpox as not present in their counties, and yet deaths from the disease had occurred within their jurisdictions. Their attention was called to this anomaly and they were told that

more careful work would be expected of them in the future. We are glad to say that all of the counties have come to time this month with fuller and better reports.

TUBERCULOSIS: The deaths from consumption numbered 371, a rate of 173.9 per 100,000. In the same month last year, the tuberculosis deaths numbered 319, a rate of 149.5. We have, therefore, to record an increase in this disease by this comparison. By ages the deaths were: Under 1 year of age, 7; 1 to 5 years of age, 8; 5 to 10 years of age, 3; 10 to 15 years of age, 4; 15 to 20 years of age, 34; 20 to 30 years of age, 104; 30 to 40 years of age, 81; 40 to 50 years of age, 52; 50 to 60 years of age, 33; 60 to 70 years of age, 24; 70 to 80 years of age, 21. Of the total deaths from consumption 165 were males and 206 were females. Of the males 29 were married men between the ages of 18 to 40, and they left 58 fatherless orphans. Of the females, 76 were between the ages of 18 to 40, and they left 151 orphans, a total of 209 orphans. If these 371 persons had been burned to death in the Chicago theater there would have been a great outcry and the matter would have been upon the wires as news of the utmost importance. They were destroyed, however, by the slow burning of consumption, which is a preventable disease, and therefore the destruction causes no excitement. How many of the 209 orphans under 12 years of age, which were produced by consumption in December, will find their way into Orphan Asylums, cannot be told, but certainly a few of them will land there. And it is also true that a percentage of the 29 widows will be given public aid. The 211 homes which were invaded by this disease, producing death in December, are of course desolate in consequence thereof. It is to be hoped that ere long this terrible monthly destruction will be lessened.

TYPHOID FEVER: This great filth disease, a disgrace to civilization, caused 65 deaths in December, which is a rate of 30.4 per 100,000. In the corresponding month last year, typhoid fever caused 91 deaths, a rate of 42.6. This is an improvement which is to be noted. 58 of the 92 counties reported the disease present, 411 cases in all being reported.

PNEUMONIA: The pneumonia deaths numbered 392, a rate of 183.8 per 100,000. The rate in the cities was 275.1 and in the country 136.5. In the corresponding month last year 267 cases of pneumonia were reported, a rate of 25.1. In that month, the country rate was less than the city rate.

VIOLENCE: 153 violent deaths were reported, which is a rate of 71.7. In the corresponding month last year 121 violent deaths were reported, a rate of 56.2. Of the violent deaths 111 were males and 40 were females, and 3 of these were murders. There were 20 suicides, 16 being males and 4 females. The methods chosen by the females were carbolic acid 2, arsenic 1, hanging 1. The males chose morphine 4, chloroform 2, asphyxiation by gas 1, gunshots 4, hanging 2, cutting throat 1. The accidental deaths numbered 128, 93 being males and 35 females. Railroads killed 24, all males; horses and vehicles 3, all males; fracture of skull 9, all males; electricity 2 males; mining

2 males; strangulation 3, 2 males and 1 female; falling trees 2, both males; poisons 3, 1 male and 2 females; crushing injuries 11, 10 males and 1 female; gunshot 16, 14 males and 2 females.

### HOW TO RID A HOUSE OF BEDBUGS, ROACHES, ANTS, FLEAS, MOTHS, AND OTHER INSECTS, AND AT THE SAME TIME ACCOMPLISH THOROUGH DISIN- FECTION.

Even our finest houses sometimes become infested with bedbugs, roaches, ants and fleas. Old houses, and especially old frame ones, are almost certain to harbor insects and also disease infection. It would be a wise law which would require under a heavy penalty that all houses (excepting new houses), when once vacant, should not be again occupied until carefully disinfected by trained disinfectors. The happiest results would attend the thorough enforcement of such a law.

**METHOD OF PROCEDURE:** First, close all openings in the room to be disinfected. This is best done by pasting strips of paper over all window and door cracks, pasting paper over stove pipe holes, and thoroughly stopping up grates. No fire should be in the room, but all usual articles should remain where they are. Now calculate the cubical contents of the room by multiplying together the length, breadth and height, and for each 1,000 cubic feet use one ounce of good cyanide of potassium and a mixture of one fluid ounce of commercial sulphuric acid in two fluid ounces of water. A good quantity of this dilute acid should be prepared at once by placing one quart of water in a gallon crock and slowly adding one pint of sulphuric acid. Be careful not to add the water to the acid, for slight explosions throwing the liquid around would then occur. On the floor of the room place a large wash bowl or two-gallon stoneware crock, and underneath it place a piece of old oil cloth or linoleum. Several layers of old newspapers will serve well. This is for the purpose of protecting the floor or carpet against accidental overflow. If an entire house is to be fumigated, each room must be carefully prepared as described. Into each bowl must be placed two ounces of the acid solution for each 1,000 cubic feet in the room of powdered or ground potassium cyanide. Weigh out one ounce for each 1,000 cubic feet in each room and put in a thin paper sack and place in the room in which it belongs by the side of the bowl containing the dilute sulphuric acid.

No person must remain in the house. Even the family cat must be taken out. The operator begins at the top of the house, drops the cyanide into the bowl of acid and immediately leaves the room, tightly closing the door. Each room is thus treated and the open air quickly sought.

Hydrocyanic acid gas (prussic acid) is liberated by this process and it kills animals and microbes alike. The house must remain closed all night, and next morning the outside door is opened and kept open for an hour, and

after this time the operator may enter and hurriedly open all the doors and windows, breathing no more than is absolutely necessary, and quickly retiring when his work is done. So long as any odor of the poisonous gas prevails no one should enter the house to stay. When all odor is gone the furnishings should be removed and the house thoroughly cleaned as usual. The bedbugs, roaches, rats, mice, ants and moths will all be dead and thorough disinfection also be secured.

### INTERESTING CORRESPONDENCE.

Dear Doctor Brayton:—Having known you while a student in your city, I venture the enclosed questions. As you perhaps know, we have a few cases of variola in this county, and relative to this subject I wish to ask your opinion on the following points. You have had wide experience in eruptive diseases, and your answers will be given proportionate consideration. Do not refer me to books for replies, for I desire your personal verdict.

1. Do you regard the present smallpox epidemic as true variola?

2. At what stage does patient become contagious, and when does he cease to be contagious?

3. How soon after eruption first appears, in days, until patient should be allowed in public?

4. Is it your opinion that all persons who have not done so already should be vaccinated?

5. In what per cent. of cases does successful vaccination render full immunity?

6. What is the earliest date you have known vaccination immunity to have run out?

7. Do you consider virus responsible for the vilely bad arms that sometimes occur?

You will notice these questions are some that the M. D. is expected to answer every day, and I shall be thankful for any comments you wish to add, and earnestly thank you in advance for the answers you may give.

I am, very truly yours,

J. L. LAMBERT, M. D.,

December 27, 1903.

Brazil, Ind.

To the above letter Dr. Brayton replied as follows:

Dear Dr. Lambert:—To question 1. Undoubtedly.

To question 2. Contagion, I think, begins with the fever; myositis and sore throat stages, perhaps several days before the eruption occurs. I base this on autopsies I made in the City Hospital mortuary at Indianapolis, and on the appearance of ulcerated throats I have preserved in formaldehyde.

To question 3, second part. By means of the naked human body, contagions end with desquamation of every lesion of the skin and mucosa in three to eight weeks usually. Clothing and bedding, etc., may retain the virus for years.

To question 3. According to the number and depth and desquamation of the lesions. The period varies from three weeks to three months in our hospital, as shown in treatment of over 500 cases.

To question 4. Answer, "yes." Any other course is idiotic and criminal, except in certain critical illness.

To question 5. Answer, in all cases. The continuity of immunity varies from a year to a lifetime. In my own case a vaccination of 54 years ago is the only one that ever "took." In the last ten years I have seen perhaps a thousand cases of smallpox. I have been vaccinated some 15 or 20 times recently. The last vaccination was three weeks ago at Delphi. It never takes. Last year I inoculated myself twice with virulent smallpox virus without results. I think I have a high degree of immunity which has lasted in my case since infancy up to the present time.

To question 6. Personally, I saw one case of 55 years of age dying of confluent smallpox, although with a good scar of 15 years before according to statement of patient, etc. I have seen modified smallpox in adolescents who were vaccinated in infancy. It was very mild.

To question 7. "No, I do not." I saw over 1,600 insane patients in varying degrees of health vaccinated last spring, and in no single case was there a "vilely bad arm." There was absolutely no illness except that normal to the vaccination disease itself. The cases were properly vaccinated with approved virus.

Some 25,000 free vaccinations in Indianapolis, February, 1903, gave no single case of a "vilely bad arm," which we know of. No loss of an arm; no permanent injury to any person from vaccination; no death has occurred in Indianapolis or in Marion county with a population of 200,000 in the twenty years I have been interested in this subject, as a medical teacher, a medical editor, and a practitioner of medicine. In that time probably from 200,000 to 300,000 primary vaccinations have been done, and still more secondary vaccinations. With Dr. Chas. E. Ferguson of Indianapolis, I have personally, or with him, taken 128 of the Seniors and Juniors of the Medical College of Indiana (February, 1903), through the fine smallpox wards of the Indianapolis City Hospital, showing each of them from 50 to 100 cases with 109 deaths. No one of these students suffered from smallpox. They were well vaccinated and revaccinated. Nor did any one of them convey the disease to their fellow students or boarding houses, as they were thoroughly disinfected. Each of them was exposed to so virulent a smallpox for two hours, that without vaccination, doubtless the entire 128 would have taken smallpox and 21 of them would have died. I send their vaccination records to you as published in the *Indiana Medical Journal* of May, 1903. I know of no similar report in the literature of smallpox. Each of these 128 doctors is able to answer the questions you have asked offhand, as far, that is, as scientific answers can be given in the light of our present knowledge. Any one of these students can diagnose smallpox, and can give the differential diagnosis between smallpox and chickenpox. They can in any given case, by the appearance and the history determine whether the eruption is that of variola, varicella, syphilis, contagious impetigo, acne, measles, "Cuban itch," or typhoid fever.

They are imbued with the belief that any papulo, pustular eruption, contagious in nature, attacking all ages of

life, and appearing in unvaccinated persons is smallpox, whether the eruption is scanty or profuse; whether the patients are very sick or not sick at all, and regardless of the fact that a hundred cases may have appeared in the neighborhood without a single death. And their condition of mind, is simply that of all educated physicians who have read carefully the commonest and most easily accessible of medical text books.

Their facility in immediate diagnosis, we must, however, admit, is in a large part due to the practical bedside and clinical training they have had in smallpox, chickenpox, syphilis, acne, measles, contagious impetigo, typhoid fever, etc., for here, as in every department of medicine, it is practice which makes perfect.

I am, very sincerely,

(Signed) ALEMBERT W. BRAYTON.

Indianapolis, Ind., December 29, 1903.

PIKE COUNTY HEALTH BOARD: Dr. Clarence Abbott, Secretary of the Pike County Board of Health, has secured from his Board a set of rules pertaining to the public health which will undoubtedly result in much good. These rules in part reflect the new rules of the State Board of Health. In some respects they are an improvement, inasmuch as they enter into details, which it is not the part of the State Board of Health to consider. Rules 4, 5, 6 and 7 are as follows:

4th. All parties quarantined who are unable to secure necessary attention, such as nurse, medical attendance, provisions, fuel, etc., the health officer is authorized to furnish same, and shall be paid for by the County Board at the following rates: Nursing, \$1.50 per day of 24 hours; medical attendance at the rate of one dollar for the first mile and fifty cents for each additional mile. Provisions, fuel, etc., at market price.

5th. Upon complete recovery, or the removal of the remains from any contagious or infectious disease the room or rooms infected shall be immediately disinfected by the Health Officer or a Deputy, according to Rule 17 of the State Board of Health. All necessary traveling and incidental expenses incurred in placing and raising quarantines and disinfections shall be paid by County Board.

6th. The County Health Officer is empowered to purchase all supplies for vaccination, disinfections, serums, etc., that are necessary for the production and preservation of freedom from any and all contagious and infectious diseases.

7th. If at any time, in case of epidemics requiring more time and attention than Health Officer can reasonably give, he may employ one or more competent deputies to assist in establishing quarantines, conducting disinfections, said deputies to be paid by the County Board at the rate of 20 cents per hour and all necessary expenses incurred.

We think the fees allowed for services in Rule 4 are not sufficient, certainly they are not liberal. \$1.50 for twenty-four hours' labor for nurses who must labor in the presence of contagion is not enough. Doubtless, however, many generous, self-sacrificing doctors will be found in Pike County who would even give their services for nothing, but the county is amply able to pay for what it gets, and therefore should pay what is right and proper.

**ABOUT TYPHOID FEVER:** The surgeons in the army during the Spanish war, who were drawn from civil life, failed to diagnose typhoid fever in about 50 per cent. of the cases, as was proven by the investigations of the typhoid commission. Malarial fever was the usual diagnosis of mild typhoid. If this happened in the army it certainly is occurring in almost every section of the country at this time, and has so occurred in the past. Under such conditions we can readily understand that the disinfection of stools and urine in typical cases will not materially prevent the spread of infection. No wonder we have "sporadic" cases of typhoid fever, if a large percentage of cases are diagnosed as malaria and disinfection of dejecta is not practised. Not until all of the people, all of the time, under all conditions, dispose of all dejecta in a sanitary manner, will scientific and practical prophylaxis of typhoid fever be practised.

Concerning typhoid fever, Dr. Osler says: "Enteric fever may be mistaken for tuberculosis. This, I think, is rare. Very much more frequently tuberculosis is mistaken for typhoid fever. There are five types of tuberculosis infection, which may simulate typhoid fever—the acute military form, tuberculous meningitis, tuberculous peritonitis, the acute toxemia of certain local lesions, and forms of pulmonary tuberculosis. Much will be found in this literature on the question of the diagnosis in the first three of these groups, but not on the last two, and, judging from my personal experience, the profession is not fully alive to the importance of the subject."

\* \* \*

**PURE FOOD LAW NEEDED:** Here are a few of the things found on our tables and sideboards every day that cities that support a chemist have condemned upon analysis as especially harmful: Butter sweetened or kept sweetened by boracic acid and chemically colored; jam, jelly and preserves not even distantly acquainted with fruit, made up wholly of gelatine, glucose and chemical coloring and flavor; tea made by mixing magnetic oxide of iron with tea dust and rolled by means of starch into pellets resembling genuine tea; chemical vinegar, catsup and table sauces containing no vegetable matter whatever; pickles made green by a preparation of copper; wines sweetened with glucose; beers rank with salicylic acid; whiskies diluted with proof spirits and artificially beaded with sulphuric acid and smoothed with olive oil. Is it not about time for the passage of a first-class pure food law?—Galveston News.

\* \* \*

**THE LEGISLATURE** which recently adjourned was sadly derelict in its duty by failing to correct the subtle provision affixed by trickery to a statute of 1901 providing that no healthy child could be barred from school on any pretext. Such a law is a menace and a curse. It ties the hands of school authorities and places the schools at the tender mercy of incorrigibles and such dangerous cranks as the anti-vaccinationists, who boast that they were responsible for the turning of the legislative trick. It is sincerely to be hoped, however, that the Supreme Court

will see fit to intervene by declaring the law invalid. And it will, if it goes on the theory that good law is good sense.—Terre Haute Tribune (Ind. Rep.).

\* \* \*

**HEALTH OFFICERS IN ENGLAND:** Since 1866 England has had a law making it necessary for every man occupying the position of health officer to have a special Diploma in Public Health, granted upon examination by one of several recognized schools, in subjects covering the field of State medicine. In Indiana the selection of health officers is a matter of politics. In England there has been a decrease of 45 per cent. in tuberculosis in fifty years. In Indiana this disease is on the increase.

\* \* \*

**HYGIENE OF THE SICK ROOM:** Roger, in his work on "Infectious Diseases," says: "The therapeutics of infectious diseases, notwithstanding its considerable interest, is perhaps less important than the hygienic measures which must be observed with reference to the patient and those surrounding him."

### HOW TO MANAGE THE SICK-ROOM.

1. Remove all carpets, drapery, clothing and furniture not needed.
2. Ventilate well. *If you don't ventilate the sick room thoroughly, recovery is greatly delayed, for bad air of itself makes well persons sick.*
3. The room, nurse and patient should be kept perfectly clean. *Cleanliness greatly aids recovery.*
4. Admit no visitors without permission of the physician.
5. Keep out flies, mosquitoes, and other insects by screens and all practicable methods. *Insects worry sick people, thus preventing recovery, and they also very frequently carry disease in their bite.*
6. Never allow a bad smell to exist. If free ventilation, sunshine and cleanliness do not keep out bad smells, then sprinkle dilute formaldehyde (1 part formaldehyde to 50 of water) onto the carpet, or spray it into the air with an atomizer.
7. All body or bed clothing, towels, napkins, cloths, bandages, sponges, and also all dishes which have been in the sick-room must be disinfected before being taken from the room.
8. Discharges from the sick, whether from the mouth, bowels or bladder, must always be received in a vessel containing a disinfectant.
9. Consider that everything that has been brought into the sick-room has become infected and carefully disinfect it before carrying out. Also, never leave a sick-room or eat without first washing hands with carbolic or other antiseptic soap.

\*These directions and advice will be printed on cards by the State Board and furnished free to all who ask.



## HOW TO DISINFECT.

**WASHABLE ARTICLES:** Into a tub or other receptacle of appropriate size, put enough water to cover the handkerchiefs, towels, napkins, sheets, blankets and other washable articles, and to each gallon of water used, add one fluid ounce (two tablespoonfuls) of 40% formaldehyde solution. Stir the water and formaldehyde together and then put in the articles. Let soak for not less than one-half hour, then laundry as usual.

**UNWASHABLE ARTICLES:** Quilts, comforts, pillows, mattresses, carpets, rugs, clothing, etc., may be disinfected by placing them in a tight room, or in a room that is itself to be disinfected, and then burning sulphur therein or filling the room with formaldehyde gas. The articles must be spread on chairs, clothesracks or otherwise disposed so the gas may get at them. If sulphur is used, proceed as follows:

**By SULPHUR:** Place a tub containing about two inches of water in the room. Put two bricks in the tub and on them place a tin pie-pan or a stone crock, and in the pan or crock place three pounds of sulphur for every 1,000 cubic feet. Now fill the room with steam by pouring hot water onto a redhot brick or stone which may be placed in an iron kettle in the room. When the room is full of steam, pour a spoonful of alcohol or coal oil onto the sulphur and set on fire. Immediately leave the room and close the door. The sulphur is burned to a gas and this gas in the presence of the steam, kills all infection. Sulphur gas without steam is worthless. Do not, on any account, leave out the steam. "Sulphur candles," purchasable at drug stores, are all right, if enough are used, but they are more expensive than ordinary sulphur.

**By FORMALDEHYDE:** The room and contents may be disinfected by formaldehyde by burning formaldehyde candles in the room, or better by filling the room with formaldehyde gas which is evolved in a generator and passed into the room through a small pipe which projects through the key hole. The steaming of the room is necessary for formaldehyde disinfection and must not be omitted.

Whether disinfected by sulphur or formaldehyde, at the end of ten or twenty hours, open and air the room thoroughly; take out all the articles, including carpet, and submit them to air and sunshine for several days; then clean the floor, woodwork, bedstead, chairs, table, etc., with soap and hot water. The walls should be repapered or calomined.

**DISINFECTION OF CLOTHING OR A FEW ARTICLES:** Take an empty trunk, wooden box or a wash boiler. On the bottom lay any article, say a coat, cover with an old towel or piece of wash goods, and sprinkle thereon two tablespoonfuls of 40% formaldehyde solution. Then put in another article, say a pair of trousers or a dress skirt, cover as before, and again sprinkle two tablespoonfuls of formaldehyde. If there are enough articles the boiler or trunk may be filled in this way. Finally put on the cover to the boiler or close the trunk

and in ten hours open and hang the articles in the air and sunshine. If the smell of formaldehyde persists, a little aqua ammonia sprinkled on the clothes will remove it.

**HYGIENE:** Its highest function is not to prolong the expectations of life, but to enhance the well being during life. Not so much to make us live longer as to live more abundantly.

\* \* \*

**IS THERE SMALLPOX AT BROOK?** Mrs. Oliver Kline, a lady who is a constant teacher at Farmers' Institutes, and who is celebrated as an eloquent lecturer, writes us as follows: "Is there any smallpox at Brook? I am due there for a Farmers' Institute, Thursday, January 7th. The Farmers' Institute at Madena has been abandoned on account of smallpox. I do not want to go to Brook if smallpox exists there."

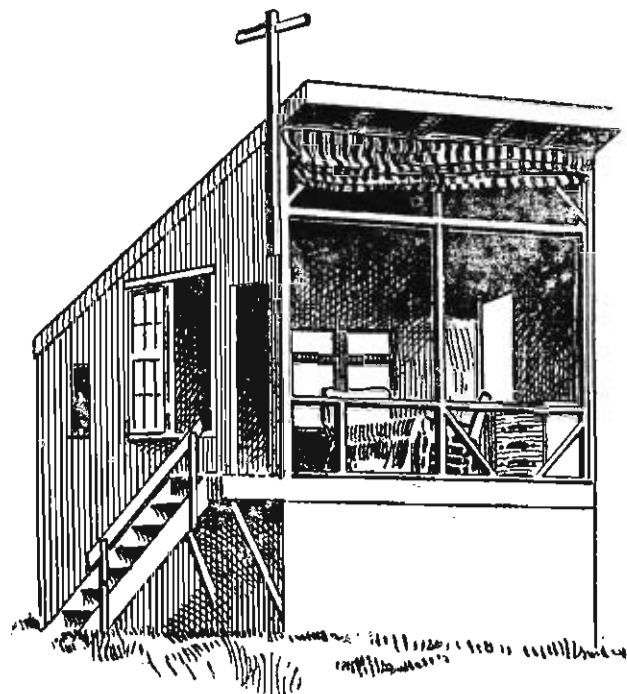
We replied to this as follows: No one need fear smallpox, for all that is necessary in order to be safeguarded against this disease is to be vaccinated. It is very probable that no unvaccinated person will finally escape having smallpox. People attacked with the disease in mild form are traveling everywhere. These are the ones who spread smallpox. Failure in diagnosing the disease occurs on every hand and sometimes even quite severe cases are diagnosed as chickenpox, Cuban itch, porrigio and the like. These cases travel where they please, spreading the infection on every hand. It is plain, therefore, that he who is unprotected by either having had the disease or by being vaccinated, will almost certainly be attacked sooner or later. We advise you to be immediately vaccinated and revaccinated until successful. And then without fear and without hesitation, go into any community or anywhere the disease may exist. Being thoroughly protected by vaccination, there is no reason why you should not offer to give aid in smallpox cases where aid is needed. There would be no smallpox if the people were vaccinated. We know this to be true because vaccination is compulsory in Germany and the disease is unknown there. Further, it is known that the successfully vaccinated may constantly live in the presence of smallpox, handling it and nursing it, and still go free from the disease. And it is further true that the unvaccinated person is absolutely certain to go down with smallpox if exposed as just described.

\* \* \*

**WHY SHOULD NOT SMALLPOX SPREAD?** Dr. Bence, the "top-notch" health officer of Putnam county, in his monthly report says: "Joshua Lancaster, 35 years old, never vaccinated, came into my office with body well covered with papules. He had had all the prodroma of smallpox and had been treated for 'grippe'. I gave him a red flag and sent him home." Why should not smallpox spread when so many physicians are unable to diagnose the disease and when so many people are so foolish as to go unvaccinated?

## OUTDOOR LIFE FOR THE CURE OF CONSUMPTION.

It is proven beyond controversy that open air life is the first requirement for the cure of consumption. This must be supplemented by regular living, plain, nutritious diet, cold baths, exercise, etc. *Pure air, pure air, and still more pure air*, is the first necessity for both the prevention and cure of consumption. Unventilated bedrooms have killed thousands, but even wide open windows do not sufficiently ventilate rooms used by consumptives. The open air is required, but yet some protection is necessary.



The picture shows the kind of lodges and sleeping houses used at the Miletts sanitarium. They are high above the ground, face south, and are entirely open on the south side. Windows at the side and rear furnish increased light and air, and still protection from storms is secured. The curtain for the open south front gives privacy at special times, and will also protect against rain, sleet and snow, which might be forced in by southern winds. Farmers and all who have large yards could construct such sleeping rooms if consumptives were in the family, and so conduct the open air cure at home.

To those wishing information concerning the prevention and cure of consumption we recommend "Prevention and Treatment of Tuberculosis."—P. Blakiston Sons.

**A PREVENTABLE DISEASE:** Pulmonary tuberculosis is a preventable and curable disease, and it is a sad and, I might say, a humiliating and disgraceful fact that thousands of our fellow citizens must die every year, not because their disease is incurable, but because there are not enough places to cure it.

DR. KNOPP.

**CHILD SENSE:** Dr. Domer, health officer of Wabash county, has had an experience which is interesting. His report is as follows:

"In a family in this county an old man about 60 years old developed discrete smallpox. When I visited the house I advised all the members of the family to be vaccinated. There were seven in all. All refused to permit me to vaccinate them except two small children. They agreed to permit the operation and the parents did not object. The five unvaccinated members contracted the disease and had severe cases, but the two sensible children, who allowed themselves to be vaccinated, were not sick at all and were with the other members continuously. This is an example of child sense."

It certainly is a right use of terms to call this "child sense."

## "COLDS" AND COLD.

This paper, read before the Indiana Academy of Science, was an inquiry into the connection between physical cold and the affection known as a "cold," and the author brought together many facts relating to the subject, and went on to disprove the frequently made assertion that Indiana was an unhealthy State on account of variable weather conditions. The writer held that Nature herself was not at fault: the prevalence of colds was due to man himself. Rapid changes in the weather might be disagreeable, but by themselves were not productive of disease. Something more than physical cold was required to take or catch cold—Arctic explorers in the far north do not catch cold and are singularly free from respiratory diseases, although most severely exposed to physical cold. The early pioneers of Indiana suffered little from colds. A cold may be caught in the warm summer days as well as in the winter time. Long ago that patient observer, scientist and philosopher, Benjamin Franklin, knew that something more than simple exposure to cold was necessary to contract a cold; what this something is, he did not know, and we are only now beginning to find out. Physical cold, the writer said, by way of illustration, stands in relation to catching a cold, as plowing the field does to the production of a crop of wheat; you can plow and harrow all you please, but unless the seed is sown in the prepared ground no crop results. No amount of exposure to cold or a draught or getting the feet wet will produce a common cold, unless the active cause of the cold is present. This active or real cause is transmissible from one person to another and manifests itself by all sorts of bodily disturbances. Dust is the agent which transmits the infective matter; dust free from expectoration is free from the active cause of colds. The writer intentionally avoided the use of the word microbe and quoted a wise sanitarian, who said that as long as we speak of infective matter we come in for very little criticism, but the moment you mention microbes some of the newspapers jump on you and ridicule the idea that the inhalation of dust full of dried expectoration is injurious.—Dr. Robert Hessler.

### HOW TUBERCLE GERMS GET HOLD.

There seems to be no manner of doubt that we may accept Koch's tubercle bacillus as the *causa causans* of tuberculosis. Here, however, let me put you on your guard, as I guard myself, against a mistake in which it is very easy to fall, i. e., that because a tubercle bacillus comes near, or even into contact with the human or brute body, an attack of tuberculosis necessarily results. This bacillus must make its way not merely into a free surface, but into the tissues of the body, before it can do any harm; nay, more, it seems that, in the human body at any rate, the tissues must be damaged or weakened and a special mode of entrance into these damaged tissues must be prepared for the tubercle bacillus before it can work its dire effects. During the course of my work my hands have for weeks, months, or even years, been almost daily soiled with tubercle bacilli; I have no doubt that I have swallowed many, and that some have made their way into my respiratory tract; but none of these have done me much, if any, harm, because while I have been working with them I have carefully protected my cuts on my hands and have refrained from working when I have been run down in any way, and especially when I have been suffering from any catarrhal processes in the respiratory or alimentary tracts.

From my experiments on animals I am satisfied, as are all experimenters, that tuberculosis is never produced without the presence and action of the tubercle bacillus, but my own observations on human patients, especially on children, confirm those of many others, that unless the tissues are weakened or damaged—i. e., the soil is prepared—there can be no relation between the bacillus and the tissues which can end in the production of a tuberculous lesion. The exciting cause must be present, but in the human subject at any rate, there must also be one or more predisposing causes. In the lung this predisposing cause appears to be catarrh; that is, a congestion of the vessels of the mucous membrane, accompanied by some slight proliferation of the epithelial cells lining the air vesicles, with an increased pouring out of fluid and an emigration of a larger number of white blood cells. In the air vesicles of the lung, especially when expansion and contraction are weak and imperfect—i. e., at the pulmonary apices in adults, near the root of the lung in children (and in monkeys), beneath areas of adhesion between the pulmonary and costal pleuras, at the base of the lung when there is adhesion of the pleuras in this position, especially if the liver be adherent to the under surface of the diaphragm—there is usually an accumulation of catarrhal products, in which, if bacilli gain entrance and are allowed, undisturbed by any great amount of movement, to multiply, to produce their special products, and to cause those degenerative changes with which they are found to be associated causally. Once give them a footing under these conditions, and they are in a favorable position to produce tuberculosis.—Dr. Sims Woodhead, Professor Pathology, Cambridge University, England.

### WHAT THE TUBERCULOSIS PATIENT SHOULD KNOW.

Stevens insists on the tuberculosis patient coughing into a handkerchief, not coughing at all in the dining-room, never swallowing the expectoration, using an antiseptic mouth wash before each meal, and the careful cleansing of the hands, avoid talking if it increases the cough, avoiding spitting into anything excepting a proper sputum receptacle, the thorough disinfection of whatever is soiled by the sputum, abstinence from kissing, taking exercise only under direction and none of a sporting character, taking none if the temperature is abnormal, if there is blood in the sputum or if losing in weight. Always stop before becoming tired, never run or get out of breath and never lift or strain, avoid breathing exercise except those as specifically directed. If the temperature reaches 100 lie down, and if it reaches 101 undress and go to bed in earnest. Spend ten hours in bed each night, and retire early enough to finish your sleep before sunrise. Spend all the time possible in the open air. Keep the windows of the sleeping room open. Protect the head from the direct rays of the sun when taking outdoor rest cure, avoid dust, draughts, crowded and poorly ventilated rooms, and if you catch cold report at once to the physician. If the digestion is good use a generous mixed diet, taking no food between meals. Forced feeding, if necessary, must be under the direction of a physician. It is not the quantity eaten, but the quantity digested or assimilated that benefits. If not on a full diet, a light luncheon of milk and crackers, malted milk or raw egg should be taken regularly two or three hours after each meal, taking no food within less than two hours of a regular meal. Do not drink milk hastily. Sip it, eating something at the same time. Regularity of meals is essential. Take only such medicines as are prescribed and stop any that disturb the stomach; beware of sleep producers. Throw away any medicines that have been ordered discontinued. The clothing should be adapted to the individual; avoid chilling and overheating; wear nothing that interferes with respiration. Use sensible footwear and no chest protectors. Unless there is a special reason for not doing it, a cold sponge bath or shower bath should be taken each morning, and a full warm bath only once a week, rubbing the skin well with a coarse towel after the shower or sponge bath. Omit the cold baths during a pleurisy, or after a night sweat, or if the morning temperature is below 97°F., using a dry rub instead. Alcohol, if prescribed in exceptional cases, should be used the same as medicine and with the same care as to dose and time as with other medicines. Smoking should not be indulged in, and chewing should be condemned for sanitary reasons, because it increases the tendency to expectoration. Co-operate with the medical adviser, make a business of getting well. Do not take too many suggestions from outsiders. The less one knows of a subject the more readily he is to advise. Avoid self-experimentation. Do not discuss your symptoms with other patients. If you do not trust your physician change him.—American Medicine.



CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM CERTAIN COMMUNICABLE DISEASES IN DECEMBER, 1903.

#### NORTHERN SANITARY SECTION.

Total population .....	839,835
Total deaths .....	988
Death rate per 1,000 .....	13.8
Consumption, rate per 100,000 .....	126.4
Typhoid, rate per 100,000 .....	25.2
Diphtheria, rate per 100,000 .....	32.3
Scarlet fever, rate per 100,000 .....	18.2
Diarrhoeal diseases, rate per 100,000 .....	12.6

#### CENTRAL SANITARY SECTION.

Total population .....	1,024,791
Total deaths .....	1,172
Death rate per 1,000 .....	13.4
Consumption, rate per 100,000 .....	153.9
Typhoid, rate per 100,000 .....	39.1
Diphtheria, rate per 100,000 .....	14.9
Scarlet fever, rate per 100,000 .....	14.9
Diarrhoeal diseases, rate per 100,000 .....	12.6

#### SOUTHERN SANITARY SECTION.

Total population .....	651,836
Total deaths .....	688
Death rate per 1,000 .....	12.4
Consumption, rate per 100,000 .....	197.3
Typhoid, rate per 100,000 .....	23.5
Diphtheria, rate per 100,000 .....	32.5
Scarlet fever, rate per 100,000 .....	14.4
Diarrhoeal diseases, rate per 100,000 .....	9.0

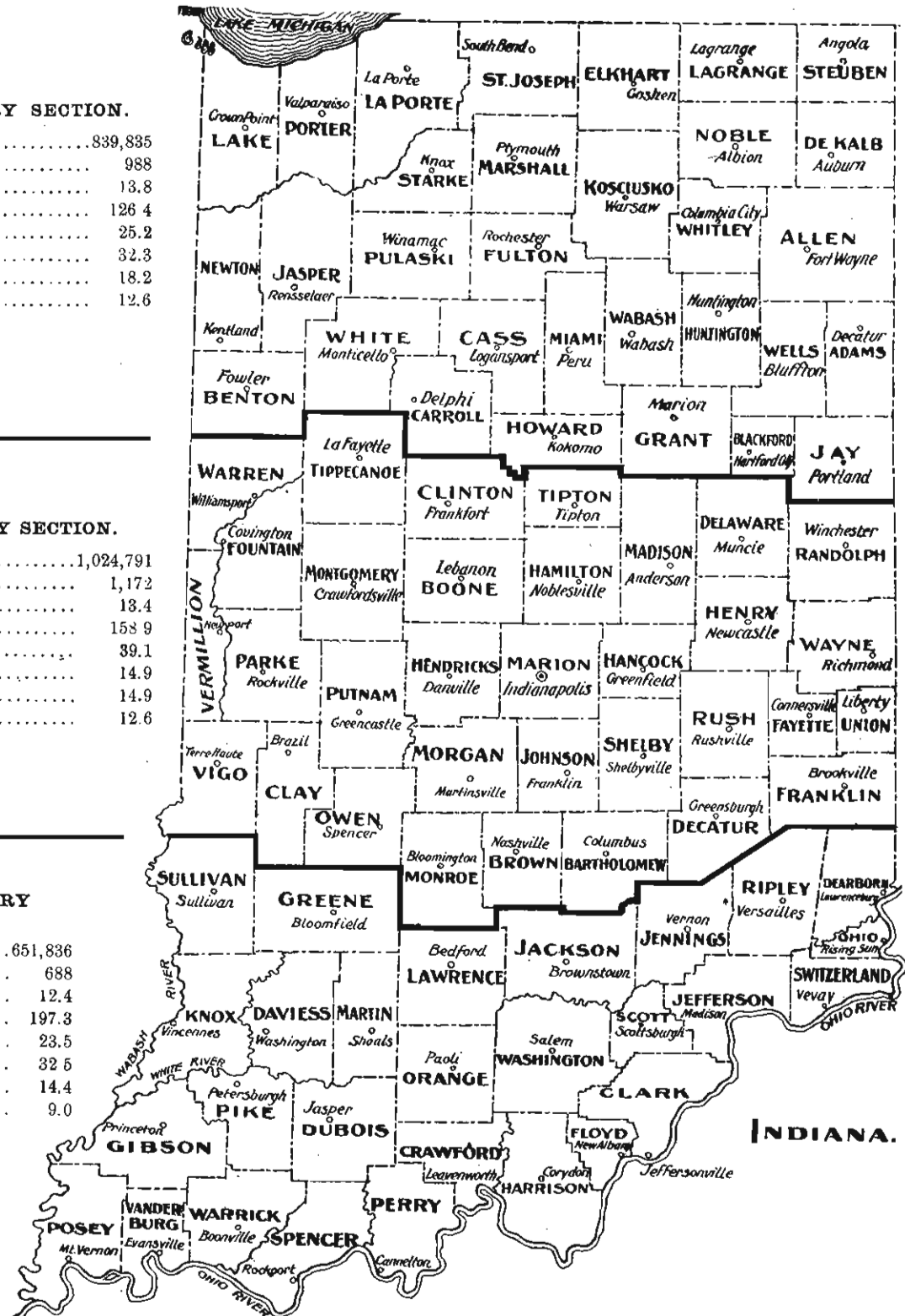


TABLE No. 1. Deaths in Indiana by Counties, During the Month of December, 1903.

STATE AND COUNTIES.	Population, based on Census 1900.	Total Deaths Reported for December, 1903.	Annual Death Rate per 1,000 Population.	Stillbirths.	IMPORTANT AGES.						DEATHS FROM IMPORTANT CAUSES.																
					Under 1 Year.	1 to 4, inclusive.	5 to 9, inclusive.	10 to 14, inclusive.	15 to 20, inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Pneumonia.	Diarrhoeal Diseases, Under 5.	Cerebro-spinal Meningitis.	Influenza.	Puerperal Septicæmia.	Cancer.	Violence.	Deaths in Institutions.	Smallpox.
State of Indiana.	2,516,462	2,848	13.3	175	391	201	88	49	100	805	337	34	65	54	4	31	8	3	392	23	34	35	10	91	153	125	2
Northern Co's....	839,835	988	13.8	53	141	65	28	17	34	300	90	7	18	23	2	13		1	123	9	14	14	7	33	51	43	
Adams	22,232	25	13.2	1	4	1	1	2	2	7	4			1					6		1			1	3	6	4
Allen	77,270	85	12.9	4	12	3		1	1	29	4		1	1					10					1	1	2	1
Benton	15,123	10	9.9	1	1	1				3	2																
Blackford	17,213	20	13.7	2	3	5				3	2								3		2			2	1		
Carroll	19,953	34	20.1	1	4	1				13	2			1					8								
Cass	34,545	48	16.3	3	7	4				18	2			2					9								
Dekalb	25,711	24	11.0	2	2					7	7								9								
Elkhart	45,052	14	14.1	3	10					13	7								9								
Fulton	17,453	14	9.4							7	2																
Grant	64,693	83	17.9	3	14	9	6	3	4	19	2								14		1						
Howard	23,575	48	19.8	3	3	4	2		3	12	5			3		4			1		1						
Huntington	28,901	30	12.2	2	3					10	1								5		2						
Jasper	14,292	7	5.7	2	2					1	1								2								
Jay	26,818	19	8.3	3	3					6	1								2								
Kosciusko	29,109	35	14.1	3	7	3				15	3			1					2								
Lagrange	15,284	16	12.3	4	4					5	3								1								
Lake	37,892	62	16.1	11	7	3	3	2	2	16	7			1					2								
Laporte	39,386	62	19.0	4	3	1				25	2			2					3		3						
Marshall	25,119	20	9.3	3	2					4	1								6								
Miami	28,344	30	12.4	1	2	2				13	5			1					4								
Newton	10,448	10	11.2			1				3																	
Noble	23,533	26	13.0	2	3	2				7	1			1					3		1						
Porter	19,175	29	17.8	3	3	1				13	1			1					4		1						
Pulaski	14,033	12	13.5	1	3	1				4	2								1								
Starke	10,431	15	11.6	1	2					4	2								1								
Steuben	15,219	17	11.6	1	3					4	2								1								
St. Joseph	58,881	97	19.4	15	9	3	2	4	4	23	6			2		3			17		2						
Wabash	28,235	28	11.7	6	2					6	3								4								
Wells	23,449	19	9.5	2	4	2				3	3								4								
White	19,138	24	14.7	1	1	1				8	3								2								
Whitley	17,228	9	6.1	2	2					3	1								2								
Central Co's.....	1,024,791	1,172	13.4	82	162	82	36	21	40	311	138	21	34	13	1	13	2	2	169	9	10	10		36	60	62	1
Bartholomew	24,594	14	6.7	1	2					5	4								1								
Boone	26,321	23	10.3	3	2	1				9	1								1								
Brown	9,727	6	7.2	2	1					2	1								1								
Clay	34,285	17	5.8	2	3	3				5	1								2								
Clinton	28,202	35	14.6	4	4	2				9	1																
Decatur	19,518	25	15.1	1	1	1				7	6								5								
Delaware	49,624	53	12.6	8	7	5	4	1	1	11	3								4		2						
Fayette	13,495	11	9.6	2	2					3	2								8								
Fountain	21,446	21	11.5	2	2					4	2								5								
Franklin	16,388	12	8.6	1	1	1				5	6								1								
Hamilton	29,314	40	16.7	3	11	2	1			12	4								5								
Hancock	19,189	21	12.9	1	4	2				2	4								5								
Hendricks	21,292	31	16.0	3	4	2				4	1								5								
Henry	25,088	21	9.8	3	4	1				4	2								4								
Johnson	20,223	19	11.0	3	3	1				4	1								3								
Madison	70,470	79	18.2	6	11	10	3	1	3	17	1								2								
Marion	197,227	319	19.0	41	42	25	11	2	11	78	36								50								
Monroe	20,873	28	16.8	2	4	1				7	5								5								
Montgomery	29,388	34	13.6	1	3	1				11	8								5								
Morgan	20,457	15	8.6	1	1					7	2								2								
Owen	15,149	23	11.6	1	5					9	5								1								
Parke	23,000	21	11.8	1	7	5	1			5	1								6								
Putnam	21,478	21	11.5	1	3	1				2	2								3								
Randolph	28,653	28	11.5	1	4	1				10	1								2								
Rush	20,148	21	12.3	3	3	1				9	2								4								
Shelby	26,491	29	12.9	3	3	1				5	2								3								
Tippecanoe	38,659	45	13.7	6	2	2				15	4								4								
Tipton	19,116	20	12.3	1	6	2				3	1								4								
Union	6,748	6	10.4		2	2				5	2								2								
Vermillion	15,252	21	17.0	2	2	1				6	2								2								



# Mortality of Indiana for December, 1903.

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Population, Census 1900.	Total Deaths Reported for December, 1903.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.												Deaths and Annual Death Rates per 100,000 Popu- lation from Important Causes.							
					Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		65 and Over		Consumption.		Other Forms Tu- berculosis.		Typhoid Fever.		Diphthe- ria.	
					Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
State .....	2,516,462	2,848	13.3	175	391	15.0	201	7.5	88	3.2	49	1.8	100	3.7	805	30.1	337	158.0	34	15.9	65	30.4	54	25.3
Northern Co's	839,835	988	13.8	53	141	15.0	65	6.9	28	2.9	17	1.8	34	3.6	300	32.0	90	126.4	7	9.8	18	25.2	23	32.3
Central Co's..	1,024,791	1,172	13.4	82	162	14.8	82	7.5	36	3.3	21	1.9	40	3.6	311	28.5	138	158.9	21	24.1	34	39.1	13	14.9
Southern Co's	651,836	688	12.4	40	88	13.5	54	8.3	24	3.7	11	1.6	26	4.0	194	29.9	109	197.3	6	10.8	13	23.5	18	32.5
All cities...	857,840	1,309	18.0	82	176	14.3	99	8.0	37	3.0	17	1.3	51	4.1	356	29.0	163	224.2	17	23.3	30	41.2	28	38.5
Over 50,000...	228,171	380	19.6	24	53	14.8	25	7.0	13	3.6	2	.5	17	4.7	97	27.5	49	253.4	6	31.0	10	51.7	4	20.6
25,000 to 50,000	117,787	191	19.1	10	28	15.4	14	7.7	2	1.1	4	2.2	4	2.2	43	23.7	16	160.2	3	30.0	3	30.0	2	20.0
10,000 to 25,000	218,623	347	18.7	21	45	13.8	33	10.1	15	4.6	6	1.8	12	3.6	102	31.2	34	183.5	2	10.7	6	32.3	16	86.3
5,000 to 10,000.	161,751	238	17.3	19	30	13.7	13	5.9	1	4	1.8	12	5.4	65	29.6	41	299.1	2	14.5	7	51.0	2	14.5	
Under 5,000...	131,508	153	13.7	8	20	13.8	14	9.6	6	4.1	1	.6	6	4.1	49	33.8	23	206.3	4	35.8	4	35.8	4	36.8
Country.....	1,658,622	1,539	10.9	93	215	14.8	102	7.0	51	3.5	32	2.2	49	3.3	449	31.0	174	123.7	17	12.0	35	24.9	26	18.4

POPULATION BY GEOGRAPH- ICAL SECTIONS AND AS URBAN AND RURAL.	Deaths and Annual Death Rates per 100,000 Population from Important Causes.																							
	Group.		Scarlet Fever.		Measles.		Whooping Cough.		Pneu- monia.		Diarrhœal Diseases, Under 5 Yrs		Cerebro- Spinal Meningitis.		Influenza.		Puerperal Septi- cæmia.		Cancer.		Violence.		Small- pox.	
	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
State.....	4	1.8	34	15.9	8	3.7	3	1.4	392	183.8	23	10.7	34	15.9	35	16.4	10	4.6	91	42.6	153	71.7	2	.9
Northern Co's....	2	2.8	13	18.2	.....	.....	1	1.4	123	172.8	9	12.6	14	19.6	14	19.6	7	9.8	33	46.3	51	71.6	.....	.....
Central Co's.....	1	1.1	13	14.9	2	2.3	2	2.3	169	194.5	9	10.3	10	11.5	10	11.5	.....	.....	36	41.4	60	69.0	1	1.1
Southern Co's....	1	1.8	8	14.4	6	10.8	.....	.....	100	181.0	5	9.0	10	18.1	11	19.9	3	6.4	22	39.8	42	76.0	1	1.8
All cities .....	.....	.....	11	15.1	3	4.1	.....	.....	200	275.1	7	9.6	15	20.6	19	26.1	3	4.1	38	52.2	68	93.5	1	1.3
Over 50,000.....	.....	.....	3	15.5	2	10.3	.....	.....	59	305.1	1	5.1	1	5.1	6	31.0	1	5.1	10	51.7	21	108.6	.....	.....
25,000 to 50,000 .....	.....	.....	3	30.0	.....	.....	.....	.....	33	330.5	2	20.0	.....	.....	.....	.....	1	10.0	9	90.1	13	130.2	1	10.0
10,000 to 25,000 .....	.....	.....	2	10.7	.....	.....	.....	.....	58	313.0	2	10.7	8	43.1	9	48.5	1	5.3	6	32.3	20	107.9	.....	.....
5,000 to 10,000 .....	.....	.....	1	7.2	.....	.....	.....	.....	28	204.2	2	14.5	5	36.4	2	14.5	.....	.....	5	36.4	9	65.6	.....	.....
Under 5,000.....	.....	.....	2	17.9	1	8.9	.....	.....	22	197.4	.....	.....	1	8.9	2	17.9	.....	.....	8	71.7	5	44.8	.....	.....
Country.....	4	2.8	23	16.3	5	3.5	3	2.1	192	136.5	16	11.3	19	13.5	16	11.3	7	4.9	53	37.7	85	60.4	1	.7

Meteorological Summary for December, 1903. Furnished by the Central Office, Indiana Section, Climate and Crop Service, U. S. Weather Bureau, Indianapolis, Ind.

W. T. BLYTHE, SECTION DIRECTOR.

SECTIONS.	TEMPERATURE.								PRECIPITATION.				CONDITION OF SKY.			Wind.
	Mean.	Departure from Normal.	Highest.			Lowest.			In Inches.				Number of Days.	Prevailing Direction.		
			Degree.	Date.	Place.	Degree.	Date.	Place.	Average.	Departure from Normal.	Snowfall Unmelted.	Days with .01 inch or more.				
															Clear.	Partly Cloudy.
Northern Section.....	20.9	-8.5	60	21	Logansport ..	-17	13	Hammond ...	2.61	+0.32	13.3	9	9	9	13	SW.
Central Section.....	24.0	-7.7	67	23	Connersville.	- 9 {	13, 26 13, 14 {	Northfield.... Rockville .... Veedersburg. }	1.72	-1.25	4.6	7	11	9	11	SW.
Southern Section .....	27.8	-7.0	60	18	Rome .....	- 5	26	Vevay.....	2.15	-1.22	3.6	8	14	7	10	SW.
State .....	24.2	-7.7	.....	.....	.....	.....	.....	.....	2.16	-0.72	7.2	8	12	8	11	SW.