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Indiana State Board of Health

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The MONTHLY BULLETIN will be sent to all health officers and deputies in the State. Health officers and deputies should 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 AUGUST, 1905.

Total number of deaths, 3,070. Rate, 13.6. In the corresponding month last year, 2,980 deaths; rate, 13.2. In the preceding month, 2,774 deaths; rate, 12.3. Deaths by important ages were: Under one year, 665, or 22.7 per cent. of the total; 1 to 5 years, 287; 5 to 10, 53; 10 to 15, 55; 15 to 20, 90; 65 and over, 735, or 25.1 per cent. of the total. Some important causes of death were: Tuberculosis, 340, of which 292 were pulmonary; typhoid fever, 125; diphtheria, 12; scarlet fever, 6; measles, 1; whooping cough, 15; pneumonia, 61; diarrhœal diseases, 478; cerebro-spinal meningitis, 56; influenza, 1; puerperal fever, 8; cancer, 126; violence, 190; smallpox, none.

SANITARY SECTIONS: THE NORTHERN SANITARY SECTION, population 887,832, reports 944 deaths; rate, 13.2. In the corresponding month last year, 888 deaths; rate, 11.7. In the preceding month, 781 deaths; rate, 10.3. The increase in August over July is due principally to diarrhœal diseases, there having occurred 117 more deaths from this cause.

THE CENTRAL SANITARY SECTION, population 1,087,620, reports 1,302 deaths; rate, 14.1. In the corresponding month last year, 1,257 deaths; rate, 13.5. In the preceding month, 1,266 deaths; rate, 13.7.

THE SOUTHERN SANITARY SECTION, population 673,097, reports 774 deaths; rate, 13.6. In the corresponding month last year, 825 deaths; rate, 14.6. In the preceding month, 727 deaths; rate, 12.7.

REVIEW OF SECTIONS: The Northern Sanitary Section, as usual, shows the lowest death rate. The highest death rate is found in the Central Section. The Southern Section shows the highest death rate for consumption and typhoid fever.

BY COUNTIES: The lowest death rate 5.2, occurred in Benton county, and the highest, 23.2, in Hancock. The counties showing death rates above the average for the whole State, which average was 13.6, were: Blackford, 21.9; Carroll, 17.7; Cass, 18.4; Dekalb, 13.9; Fulton, 16.6; Lagrange, 13.8; Lake, 16.8; Laporte, 14.1; Porter, 15; St. Joseph, 17.6; Wells, 14.6; Clay, 14.5; Clinton, 18.1; Decatur, 19.8; Hancock, 23.2; Hendricks, 14.9; Henry, 15.2; Marion, 16.4; Monroe, 15.9; Randolph. 14.7; Tipton, 15.7; Union, 13.9; Vermillion, 18.3; Wayne, 14; Dubois, 14.4; Floyd, 18.6; Gibson, 13.9; Greene, 15.6; Jackson, 14.5; Lawrence, 16.3; Perry, 15.5; Pike, 14.4; Scott, 15.2; Sullivan, 17.3; Vanderburgh, 14.9.

CITIES: All of the cities of the State, total population 977,812, report 1,336 deaths; rate, 16.2. In the corresponding month last year, 1,292 deaths; rate, 15.9. In the preceding month, 1,251 deaths; rate, 15. The cities show a rate 2.6 higher than the average for the whole State and 4.1 higher than the country rate. The cities also show a higher rate than the average for the whole State in the following diseases: Tuberculosis, typhoid fever, diphtheria, scarlet fever, pneumonia, diarrhœal diseases, puerperal fever, and violence.

COUNTRY: Population 1,670,737, reports 1,737 deaths; rate, 12.1. In the corresponding month last year, 1,688 deaths, rate 11.4. In the preceding month, 1,523 deaths, rate, 10.7.

CITIES BY CLASSES: CLASS A, having 50,000 population and over, a total population of 256,046, reports 337 deaths, rate 15.2. In the corresponding month last year, 329 deaths, rate 15.2. In the preceding month, 374 deaths, rate 16.9. This class includes Indianapolis, rate 15.7, and Evansville, rate 13.8.

CLASS B, having from 25,000 to 50,000 population, total population 159,349, reports 217 deaths, rate 16. In the corresponding month last year, 160 deaths, rate 14.8. In the preceding month, 232 deaths, rate 17.1. This class includes Ft. Wayne, rate 15.8; South Bend, 17.2; Terre Haute, 14.7; Muncie, 16.5.

CLASS C, having from 10,000 to 25,000 population, 16 cities in all, a total population of 231,707, reports 327 deaths, rate 16.6. In the corresponding month last year, 332 deaths, rate 16.6. In the preceding month, 282 deaths, rate 14.3.

CLASS D, having under 10,000 population, 63 cities in all, total population 326,710, reports 465 deaths, rate 16.1. In the corresponding month last year, 471 deaths, rate 17.4. In the preceding month, 363 deaths, rate 12.9.

Chart showing deaths by sanitary sections on page 101.

SUMMARY OF MORBIDITY AND MORTALITY FOR AUGUST.

DISEASE PREVALENCE: As in July, the reports show that diarrhoea was the most prevalent disease during the month. Typhoid fever which was seventh last month rises to second place this month. Rheumatism remains prevalent, for it has only fallen from second to third place. On the whole, the health for August was not as good as for July. The following is the order of disease prevalence: Diarrhoea, typhoid fever (enteric), rheumatism, cholera morbus, tonsilitis, cholera infantum, dysentery, intermittent and remittent fever, bronchitis, scarlet fever, typho-malaria fever, inflammation of bowels, diphtheria and membranous croup, erysipelas, pleuritis, pneumonia, influenza, whooping cough, puerperal fever, cerebro-spinal meningitis, smallpox, measles.

SMALLPOX: Ten cases of smallpox, with no deaths, in five counties were reported. In the corresponding month last year, there were 56 cases of smallpox in 14 counties with 3 deaths. In the preceding month, 31 cases in 6 counties with 3 deaths. The counties reporting cases this month were: Daviess, 1; Noble, 1; Steuben, 1; St. Joseph, 6; Vermillion, 1. These figures make it seem probable that smallpox is dying out and that Indiana has known the worst from this visitation.

TUBERCULOSIS: Tuberculosis deaths numbered 340, 292 being pulmonary and 48 other forms. Of this number 210 were females and 129 males. Of the females, 75 were married and were between the ages of 18 and 40 and they left 157 orphans under 12 years of age. Of the males, 26 were married and in the same age period as above, and they left 52 orphans under 12 years of age. This makes 209 orphans, either fatherless or motherless, produced by this disease in one month. 301 homes were invaded. Of the total number of persons dead from consumption, 253 were between the ages of 15 and 50, the prime of life. Three consumption deaths were people over 80 years of age. 364 tuberculosis deaths were reported in the corresponding month last year—135 males and 168 females. It is gratifying to know that the disease was not quite as destructive in August this year as in August last year.

TYPHOID FEVER: This disease has certainly increased over July to a very considerable degree. 125 deaths were reported against 62 in July. It certainly was present in every county. The cases reported numbered 360, but this probably does not include ⅓ of the cases which actually occur. It is safe to estimate the number of cases as 1,000. At the Indiana Soldiers' Home at Lafayette, it was found that only 4 cases of typhoid fever were recognized clinically, and of those diagnosed as "fever," "chills," "debility," etc., 62 showed the Widal reaction.

PNEUMONIA: Pneumonia caused 61 deaths, 35 females and 26 males. 12 deaths occurred in infants under 1 year of age; 11 in the age period of 1 to 5; 11 in the age period of 20 to 50. There will be an increase of this disease next month, for people will cease to live the out-door life on account of the coming cold and this, as is well known, brings on the disease.

VIOLENCE: There were 193 deaths from violence. Of these, 7 were murders, 34 suicides and the remainder accidental. The methods chosen by the suicides were: Carbolic acid, 14, of which 9 were males and 5 females; pistol-shots, 6 males; poisons, 12—males, 5, and females, 7; drowning, 2. Of the accidental deaths, 24 occurred on railroads. 29 were from crushing and falling injuries; electricity and lightning, 8; drowning, 27; burns and scalds, 11; sun-stroke, 3; gun-shot, 11; mining accidents, 6; horses and wagons, 5; poisons, 4; and the remainder by various means.

THE CHEMICAL DEPARTMENT of the State Laboratory of Hygiene, which the Board of Health has been so earnestly demanding for years, is now equipped and open for work. The laboratory is in charge of H. E. Barnard, B. S., late chemist to the State Board of Health of New Hampshire, and associated with him are H. E. Bishop, B. S., assistant chemist; L. W. Bristol, deputy food inspector, and Mrs. E. T. Coney, clerk.

During the present month the inspector has visited the cities of Columbus, Noblesville, Anderson, Elwood, Alexandria, Muncie, Brazil and Terre Haute, and collected samples of milk, groceries and meat products for analysis at the laboratory.

The results of the inspection and the analyses will be published each month by the Bulletin and the press of the State, and, we trust, will soon prove a valuable agent in driving from our markets the adulterated products they now contain. Copies of the Pure Food Laws and Rules published in the July number of the Bulletin have been sent to all the canners and packers of food products of the State, as well as to many of the large firms doing business in other parts of the country. The frequent requests for advice in labeling and preparing formulae show a decided interest in the work of the laboratory among the manufacturers. The laboratory hopes to receive the active coöperation of every Indiana food producer, wholesaler and retailer, and the campaign against adulterated goods, if entered into by all interests with the sincerity that is expected of them, will result in a greater profit and wider market for the farmer who furnishes the raw material, better trade conditions for the merchant, and more healthful and economical food for the consumer.

The water laboratory is prepared to undertake investigations into the purity of public and private water supplies, whenever conditions arise affecting the public or individual health; to advise with promoters of new or enlarged systems of water works, that they may secure the best results from a sanitary standpoint, without undue expense in experimental work that may be a menace to the public health; and to assist in every possible way in conserving the purity of the streams, ponds and waters of the underlying strata that must continue to be the only source of water supply to the citizens of the State.

The attention of health officers is called to the facilities the laboratory affords them for securing the analytical work necessary to a satisfactory sanitary inspection of water supplies and food products. They are invited to visit the laboratory and urged to acquaint themselves with every detail of the work.

RULES OF THE INDIANA STATE BOARD OF HEALTH GOVERNING CHEMICAL ANALYSES AND PATHOLOGICAL AND BACTERIOLOGICAL EXAMINATIONS.

"The State Laboratory of Hygiene shall be at Indianapolis, and shall be used for making analyses of foods and drugs for the purpose of enforcing the pure food and drug laws, for making sanitary analyses, pathological examinations and studies in hygiene and preventive medicine to aid in the enforcement of the health laws, *and for no other purpose*.

"All work done in the State Laboratory of Hygiene shall be exclusively and entirely for the public benefit, and no fees shall be charged."—Acts 1905. Chapter 38, Sec. 2.

FOOD, DRUG AND WATER ANALYSES.

Rule I. When possible, all samples of foods and drugs shall be original packages, and when impossible, as in the case of cheese, milk, etc., samples may be sent after making into secure, plainly labeled packages. The quantity of bulk goods shall be not less than eight ounces, and liquids not less than one pint.

Rule II. All samples must be attended by an affidavit stating their origin and reasons for making analysis, and clearly setting forth any pertinent facts concerning the same.

Rule III. Upon request of any health officer or licensed physician, sanitary water analyses will be made as follows, to wit:

(1) A request clearly stating reasons shall first be submitted, and if satisfactory to the executive officer of the Board, a shipping case will be forwarded to the applicant. Said shipping case shall contain blank forms for records and full directions for collecting, sealing and shipping.

(2) Unless samples are collected in official containers, strictly according to directions, and unless all blanks are fully filled out, analysis and report shall not be made.

(3) Express shall always be prepaid, otherwise analysis shall not be made.

PATHOLOGICAL AND BACTERIOLOGICAL EXMINATIONS.

Rule IV. Diphtheria cultures, sputum examinations and blood examinations for the diagnosis of malaria and typhoid fever shall not be made unless specimens are collected in the special outfits furnished by the State Board of Health, and not then unless the directions for collecting are strictly followed and the information blanks are fully filled out. Approved outfits may be secured directly from the State Board, also from local health officers or established stations.

Rule V. Bacteriological examinations of samples of waters shall not be made unless the said samples are collected in the outfits furnished by the State Board according to the directions accompanying said outfit, and not then if the accompanying information blanks are not fully filled out and properly signed.

Rule VI. Pathological specimens, such as curettings, samples from tumors, cancers, pathological fluids, etc., shall not be examined unless collected, preserved and sent according to the conditions and directions obtainable by correspondence with the Board.

Rule VII. The charges for transportation of all packages sent to the State Laboratory of Hygiene shall be prepaid, otherwise they shall not be accepted. Reports of analyses and examinations shall always be sent by mail, but, if requested, results will be telephoned or telegraphed at the expense of those making the request.

Rule VIII. No analyses or laboratory examinations shall be made which are not related to or of importance to the public health.

NOTES ON THE DETECTION OF PRESERVATIVES AND ADDED COLORING MATTER IN MILK.

By H. E. Barnard, Chemist Indiana Laboratory of Hygiene.

Pure as milk may be when first taken from the cow, it is a perishable product, very susceptible to outside influences, and constantly liable to contamination which tends to render it unpalatable and unwholesome. It is well known that milk undergoes a number of chemical changes in its constitution some hours after milking. It becomes sour, owing to the decomposition of the milk sugar; the casein separates, and finally putrefactive decomposition begins. These changes are evidenced by the presence in milk of bacteria, which, for the most part, do not generate diseases, but which may be, and often are, accompanied by harmful bacteria that obtain access to the milk from the body of the animal, from the air, from the water used in washing the cans, from the hands, clothing and person of the milker, and the like. Even when collected with precaution, the careless distribution of milk from cart or store may result in its contamination with disease-producing bacteria.

The importance of a method or methods for protecting milk from these minute forms of life which may cause so much damage, or of rendering them harmless, is evident. Several methods have been adopted to secure this end. The most important are pasteurization and sterilization. The simple pasteurization of milk is useful, provided the milk is immediately cooled and used within twenty-four hours. But careful sterilization is the most effective method of preserving milk. Thorough cleanliness in the stable and dairy, the use of sterilized instruments for the collection of the milk and careful and scientific handling of the product at every step between the cow and the consumer will be most effective in preventing the entrance of bacteria and consequent souring of the milk.

A third method of preserving milk is by the use of chemicals which either neutralize the acidity of the milk or retard the growth of bacteria. However, preservation by chemical means is neither satisfactory nor advisable. The agents employed are injurious to health, even in small quantities, if taken continuously.

The temptation to the unscrupulous dairyman or milk vendor to cover his lack of cleanliness and proper subsequent care by the use of chemical preservatives is great. Many preparations have been advocated for this purpose, including bi-carbonate of soda, and boric and salicylic acid. Within the last decade an aldehyde, known as formic aldehyde, methonal, methyl aldehyde, formaldehyde, etc., of the formula (H C H O), of valuable germicidal and antiseptic powers, has been brought into prominence and largely employed in the preservation of milk and other foods.

For ordinary uses formaldehyde appears on the market as an aqueous solution from thirty-three to forty per cent. strength, under the trade name of Formalin. As a milk preservative it is also sold under various misleading names, as Freezine, Preservaline, Formol, Iceline, Anti-sour, etc. These preparations are sold in weak solutions, in some instances not containing more than two and five-tenths per cent. formaldehyde, and are accompanied by the most engaging claims for usefulness. They are advertised as much cheaper and more convenient than ice, tasteless and healthful, and of such peculiar composition that their presence can not be detected in the milk. Formaldehyde as sold to milkmen is usually accompanied by directions telling how much to use, varying from a tablespoonful of the solution in five to ten gallons of milk. It is commonly used in the strength of one part of the gas in twenty thousand parts of milk; rarely less than one part in fifty thousand. The antiseptic power of formaldehyde increases in a marked degree as the strength of the preservative is increased.

There are unquestionably many milk dealers who are honest and who serve honest milk, and who are so cleanly in their method of handling their products that they do not have to rely upon the aid of formaldehyde or other preservatives. On the other hand, it is sadly true that in many communities there are dealers who, through ignorance or unscrupulousness, do add foreign and deleterious substances to their milk. It is well that such conditions are met by legislation, and that the selling of milk containing preservatives is a violation of the laws of Indiana. But since the adulteration exists, and the only remedy is prosecution, there must be methods for the detection of the adulterants. Fortunately, the detection of formaldehyde in milk is comparatively easy for one who has had some laboratory experience.

In order to enable health officers to examine into the quality of milk sold in their respective cities, we give a number of methods for detecting formaldehyde in milk, any one of which may be employed with satisfactory results. Careful attention must be paid to the details of the process, and it will be well for the health officers in each case to run a series of blank examinations in which a trace of formaldehyde has been added to the milk samples, in order that he may acquaint himself with the characteristic color reactions.

1. Hehner's Test.

This method depends upon the fact that when milk containing formaldehyde is mixed with sulphuric acid containing a trace of ferric salt, a violet-blue color appears.

Place 5 cc. milk in a test-tube and dilute with an equal volume of water. Carefully pour down the sides of the test-tube strong sulphuric acid containing a trace of ferric chlorid, so as to form a layer of acid below the milk. If formaldehyde is present a violet ring is formed at the junction of the two liquids. One part in 100,000 may be detected.

Caution. The acid used should be of 1.81–1.83 specific gravity, and must contain a trace of ferric salt.

The charring due to the action of the acid on the milk must not be mistaken for the color reaction.

2. HYDROCHLORIC ACID TEST.

Hydrochloric acid containing a small amount of ferric chlorid gives a characteristic violet color, with quantities of formaldehyde not over one part to 1,000.

The test is applied by heating 10 cc. of the sample in a porcelain dish with an equal quantity of strong hydrochloric acid containing a trace of ferric chlorid. A purple color appears, varying from a delicate tint to a deep violet, if formaldehyde is present.

Caution. If a yellow color appears repeat the test, using milk that has been diluted, 1 to 10, with water.

3. LEBBIN'S TEST.

Boil 5 cc. of the sample with 0.05 gram resorcinol, to which half or an equal volume of a fifty per cent. solution of sodium hydroxide is added. If formaldehyde is present the yellow solution changes to a fine red color. This color becomes more apparent on standing.

4. THE DENIGE TEST.

This test depends upon the reaction of Schiff's reagent with formaldehyde. The following solution must be prepared:

40 cc. of one-half per cent. solution of fuchsine.
250 cc. distilled water.
10 cc. of sodium bi-sulphite of 1,375 specific gravity.
10 cc. pure sulphuric acid.

Add 1 cc. of the above solution to 10 cc. of the suspected milk and let it stand for five minutes. Then add 2 cc. of pure hydrochloric acid and shake. A violet color will appear in the presence of the formaldehyde; a yellowish white color in its absence.

5. JORISSEN'S TEST.

Several drops of a ten per cent. aqueous solution of phloroglucinol are added to 10 cc. of the suspected milk in a test tube, well shaken, and a few drops of caustic potash (or caustic soda) added. If formaldehyde is present a delicate red color appears.

This test is very easily applied and gives excellent results. One part of formaldehyde in 100.000 can be detected.

In some cases formaldehyde may be detected by its characteristic odor when the milk is warmed. Hehner has observed that formaldehyde disappears from milk on standing. He found that one part in 100,000 could not be detected after one week; one part in 50,000 after two weeks; and one part in 25,000 after three weeks.

There may be errors in special cases by any one given method, and it is advisable, when a positive reaction is obtained, to confirm it by employing one other method, and preferably more.

Borax or some form of boric acid is frequently employed as a preservative of milk. The presence of borax in milk may easily be determined by burning a tablespoonful of the sample to a white ash, making slightly acid with hydrochloric acid, and dipping a piece of turmeric paper in the solution of the ash of the milk. If borax or boric acid is present the yellow turmeric paper will become a deep cherry red on drying, and this color will in turn develop a characteristic olive green when treated with a drop of ammonia. If a decided effervescence is noticed when the ash of the milk is acidified, it is probable that carbonate or bicarbonate of soda has been added to the milk to correct its acidity. This treatment as well as the addition of borax to milk is prohibited.

The public demands a milk of a more or less decided yellow appearance, under the impression that the yellow color is an evidence of good quality. It is not an infrequent practice of dairymen to counterfeit this color by adding a dye to the milk, particularly if he is resorting to skimming or watering his milk. Until comparatively recently, annatto, a vegetable dye, was employed almost exclusively for this purpose, but of late some of the coal tar colors have also been used. Either one of these colors, when used judiciously and with the right dilutions, will give a very creamy appearance to the milk even when watered.

If, however, the consumer or milk inspector acquaints himself with the fact that the natural yellow color of milk confines itself largely to the cream, and that on the contrary an artificial coloring is dissipated through the whole body of the milk, so that when the cream has risen the underlying milk, instead of showing the familiar blue of skimmed milk, will still be definitely tinged with yellow below the layer of fat, he will have no difficulty in recognizing colored milk.

To determine this fact by chemical methods a gill of the milk is curdled by the aid of heat and acetic acid. If the milk is stirred while heating the curd can nearly always be gathered into one mass, from which the whey is poured off. If, however, the curd is finely divided in the whey, it must be separated by straining through a sieve or a fine cloth. The curd is pressed free from the whey and shaken with ether in a corked flask until the fat has been extracted and with it the annatto. If the milk is uncolored, on pouring off the ether the curd will be left perfectly white. If, on the other hand, a coal tar dye has been employed, the curd will be colored more or less deeply. The ether extract, if colored, is evaporated, the residue made alkaline with sodium hydroxide and poured upon a small wet filter paper; the fat will be held back and the annatto, if present, will fill the pores of the filter. On washing off the fat gently in the water all the added coloring in the milk used in the test will be found concentrated on the filter paper, giving it an orange color varying in depth with the amount of annatto present.

To confirm this test a drop of stannous chlorid applied to the colored filter produces the characteristic pink color. If the milk has been colored with an anilin dye the colored curd when treated with strong hydrochloric acid will immediately turn pink.

It is to be hoped that Health Officers will endeavor to apply the tests for preservatives and coloring matter to all samples of suspected milk that may be brought to their attention, and that they may establish some form of milk inspection in their cities that will insure their communities against adulterated milk, and the consequent injuries to health.

AS TO CHANGE OF CLIMATE FOR THE CURE OF CONSUMPTION.

"Climate in consumption is a will-o'-the-wisp. It is the end of the rainbow with its pot of gold. It is ever just a little beyond. It rests in Colorado, New Mexico, Arizona, California. Like children in their simple faith, chasing the rainbow's vanishing end and delving for treasures where once it stood, our patient pursues his phantom till, worn and wasted, weary, but hopeful still, he falls asleep and wakes to learn that the magic end of the bow of promise rests upon the mystic shores of the spirit land."

While certain climates may be preferred for certain consumptives, it is nevertheless the consensus of opinion of the leading authorities of the day that there is no climate which has a specific curative power over consumption. Many, including Dr. S. A. Knopf, of New York, an acknowledged expert on the treatment of consumption, hold that cures effected in the home climate in which the patients will have to live and work after their restoration to health are more lasting and assured than cures obtained in more genial climes. While it is known that patients cured in the salubrious regions of the West have been able to return and live in Illinois and eastern States from whence they came, it is also known that others can never leave the climates in which they recovered, for on their return to their own State their disease recurs.

There are many reasons why an attempt should be made to cure a consumptive patient at or near his own home if it be in a climate not unsuitable for the cure of consumption; many reasons why he should not be sent a long distance from home.

Separation from friends depresses the patient. "Homesickness" is a malady which often baffles the physician.

The expense of the journey is a serious drain on his resources and is often incurred unnecessarily. As has been aptly stated by the State Board of Health of Maine, "many patients could be well put on the road to recovery in their own State at a cost which would barely defray their expenses to and from Colorado and Arizona."

The fatigue of a long journey is bad for a consumptive.

The lack of home comforts in a distant State and the inability often to obtain proper accommodations unless at a prohibitive price naturally handicap the best efforts made to cure the patient.

The expense of living in the States having "specific" climates is great. Even if his disease be cured the patient may not be able to return to live in his home State.

If the patient must work he can find no occupation. Too many have preceded him.

It is known that in certain Western States doors are closed to the consumptive and legislation against him is contemplated.

For the wealthy patient, who can be surrounded by his relatives and friends wherever he goes, a change of climate may be desirable; for the poor patient—and consumption is often a disease of the poor—a change of climate frequently quickens an unfavorable termination of the disease.

The consumptives of Illinois should not forget that their disease can, as a rule, be cured in Illinois if it can be cured anywhere.

Consumption has been cured in the past and is still being cured in Massachusetts, Rhode Island, New York, Pennsylvania and other eastern and central States. Not one of these States offers special advantages in altitude, temperature, sunshine, air or soil, or other elements necessary to the successful treatment of consumption which can not be enjoyed in Illinois.

It is often not so much the best climate for the disease as the best place for the consumptive.

Before changing climate, the consumptive should obtain competent medical assurance that the change will be beneficial. A climate or altitude which is suitable for one consumptive may cause the speedy death of another. An extremely hot climate is often not only more exhausting, but more dangerous to the consumptive than an extremely cold climate.

The consumptive should not go to any State without first informing himself as to the exact locality he is to visit, and the certainty of securing suitable accommodations in hospital, hotel or boarding house. A neglect to do this has caused untold trouble and misery to consumptives, and has resulted in the death of many unfortunates. The State Board of Health will gladly furnish any consumptive in Illinois with a list of the sanatoria and hospitals for consumptives in any of the eastern, southern or western States, with such information regarding the climate and altitude as may be desired.—Illinois State Board of Health Pamphlet on Consumption.

TUBERCULOSIS CURABLE.

The popular belief that consumption is incurable, that the touch of the white plague is but the kiss of the black angel's wing, must be overcome, ere sanitary treatment and cure of the tubercular types will have the needful coöperation and confidence of the laity.

In 1882 I was "riding" with Dr. Thos. A. Bertenshaw at Drewersburg, Ind. Sol Steyn, 19, was making a heroic struggle to provide for his mother and numerous brothers and sisters, who had been abandoned by a vicious father. He was employed at heavy, depressing labor in a damp, unwholesome rural tile works.

He came to the office, complaining of lassitude, loss of appetite, night sweats, hacking cough, etc. Examination gave the characteristic physical signs, the apex of the left lung being badly involved.

He was put on a treatment of iodine and arsenic; a new employment was secured where his work would be light, cheerful and in the open air and sunshine, and particular stress put upon plenty of sleep and food. He regained health and strength, and, excepting a little dullness, the lung cleared up.

Then, a year later, his father waylaid and murdered him. I was employed in the autopsy, and naturally made a special examination of the affected lung. The tubercular deposits were caseated and encysted, and very plainly recognizable, as the time had been too short for absorption.

Since that time I have carefully examined for tubercular deposit in every autopsy I have attended, and I find that above the age of forty, the majority of cases have had tuberculosis. In many of these, too, the history shows that the presence of the disease had not been suspected. Good open-air living, good alimentation, had *cured consumption*.

If we can but induce the people to know and to believe fully in the curability of the disease, popular opinion will compel legislative action. No law is stronger than popular opinion, and we must educate the common people, even at the expense of being thought cranky. When law, medicine and popular belief unite to stamp out consumption, the baleful, ulcering drain upon the resources, happiness and strength of the commonwealth must cease.

A heavy death or disease rate from tuberculosis is but want of civilization, is a crime against nature, a barbarism equal to that of burning witches.—G. Henri Bogart, Brookville, Ind.

THE GREAT WHITE PLAGUE.

Dr. John B. Huber, of New York City, in Popular Science Monthly, says: It is with a very real sense of melancholy that one contemplates the long death roll of those of the world's great men and women who have succumbed untimely to the tubercle bacillus, which is and has been through countless generations by far the most potent of all death-dealing agencies. Had it not been for this detestable parasite, Bastien Le Page might have given us another Joan-of-Arc to feast our eyes on: Rachel might for many years have continued to permeate the spirits of her audiences with the divine fire that was in her. Our navy did well enough in the 1812 war, as all the world knows; but what a rip-roaring time there would have been if John Paul Jones had lived to take a hand in it. We might be reading some more of Stephen Crane's splendid war stories; we might have had some more of Robert Louis Stevenson's delicious lace-work; Schiller might have given us another Song of the Bells; we might have taken another Sentimental Journey with Lawrence Sterne; Henry Cuyler Bunner might have continued to delight us, and to touch our hearts. John Keats might have given us another "Endymion." Had the tubercle bacillus permitted, Nevin might have vouchsafed us another "Rosary;" Von Weber another "Euryanthe Overture;" Chopin might have dreamed another "First Polonaise;" and the tender flute notes of Sidney Lanier might even now be heard. Maria Constantinovna Bashkirtseff, Zavier Bichat, John Godman, Rene Theophile Hyacinth Laennac, Henry Purcell, John Sterling, Henry Timrod, Artemus Ward, Henry Kirke White, Henry David Thoreau, Baruch Spinoza—such names as these are but a moiety among those of the world's nobility, whose precious lives were cut off in their prime by the "Great White Plague."

A MODEL SMALLPOX PRECAUTION.

From some unknown cause, a case of smallpox appeared among the colored employes at the Culver Military Academy, situated on the banks of Lake Maxinkuckee, at which, besides the one infected person, were about twenty exposures, all colored people living in four small houses, nearly adjacent to each other. Before the health officer arrived the strictest quarantine had been established and a guard of four persons were on constant watch. A large cloth tent was immediately improvised in the woods, four miles away, along a lake, and one mile from any human habitation, to receive the exposed persons, and a small tent a hundred yards from this, to accommodate the infected person. To this locality the whole party was removed in the night after 1 o'clock, and the houses, with all their effects, from which they were removed, except the clothing they wore away, burned in one conflagration. The buggy that carried the smallpox patient away, together with the harness, were also burned. A well was driven on the grounds, a cooking stove set up, abundant provisions provided, attendants procured, and a guard established night and day. When these parties were released from quarantine and their persons disinfected, they were supplied with entire new suits of clothes, their other losses duplicated, and their wages in the meantime were given them without interruption. All their clothing worn when under quarantine will be burned. All this was done under the suggestion and at the expense of Harry Culver, with the authority and approval of the County Health Officer, Dr. J. S. Martin.

HOW TO ABOLISH NUISANCES: It is not a difficult matter, under the new law passed by the Legislature of 1905, to secure the abatement of a nuisance. This law is given below. The procedure is for any person who is offended or damaged by any condition described in the law to go before a justice of the peace and swear out an affidavit of nuisance. Said affidavit must set forth the name of the offender, fully describe the nuisance and state wherein property, health or enjoyment of life is affected. The affidavit should also pray for relief. Any justice of the peace will immediately summon the offending party, and if the charges can be sustained, he must impose the penalty as set forth in the law. We have many inquiries upon this subject. Not a few writers think it is within the power of the health officer to look upon a nuisance and order its abatement. This is not the order of the law. Health officers undoubtedly have this power, but if they are not obeyed, they, too, must file an affidavit of nuisance the same as any citizen. There is, however, another method of procedure for health officers. They may address a letter to their respective Boards of Health describing the nuisance in detail, giving the name of the owner or offender, setting forth wherein the nuisance consists and adding thereto their recommendations. Boards of Health must then take up the question and may, by health order or by ordinance, command the abatement of the nuisance. If this order is not obeyed, it still is necessary to have a trial before a justice or a judge. As a matter of interest, we insert herewith a typical letter received from a citizen who is certainly offended. As the writer did not give the name of the town in which she lives we, of course, have been unable to answer it.

State Secretary Board of Health:

DEAR SIR—For two summer seasons I have been annoyed and injured in my business on account of a garbage nuisance. My place of business is in the rear of and across the alley from the Commercial Hotel. All the garbage is piled and thrown in the same place and rats are also thrown into the barrels. This garbage is the general refuse and scraps from the hotel, but is not removed often enough. My guests refuse to occupy rooms with windows opening into this alley. I have made complaints three times last year and once this year. What can be done about the nuisance? One of my guests, a physician, can certify that he saw hundreds of maggots crawling around the side of a garbage barrel.

Yours truly,

MRS. C. KIRSCH.

Following is the nuisance law which will bring the good lady relief if she will put it in motion:

PUBLIC OFFENSES.

Acts of 1905, Page 709.

OFFENSES AGAINST PUBLIC HEALTH.

PUBLIC NUISANCE.

Sec. 534. Every person who shall erect, or continue and maintain any public nuisance, to the injury of any part of the citizens of this State, shall, on conviction, be fined not exceeding one hundred dollars.

PUBLIC NUISANCE—WHAT CONSTITUTES.

Sec. 535. Whoever erects, continues, uses or maintains any building, structure or place for the exercise of any trade, employment or business, or for keeping or feeding of any animal, animals or fowls, which, by occasioning noxious exhalations or noisome or offensive smells, becomes injurious to the health, comfort or property of individuals or the public; or whoever causes or suffers any offal, filth or noisome substance to be collected or to remain in any place to the damage, prejudice or discomfort of others or the public; or whoever obstructs or impedes, without legal authority, the passage of any navigable river, harbor or collection of waters, or unlawfully diverts any stream of water from its natural course or state, to the injury of others; or whoever obstructs or encumbers by fences, buildings, structures or otherwise, any public grounds, or erects, continues or maintains any obstruction to the full use of property, so as to injure the property of another or essentially interfere with the comfortable enjoyment of life, shall, on conviction, be fined not less than ten dollars nor more than five hundred dollars: *Provided*, That nothing in this section shall prevent the board of trustees of towns and the common councils of cities from enacting and enforcing such ordinances within their respective corporate limits as they may deem necessary to protect the public health and comfort.

* * *

MILD DIPHTHERIA AT THE INDIANA SCHOOL FOR BOYS: A few months ago diphtheria broke out in the State Reform School at Plainfield. An account of the epidemic was published at the time. About July 20th the disease appeared again at this school. All the cases were mild and all were confirmed by bacteriological examination. Dr. Carter, the physician, writes: "Some of these cases are so mild that they might easily be passed as simple sore throat. Most of them would be hardly sick enough to have the doctor visit them in private practice. My suspicion was aroused by high temperature and prostration. Of course, isolation and every precaution against spread was taken."

* * *

THE FLEMING WELL: The Fleming family live at Ben Davis, Indiana, a small station on the Vandalia line in Marion County. About May 25, the little boy aged 3½ years, had a chill and was quite sick. He was brought to the Bobbs Dispensary on June 10th and the diagnosis was "typhoid fever." About June 16th, Mrs. Fleming and Minnie, aged 14, commenced feeling badly. On June 25th, they were taken to the City Hospital and Mrs. Fleming reports the diagnosis as "Prostraction account of over-work and worry." This was the diagnosis in both cases. September 8th, the blood from both these patients gave the positive Widal reaction in dilution 1 to 100. June 20th, Alice Fleming; aged 11, commenced feeling badly and went to bed June 27th. She was in bed several days with a fever of 103 and was sick for two or three weeks.

The Fleming house is dilapidated with damp wells, no screens, and the flies are very bad in the house. The well is dug about thirty feet deep and has an old rotten pump with platform decayed and open so that drainage is back into the well. With such surroundings, it is not hard to account for the typhoid fever which has cost far more than the price for sanitary conditions. Analysis shows the water of the well to be polluted, for it contains intestinal bacteria.

CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM CERTAIN COMMUNICABLE DISEASES IN AUGUST, 1905.

NORTHERN SANITARY SECTION.

Total population	887,832
Total deaths	994
Death rate per 1,000	13.2
Consumption, rate per 100,000	108.9
Typhoid, rate per 100,000	43.8
Diphtheria, rate per 100,000	5.3
Scarlet fever, rate per 100,000	2.6
Diarrheal diseases, rate per 100,000	223.2

CENTRAL SANITARY SECTION.

Total population	1,087,620
Total deaths	1,302
Death rate per 1,000	14.1
Consumption, rate per 100,000	124.7
Typhoid, rate per 100,000	54.2
Diphtheria, rate per 100,000	7.5
Scarlet fever, rate per 100,000	3.2
Diarrheal diseases, rate per 100,000	221.3

SOUTHERN SANITARY SECTION.

Total population	673,097
Total deaths	774
Death rate per 1,000	13.6
Consumption, rate per 100,000	166.5
Typhoid, rate per 100,000	73.6
Diphtheria, rate per 100,000	1.7
Scarlet fever, rate per 100,000	1.7
Diarrheal diseases, rate per 100,000	185.8

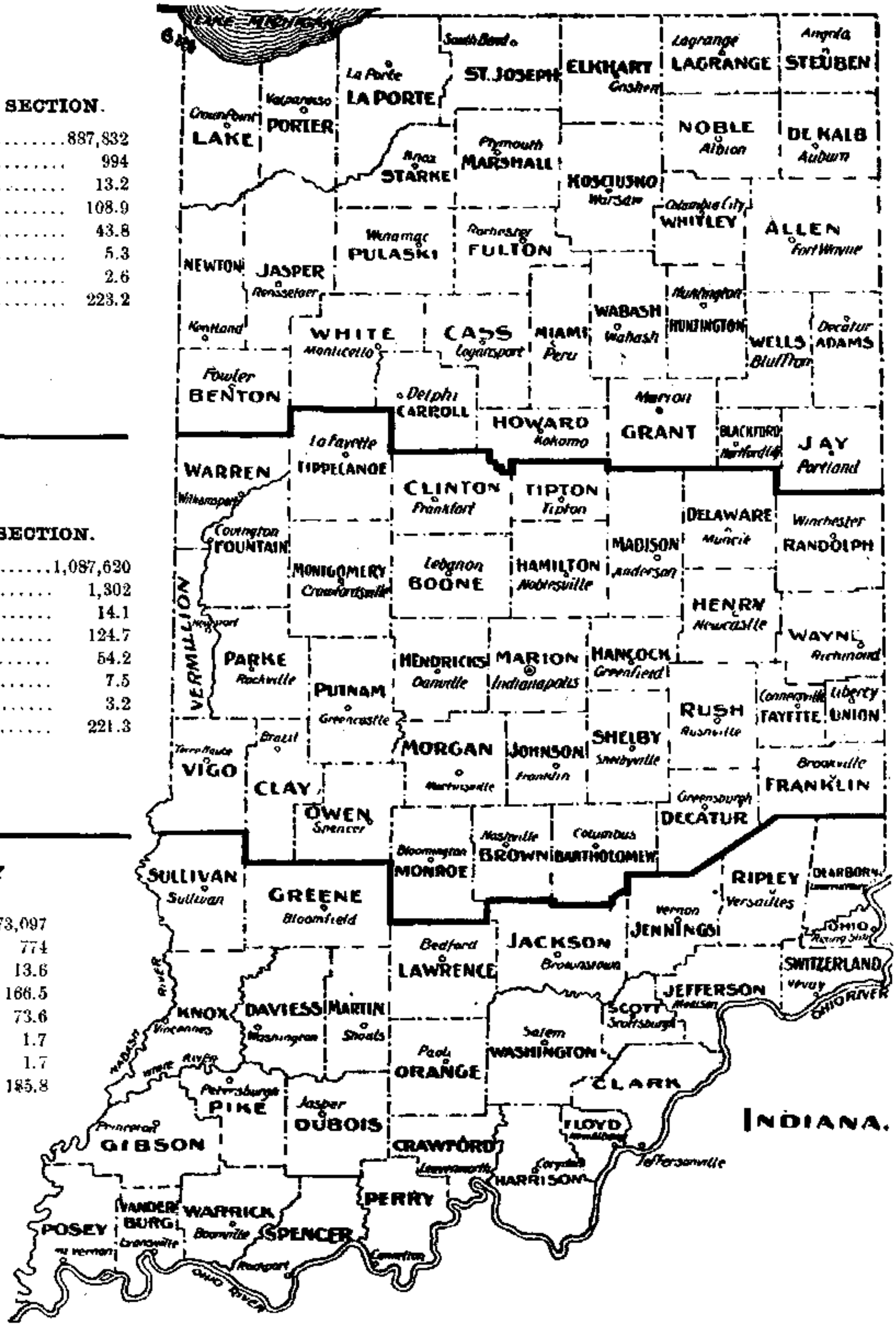

TABLE No. 1. Deaths in Indiana by Counties, During the Month of August, 1905.

STATE AND COUNTIES.	Population Estimated According to U. S. Census Bureau.	Total Deaths Reported for August, 1905.	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 19, inclusive.	65 Years and over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping-Cough.	Pneumonia.	Diarrheal Diseases, under 5.	Cerebro-spinal Meningitis.	Influenza.	Puerperal Septicæmia.	Cancer.	Violence.	Smallpox.	Deaths in Institutions.
State of Indiana	**2,648,549**	**3,073**	**13.6**	**154**	**665**	**287**	**53**	**55**	**90**	**735**	**292**	**48**	**125**	**12**	....	**6**	**1**	**15**	**61**	**478**	**56**	**1**	**8**	**126**	**190**	....	**121**
Northern Co's	**887,832**	**994**	**13.2**	**43**	**190**	**100**	**19**	**17**	**24**	**270**	**82**	**13**	**33**	**4**	....	**2**	**1**	**3**	**20**	**168**	**18**	....	**3**	**46**	**74**	....	**32**
Adams	23,052	19	9.7	1	3	2				7	1									4	2			3			
Allen	81,502	89	12.8	2	20	7	2	1	1	25	7					1			3	16	3			5	6		7
Benton	13,611	6	5.2		2	2	1			1			1							8							
Blackford	19,914	37	21.9		9	3	2	1	2	11	2	1	1	1						5			1		3		1
Carroll	19,959	30	17.7	2	5	2	1	1	4	8	3	1	6							2	1			1	3		
Cass	35,902	56	18.4	3	5	8	2			14	1		5						2	8	1				6		4
Dekalb	26,272	31	13.9	5	3	2			1	14	1			1						2				2	5		
Elkhart	47,392	47	11.7	1	8	5		1	2	16	6	2	1				1			6	1			2	3		
Fulton	17,736	25	16.6		1	5		1	1	9										5				3	4		
Grant	63,973	66	12.1	1	22	5		1	3	17	7		2					2		13	1			4	2		8
Howard	29,531	33	13.1	4	7		1		2	7	3								4	3					2		
Huntington	29,404	32	12.8	2	7	2	1			6	4	1	3							3	1			2	4		2
Jasper	15,535	7	5.3	1	1					3														1	1		1
Jay	28,154	32	13.4	2	7	4			1	7	5		1							9				1			
Kosciusko	29,295	35	14.0	2	6	4		1		10	8		1							5				1	1		
Lagrange	15,284	18	13.8		2	1	1			9	1		1						1	3	1			1			
Lake	43,494	62	16.8	4	19	4	2	2		6	1	1	1					1		16	3			3	12		4
Laporte	39,962	48	14.1	1	12	7		1	2	11	4	1	1			1				10	1			1	1		1
Marshall	25,639	23	10.5			1	1	1		13	2								1						1		
Miami	29,352	31	12.4		10	4				7	2								4	7	2			1	3		
Newton	11,106	7	7.4	1	1	2					1									2							
Noble	23,603	16	8.0		2				1	7	2	1												2	1		
Porter	19,624	25	15.0		4	1	1			6		2	1						1	4			1	1	6		
Pulaski	15,153	8	6.2			1				3	2		1						1					1			
Starke	11,668	13	13.1	1	2	1				4	3									2					3		
Steuben	15,515	15	11.4	1	1			1	1	7	1		2											2	1		
St. Joseph	65,461	98	17.6	4	21	16	3	2	1	16	11	2		1					2	25	1		1	4	5		4
Wabash	28,679	21	8.6	2	1	1			1	7	4			1						1				2			
Wells	24,223	30	14.6	2	6	6		1	1	7	2		3						1	7				2			
White	20,525	20	11.4		2	3	1	1		4	1	1	1							4				1	1		
Whitley	17,328	14	9.5	1	1	1		1		6	2		1							2							
Central Co's	**1,087,620**	**1,302**	**14.1**	**70**	**302**	**119**	**15**	**20**	**39**	**804**	**115**	**21**	**50**	**7**	....	**3**	....	**9**	**26**	**204**	**18**	**1**	**4**	**52**	**73**	....	**64**
Bartholomew	24,885	24	11.3	1	7	2	2			4	2		2							7		1		1			
Boone	26,321	30	13.4	6	4	1		1		9	5	1	1							8				3	2		
Brown	9,727	7	8.4		1	1				4																	
Clay	35,765	44	14.5		10	5	3		3	7	6								1	10	1			1	4		
Clinton	28,535	44	18.1	3	8	1	1	1	2	5	7		3						2	3				2	5		2
Decatur	19,614	33	19.8	1	5	2			1	15	2		3						2	2				3	3		1
Delaware	57,421	67	13.7	5	18	7		2	2	9	8	1	6	1					2	13	2		2	2	2		2
Fayette	13,841	14	11.9	3	5	1				1	1									3				1	1		
Fountain	22,201	20	10.6	1	6	2			1	5	2		2							5	1			1	1		
Franklin	16,388	16	11.5	1	5				3	2	1		1							1				1			
Hamilton	31,430	35	13.1	3	6	7	1	1		11	5		2			1				8				3	1		
Hancock	19,755	39	23.2	2	10	6	1			15	2	2	1							9	1				1		
Hendricks	21,292	27	14.9	1	4	2		1	2	4	7	1								2				1	1		1
Henry	25,572	38	15.2	1	10	1	1			13	1	2	2						1	4				1	2		
Johnson	20,488	24	13.8	3	7	3				7	2	2								4	2						
Madison	84,063	86	12.0	4	30	10		2	2	14	5	1	3					1	1	23	2			3	1		
Marion	219,655	306	16.4	17	69	15	4	5	8	58	29	4	10	3		2		1	11	24	3			11	21		47
Monroe	22,153	30	15.9		2	4			2	9	2	1	4					1	2	3				1			
Montgomery	29,933	32	12.6	3	7	1				12	3		1							6					2		
Morgan	21,183	24	13.3	1	6	3				9								1		6				2	2		
Owen	15,193	14	10.8		3	2		1	1	2	1		1						1	3			1				
Parke	24,082	23	11.2	2	3	3				4	1	1	1							4				1	1		
Putnam	21,478	17	9.3	1	2	2		1	1	3	1		1							2				3			
Randolph	28,880	36	14.7	1	11	7		1		11	1			1						10	1			2	1		
Rush	20,594	19	10.8		5	1	1			7										3				1	1		
Shelby	26,906	31	13.5		8	3			2	10	2		1							6	1			1	1		
Tippecanoe	40,091	39	11.4		4	3	1		3	17	2		1	1				1	1	4				1	9		3
Tipton	19,500	26	15.7	4	6	5		1	2	1	2	1	1							9				1	1		
Union	6,748	8	13.9		1					5	1		1					1									
Vermillion	16,091	25	18.3		7	2		1	2	4	5	2							1	3	1				1		
Vigo	66,771	78	12.9	5	21	13		2	1	12	3	1	1	1				2	1	15	2		1	3	5		3
Warren	11,537	9	9.2		1	1					3		1							2					1		
Wayne	39,507	47	14.0	1	10	3			1	15	3	1						1		7	1			2	3		5
Southern Co's	**673,097**	**777**	**13.6**	**41**	**173**	**68**	**19**	**18**	**27**	**161**	**95**	**14**	**42**	**1**	....	**1**	....	**3**	**15**	**106**	**20**	....	**1**	**28**	**43**	....	**25**
Clark	32,465	38	13.8	1	8	4		1	4	8	8	1	1					1		4	1				4		
Crawford	13,476	10	8.7		4	1			1	3	2		1							2	1						1
Daviess	31,389	35	13.1	1	9	2	1	1		6	4									6				2	3		
Dearborn	22,194	19	10.1	1	4	2		1	1	5			2						1	2				1	2		
Dubois	20,399	25	14.4	2	4	4	1		1	5	3		3							5				2			
Floyd	30,382	48	18.6	1	3	2	4	2	4	13	5		3						3	2	2			4	6		
Gibson	32,171	38	13.9	4	13	2	1	1	1	8	4		2							3					8		
Greene	30,190	40	15.6	3	10	3			2	10	2		4					2	2	3	1				1		
Harrison	22,068	24	12.8	1	5	2		2	1	7	1	1	2							1	3			2	2		
Jackson	27,631	34	14.5	2	6	1	1		2	5	5	1	2							4				1	1		1
Jefferson	22,913	25	12.8		2	4				8	4	2							1	3							
Jennings	16,217	17	12.8	2	2	3				5	4								1	3	1						1
Knox	34,627	40	13.6	5	10	3	1		1	7	2		2							6	1			1	4		1
Lawrence	28,104	39	16.3		9	6	1		1	7	8	1	3						3	6	1				1		
Martin	15,006	12	9.4	1	1	3	1			1	3		1							3					1		
Ohio	4,724	5	12.4			1				2										1							
Orange	17,724	19	12.6	2	1	1				4	4		4							2				1			
Perry	18,998	25	15.5	1	8	2	1		1	4	3	1	1						1	5							
Pike	21,263	26	14.4	2	11	2		1	1	4	5									3	2				2		2
Posey	22,655	22	11.4	2	5			1		3	4									2					2		
Ripley	20,093	14	8.2	1	3					6									1					3			1
Scott	8,497	11	15.2		3	1			1	3	1									4							
Spencer	22,546	25	13.0		6	2	1	1		6	3		1						1	5	2				2		
Sullivan	26,456	39	17.3	3	8	6	2	3	2	7	4	1	2			1				7	2			1	3		
Switzerland	11,840	10	10.0	1	2					4		1												2	1		
Vanderburgh	76,553	97	14.9	4	22	5	3	1		16	10	5	7	1					1	13	1		1	7	3		18
Warrick	22,796	23	11.9	1	7	6	1	2	1	2	3									9	2				1		
Washington	19,725	17	10.1		6			1	2	2	3		1							3				1	1		

TABLE No. II. Deaths in Indiana by Cities During the Month of August, 1905.

CITIES.	Population, Estimated According to U. S. Census Bureau.	Total Deaths Reported for August, 1905.	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 19, inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping-Cough	Pneumonia.	Diarrheal Diseases, Under 5.	Cerebro-spinal Meningitis.	Influenza.	Puerperal Septicaemia.	Cancer.	Violence.	Smallpox.	Deaths in Institutions.
Cities over 50,000 Population	**260,046**	**337**	**15.2**	**20**	**71**	**16**	**6**	**6**	**6**	**65**	**32**	**4**	**17**	**4**		**2**		**1**	**11**	**25**	**4**		**1**	**16**	**20**		**49**
Indianapolis	196,914	283	15.7	16	58	12	4	5	6	52	26	1	10	3		2		1	10	17	3			11	17		33
Evansville	63,132	74	13.8	4	13	4	2	1		13	6	3	7	1					1	8	1		1	5	3		16
Cities from 25,000 to 50,000 Population	**159,349**	**217**	**16.0**	**9**	**52**	**25**	**3**	**3**	**5**	**36**	**19**	**3**	**6**	**2**		**1**		**2**	**6**	**42**	**3**		**3**	**10**	**12**		**13**
Ft. Wayne	49,975	67	15.8	2	16	3			2	16	6					1			3	10				4	4		7
Muncie	26,310	37	16.5	3	10	3			1	2	3	1	5						1	8			2	2	1		
South Bend	43,163	63	17.2	2	13	8	3	2	1	11	8	1		1					2	14	1			1	4		4
Terre Haute	39,901	50	14.7	2	13	11		1	1	7	2	1	1	1				2		10	2		1	3	3		2
Cities from 10,000 to 25,000 Population	**231,707**	**327**	**16.6**	**15**	**69**	**28**	**9**	**3**	**14**	**71**	**23**	**4**	**12**	**1**				**2**	**10**	**55**	**4**			**10**	**34**		**9**
Anderson	24,398	26	12.3		8	1		1		4	3		1							8				3			
Elkhart	17,084	12	18.2	1	3	1				4		1								1				1	2		
Elwood	15,529	26	19.7	2	9	5		1		5	1							1	1	10							
Hammond	15,648	26	19.6	1	6		1			2	1	1								4				2	4		4
Huntington	10,356	15	17.0	1	5	1	1			2	1		1							3				1	1		1
Jeffersonville	10,828	14	15.2		2	2			2	3	3									2	1				2		
Kokomo	11,782	21	21.0	2	3		1		1	5	1								3	1					2		
Lafayette	19,041	29	17.9		3	2	1		3	11	2		1	1				1	1	2				1	6		2
Logansport	17,642	31	20.7	2	4	1	1			8			2						2	1	1				5		
Marion	21,620	27	14.7	1	11	4			2	3	2		2							8	1						1
Michigan City	16,885	21	14.6		4	6			1	5	2	1								7	1				1		
New Albany	20,403	35	20.2	1	3	2	3	1	3	9	4		3						3	2				1	6		
Richmond	19,034	24	14.8	1	4	3			1	7	2	1								5				1	2		1
Vincennes	10,947	20	21.5	3	4		1		1	3	1		2							1					3		
Cities from 5,000 to 10,000 Population	**196,779**	**284**	**17.0**	**19**	**75**	**17**		**4**	**5**	**57**	**24**	**2**	**11**					**2**	**11**	**48**	**1**	**1**		**9**	**18**		**3**
Alexandria	8,823	Not re	ported																								
Bedford	7,221	15	24.5		2	3			1	3	4		1						2	2							
Bloomington	7,437	14	22.2		2					6								1	1								
Brazil	8,538	14	19.3		7					3	2								1	5							
Columbus	6,694	11	14.9		5					2	2		1							3		1					
Connersville	7,751	12	18.2	3	3	1				1	1									2				1	1		
Crawfordsville	6,873	13	22.8	2	5					3			1							4							
East Chicago	7,500	12	18.8	1	8	1				1								1		7				1	1		
Frankfort	7,572	20	31.1	2	2	1			1	1	3		2						2						5		2
Goshen	8,521	9	12.4		1			1	1	3	1		1											1	1		
Greensburg	5,609	13	27.3	1	2				1	6			2						1	1				1	1		
Hartford City	7,362	14	22.4		4			1		6			1							1					1		
Laporte	7,136	14	23.1		4	1		1		2	1		1							2				1			1
Linton	9,767	8	9.6	1	1					1															1		
Madison	8,936	11	14.5		1	2				1	2	1								1							
Mishawaka	6,436	17	31.1	2	6	5				2										8				1	1		
Mt. Vernon	5,303	9	20.0	1	1						2									1							
Peru	8,997	14	18.3		6	1				2	2								3	1	1			1			
Portland	5,507	6	12.8	1	2					2	1									2							
Princeton	7,227	6	9.7	1	3					2										1							
Seymour	6,898	10	17.1	2	1				1	2	1	1															
Shelbyville	7,856	11	16.5		3	1				3										2				1			
Valparaiso	6,756	9	15.7		2					3									1	2				1	2		
Wabash	9,023	7	9.1	1	1					1	2																
Washington	9,546	8	9.8		1			1		1										1					1		
Whiting	5,500	7	15.0	1	2	1							1							2					3		
Cities under 5,000 Population	**129,931**	**171**	**15.5**	**10**	**30**	**12**	**2**	**6**	**9**	**48**	**18**	**6**	**9**	**1**		**1**		**1**	**1**	**19**	**3**			**6**	**8**		
Attica	3,279	2	7.1		1				1		1									1							
Auburn	3,788	4	12.4			1				2																	
Aurora	3,929	3	9.0							1																	
Bluffton	4,835	7	17.0	1	1					3			1											1			
Cannelton	2,267	3	15.6	1	1					1																	
Clinton	3,539	7	23.3		2	1			2	1	2									2					1		
Columbia City	3,027	5	19.4					1		2	1		1														
Covington	2,342	2	10.0							1			1														
Decatur	4,542	5	12.9		1					1											2						
Delphi	2,220	6	31.8		2				2	1		1	1														
Dunkirk	4,052	5	14.5		1	1					1									2							
Franklin	4,095	9	25.9	1	3					2	1	1								1							
Garrett	4,367	7	18.9		3				1	2										2					2		
Gas City	4,222	4	11.1		1				1		2																
Greencastle	3,661	5	16.1					1		2	1													1			
Greenfield	4,945	13	31.0		2	1				9	1	1	1							1					1		
Huntingburg	2,527	2	9.3	1	1															1							
Kendallville	3,512	1	3.3							1														1			
Lawrenceburg	4,343	5	13.5	1		1				1			1												1		
Lebanon	4,778	6	14.8	2						1	1	1															
Ligonier	2,245	3	15.7		1				1		1																
Martinsville	4,581	9	23.1		2	1				4								1							1		
Montpelier	3,844	7	21.4		3	1	1			1				1						3					2		
Noblesville	4,987	8	18.9	2	1	1	1	1		1	1		1			1				1							
North Vernon	3,147	3	11.2			1				1	1										1						
Plymouth	4,029	1	2.9																								
Rensselaer	2,575	No de	aths.																								
Rising Sun	1,548	3	22.8							1																	
Rockville	2,187	2	10.7								1																
Rushville	4,967	5	11.8		1					3										1				1			
Spencer	2,089	5	28.2					1			1		1														
Tell City	2,914	2	8.0		1					1									1								
Tipton	4,191	5	14.0			1		1	1	1		1	1							1							
Union City	2,730	5	21.6	1	1					1	1									1							
Vevay	1,494	4	31.5							2		1												1			
Warsaw	4,152	3	8.5			1		1			1									1							
Winchester	3,981	5	14.8		1	1				1										1				1			
Total Urban Population	**968,204**	**1,336**	**16.2**	**73**	**297**	**98**	**20**	**22**	**39**	**277**	**116**	**19**	**55**	**8**		**4**		**8**	**39**	**189**	**15**	**1**	**4**	**51**	**92**		**74**
Total Rural Population	**1,680,345**	**1,737**	**12.1**	**81**	**368**	**189**	**33**	**32**	**51**	**458**	**176**	**29**	**70**	**4**		**2**	**1**	**7**	**22**	**259**	**41**		**4**	**75**	**98**		**47**

Mortality of Indiana for August, 1905.

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Population, Estimated by U.S. Method.	Total Deaths Reported for August, 1905.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages. Under 1. Number.	Under 1. Per Cent.	1 to 5. Number.	1 to 5. Per Cent.	5 to 10. Number.	5 to 10. Per Cent.	10 to 15. Number.	10 to 15. Per Cent.	15 to 20. Number.	15 to 20. Per Cent.	65 and Over. Number.	65 and Over. Per Cent.	Deaths and Annual Death Rates per 100,000 Population from Important Causes. Consumption. Number.	Consumption. Death Rate.	Other Forms Tuberculosis. Number.	Other Forms Tuberculosis. Death Rate.	Typhoid Fever. Number.	Typhoid Fever. Death Rate.	Diphtheria. Number.	Diphtheria. Death Rate.
State	**2,648,549**	**3,070**	**13.6**	**154**	**665**	**22.7**	**287**	**9.8**	**53**	**1.8**	**55**	**1.8**	**90**	**3.0**	**735**	**25.1**	**292**	**130.0**	**48**	**21.3**	**125**	**55.6**	**12**	**5.3**
Northern Co's	687,832	994	13.2	43	190	19.9	100	10.5	19	1.9	17	1.7	24	2.5	270	28.3	82	108.9	13	17.2	33	43.8	4	5.3
Central Co's	1,087,620	1,302	14.1	70	302	24.5	119	9.6	15	1.2	20	1.6	39	3.1	304	24.6	115	124.7	21	22.7	50	54.2	7	7.5
Southern Co's	673,097	774	13.6	41	173	23.5	68	9.2	19	2.5	18	2.4	27	3.6	161	21.8	95	166.5	14	24.5	42	73.6	1	1.7
All cities	**977,812**	**1,336**	**16.2**	**73**	**297**	**23.5**	**98**	**7.7**	**20**	**1.5**	**22**	**1.7**	**39**	**3.0**	**277**	**21.9**	**116**	**139.9**	**19**	**22.9**	**55**	**66.3**	**8**	**9.6**
Over 50,000	260,046	337	15.2	20	71	22.4	16	5.0	6	1.9	6	1.9	6	1.9	65	20.5	32	145.2	4	18.1	17	77.1	4	18.1
25,000 to 50,000	159,349	217	16.0	9	52	25.0	25	12.0	3	1.4	3	1.4	5	2.4	36	17.3	19	140.6	3	22.2	6	44.4	2	14.8
10,000 to 25,000	231,707	327	16.6	15	69	22.1	28	9.0	9	2.8	3	.9	14	4.4	71	22.7	23	117.1	4	20.5	12	61.1	1	5.0
5,000 to 10,000	196,779	284	17.0	19	75	28.3	17	6.4	.....	.....	4	1.5	5	1.8	57	21.5	24	143.9	2	11.9	11	65.9	.....	.....
Under 5,000	129,931	171	15.5	10	30	18.6	12	7.4	2	1.2	6	3.7	9	5.6	48	30.0	18	163.4	6	54.4	9	81.7	1	9.0
Country	1,670,737	1,737	12.1	81	368	22.2	189	11.4	33	2.0	33	2.0	51	3.0	458	27.6	176	124.3	29	20.4	70	49.4	4	2.8

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Deaths and Annual Death Rates per 100,000 Population from Important Causes. Croup. Number.	Croup. Death Rate.	Scarlet Fever. Number.	Scarlet Fever. Death Rate.	Measles. Number.	Measles. Death Rate.	Whooping-Cough. Number.	Whooping-Cough. Death Rate.	Pneumonia. Number.	Pneumonia. Death Rate.	Diarrheal Diseases, Under 5 Yrs. Number.	Diarrheal Diseases, Under 5 Yrs. Death Rate.	Cerebro-Spinal Meningitis. Number.	Cerebro-Spinal Meningitis. Death Rate.	Influenza. Number.	Influenza. Death Rate.	Puerperal Septicæmia. Number.	Puerperal Septicæmia. Death Rate.	Cancer. Number.	Cancer. Death Rate.	Violence. Number.	Violence. Death Rate.	Smallpox. Number.	Smallpox. Death Rate.
State	.....	.....	**6**	**2.6**	**1**	**.4**	**15**	**6.6**	**61**	**27.1**	**478**	**212.9**	**56**	**24.9**	**1**	**.4**	**8**	**3.5**	**126**	**56.1**	**190**	**84.6**	.....	.....
Northern Co's	.....	.....	2	2.6	1	1.3	3	3.9	20	26.5	168	223.2	18	23.9	.....	.....	3	3.9	46	61.1	74	98.3	.....	.....
Central Co's	.....	.....	3	3.2	.....	.....	9	9.7	26	28.2	204	221.3	18	19.5	1	1.0	4	4.3	52	56.4	73	79.2	.....	.....
Southern Co's	.....	.....	1	1.7	.....	.....	3	5.2	15	26.2	106	185.6	20	35.0	.....	.....	1	1.7	28	49.0	43	75.3	.....	.....
All cities	.....	.....	**4**	**4.8**	.....	.....	**8**	**9.8**	**39**	**47.0**	**189**	**228.0**	**15**	**18.1**	**1**	**1.2**	**4**	**4.8**	**51**	**61.5**	**92**	**111.0**	.....	.....
Over 50,000	.....	.....	2	9.0	.....	.....	1	4.5	11	49.9	25	113.4	4	18.1	.....	.....	1	4.5	16	72.6	20	90.7	.....	.....
25,000 to 50,000	.....	.....	1	7.4	.....	.....	2	14.8	6	44.4	42	311.0	3	22.2	.....	.....	3	22.2	10	74.0	12	88.8	.....	.....
10,000 to 25,000	.....	.....	.....	.....	.....	.....	2	10.1	10	50.9	55	280.0	4	20.3	.....	.....	.....	.....	10	50.9	34	173.1	.....	.....
5,000 to 10,000	.....	.....	.....	.....	.....	.....	2	11.9	11	65.9	48	287.8	1	5.9	1	5.9	.....	.....	9	53.9	18	107.9	.....	.....
Under 5,000	.....	.....	1	9.0	.....	.....	1	9.0	1	9.0	19	172.5	3	27.2	.....	.....	.....	.....	6	54.4	8	72.6	.....	.....
Country	.....	.....	2	1.4	1	.7	7	4.9	22	15.5	289	204.1	41	28.9	.....	.....	4	2.8	75	52.9	98	69.2	.....	.....

Meteorological Summary for August, 1905. Furnished by the Central Office, Indiana Section, Climate and Crop Service, U. S. Weather Bureau, Indianapolis, Ind.

W. T. BLYTHE, Section Director.

SECTIONS.	Temperature. Mean.	Departure from Normal.	Highest. Degrees.	Highest. Date.	Highest. Place.	Lowest. Degrees.	Lowest. Date.	Lowest. Place.	Precipitation. In Inches. Average.	Departure from Normal.	Snowfall Unmelted.	Days with .01 Inch or more.	Condition of Sky. Number of Days. Clear.	Partly Cloudy.	Cloudy.	Wind. Prevailing Direction.
Northern Section	72.6	+0.4	96	12	Syracuse	46	17	Logansport	4.07	+1.16	0	8	16	7	8	SW.
Central Section	73.7	+1.3	95	5	Connersville	50	{ 2, 18 }	Northfield	5.08	+1.58	0	9	15	10	6	SW.
Southern Section	76.1	+0.6	101	6	Rome	51	30	Marengo	6.01	+2.62	0	9	15	11	5	SW.
State	74.1	+0.8	101	6	Rome	46	17	Logansport	5.06	+1.79	0	9	15	9	7	SW.