MONTHLY BULLETIN

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.

CONTENTS.

BIRTHS FOR APRIL, 1912.

Total births, 3,729 (stillbirths excluded). State rate, 16.6.

Males, 1,879; females, 1,850.

White males, 1,861; white females, 1,833.

Colored births, 35; males, 18; females, 17.

Stillbirths, 122; white, 120; colored, 2.

Northern Sanitary Section, population 927,229; rate 17.1.

Central Sanitary Section, population 1,114,087; rate, 14.6.

Southern Sanitary Section, population 659,560; rate, 19.3.

Highest rate, Union County, 27.1.

Lowest rate, Marion County, 7.4.

ABSTRACT OF MORTALITY STATISTICS FOR APRIL, 1912.

Total number of deaths, 3,117; rate, 13.9. In the same month last year, 3,054; rate, 13.7. In the preceding month, 3,375; rate, 14.5. Deaths by important ages were: Under 1 year, 248, or 7.9 per cent. of total; 1 to 4, 153; 5 to 9, 60; 10 to 14, 55; 15 to 19, 77; 65 and over, 1,028, or 32.2 per cent. of total.

SANITARY SECTIONS: THE NORTHERN SANITARY SECTION, population 993,532, reports 1,088; rate, 14.1. In same month last year, 1,005; rate, 13. In the preceding month, 1,014; rate, 14.

THE CENTRAL SANITARY SECTION, population 1,127,217, reports 1,355 deaths; rate, 16.6. In the same month last year, 1,253 deaths; rate, 13.9. In the preceding month, 1,492 deaths; rate, 15.6.

THE SOUTHERN SANITARY SECTION, population 663,757, reports 674 deaths; rate, 12.3. In the same month last year, 796 deaths; rate, 14.7. In the preceding month, 769 deaths; rate, 13.6.

REVIEW OF SECTIONS: The Southern Section shows the lowest death rate. The Central Section's death rate is 2.7 higher than the State rate. The Northern Section shows the highest death rate from typhoid fever, pneumonia, diarrhea and enteritis under two years, and external causes. The highest death rate for consumption occurred in the Central Sanitary Section, also highest rate for measles and cancer.

RURAL: Population 1,566,212, reports 1,577 deaths; rate, 12.2. In the same month last year, 1,606 deaths; rate, 12.6. In the preceding month, 1,786 deaths; rate, 13.4.

CITIES: Population 1,164,294, reports 1,540 deaths; rate, 16.1. In the same month last year, with population of 1,140,710, report 1,448 deaths; rate, 15.3. In the preceding month, 1,589 deaths; rate, 16.1. The death rates of the cities named were: Indianapolis, 15.2; Evansville, 10.1; Fort Wayne, 10.9; Terre Haute, 15.9; South Bend, 15.3; Muncie, 16; Richmond, 15; Anderson, 16; Hammond, 19; New Albany, 18.3; Lafayette, 22.8.

SUMMARY OF MORBIDITY AND MORTALITY FOR APRIL, 1912.

As in March, scarlet fever was reported as the most prevalent infectious disease; 62 per cent. of observers reported it present, and this also was true of rheumatism. The order of prevalence was as follows: Scarlet fever, rheumatism, tonsillitis, bronchitis, measles, pulmonary tuberculosis, influenza, lobar pneumonia, diphtheria and membranous croup, bronchial pneumonia, typhoid fever, smallpox, chickenpox, diarrhea, erysipelas, whooping-cough, intermittent and remittent fever, malaria fever, other forms of tuberculosis, dysentery, puerperal fever, rabies in animals, inflammation of bowels, cholera morbus, rabies in human, cerebro-spinal fever, cholera infantum, poliomyelitis.

POLIOMYELTIS: Number of cases, 1. Number of deaths, 1. This case and death occurred in Laporte County.

SMALLPOX: 141 cases in 25 counties, with 2 deaths. In same month last year, 202 cases in 28 counties, with no deaths. The counties reporting cases present were: Bartholomew, 30 cases and 1 death; Brown, 1 case; Cass, 1; Clark, 19; Daviess, 2; Dearborn, 1; Decatur, 3; Delaware, 4; Fayette, 4; Gibson, 17; Grant, 3; Greene, 1; Howard, 2; Johnson, 9; Knox, 3; Madison, 4; Marion, 2; Pike, 2; Randolph, 1; St. Joseph, 9 cases, with 1 death; Sullivan, 11 cases; Vanderburgh, 5; Vigo, 2; Wabash, 2; Wayne, 3.

TUBERCULOSIS: Total deaths 376, of which 306 were pulmonary and 70 others forms. Males 183, females 193. Of the males, 30 were married in age period 18 to 40, and left 60 orphans under 12 years of age. Of the females, 60 were married in same age period as above and left 120 orphans. Total tuberculosis orphans, 180. Total homes invaded, 357.

PNEUMONIA: 358 deaths. In the same month last year, 287 deaths. Males 186, females 172. Pneumonia appeared in all but two counties of the State and caused deaths in all but 10.

TYPHOID FEVER: Total cases, 209 in 29 counties, with 31 deaths. In the same month last year, 135 cases in 26 counties, with 40 deaths.

DIPHTHERIA: 120 cases in 33 counties, with 14 deaths. In the same month last year, 104 cases in 24 counties, with 15 deaths.

RABIES: 6 cases in 2 counties, with no deaths. The cases occurred as follows: Marion, 5; Wayne, 1.

DEATHS FROM EXTERNAL CAUSES: Total, 200. In same month last year, 173. Murders, 7; males 6, females 1. Suicides, 47; males 37, females 10. Accidental deaths, 146; males 97, females 49. Of the murders, 6 were by gunshot and 1 by stabbing. Of the suicides, 11 were by gunshots, 3 artificial gas, 7 hanging, 1 cutting, 3 drowning, 15 carbolic acid, 1 railroad train, 6 other poisons. Of the accidental deaths, railroad trains caused 26, interurbans 1, street cars 4, automobiles 2, machinery 2, electricity 2, falls and crushing injuries 42, burns and scalds 17, drowning 13, gunshots 2, horses and vehicles 6, asphyxiation and suffocation 8, poisons 4, and the remainder by various means.

REPORT OF THE DEPARTMENT OF FOOD AND DRUGS, INDIANA STATE BOARD OF HEALTH, FOR APRIL, 1912.

H. E. BARNARD, STATE FOOD AND DRUG COMMISSIONER.

During the month of April the food laboratory reports the analysis of 153 samples, of which 126 were legal and 27 illegal. Four temperance beers upon analysis proved to be straight beers and were illegal because of the misbranding. Three of the 19 ice creams examined were classed as illegal because the butter fat content was less than the required 8 per cent. Six of the 61 milk samples were also classed as illegal, usually because of the presence of visible dirt. This report is far more satisfactory than earlier records, possibly because of the fact that the cows are now on grass and stable conditions are therefore more sanitary.

Of the 13 maple syrups examined every sample was legal. This record is a splendid example of the improved conditions resulting from effective food laws. Prior to the passage of such laws it was a difficult matter to find a sample of pure maple syrup.

Of the 9 vinegars analyzed, 3 contained less than the required acidity. These were all farmers' samples and should more properly have been classed as hard ciders.

Of the 58 drug samples analyzed, 25 were classed as illegal and 33 legal. Nine of the 13 cough cures studied were misbranded in that the composition of the preparation varied widely from that indicated on the label. Seven of the 13 face applications were similarly misbranded. Of the 5 linseed oils examined one was adulterated, containing fish oil.

RESULTS OF ANALYSES OF FOODS AND DRUGS DURING THE MONTH OF APRIL, 1912.

CLASSIFICATION.	Legal.	Illegal.	Total.
FOODS.			
Beers	.....	1	1
Beers, temperance	.....	4	4
Beverages	1	1	2
Canned fruits	.....	2	2
Catsup	1	.....	1
Coffee	1	.....	1
Cream of tartar	1	.....	1
Extracts—			
Lemon	1	2	3
Vanilla	6	1	7
Flour	1	1	2
Lard	4	.....	4
Milk Products—			
Butter	4	.....	4
Buttermilk	1	.....	1
Cream	4	.....	4
Ice cream	16	3	19
Milk	55	6	61
Oleomargarine	3	.....	3
Sausage	2	.....	2
Syrups	1	.....	1
Maple	13	.....	13
Spices	2	.....	2
Vinegar	6	3	9
Whiskey	.....	1	1
Wine	1	.....	1
Miscellaneous foods	2	2	4
Total	126	27	153
DRUGS.			
Cough cures	4	9	13
Extract witch hazel	.....	1	1
Face applications	6	7	13
Hair tonic	1	.....	1
Jamaica ginger	3	1	4
Linseed oil	4	1	5
Nail bleach	1	.....	1
Spirits of camphor	1	1	2
Spirits of peppermint	.....	1	1
Spirits of turpentine	4	.....	4
Miscellaneous drugs	9	4	13
Total	33	25	58

INSPECTORS' REPORT FOR THE MONTH OF APRIL, 1912.

During the month the inspectors visited 75 cities and towns and made 1,591 sanitary inspections. Of this number 30 places were classed as in excellent condition, 1,011 as in good condition, 438 as fair, 92 poor and 20 bad. Of the 30 dairies visited, none were in excellent condition, none were even good, but 4 could be graded as fair, 15 or 50 per cent. of the places were in poor sanitary condition, and 11 were unqualifiedly bad. As we have so often said, the reports of the sanitary inspectors as to dairy conditions reveal a condition which, from the standpoint of the sanitarian, is almost hopeless, and from the standpoint of the dairyman is an accusation of inefficiency and carelessness.

Three hundred and forty-seven of the 467 grocery stores were in good condition, 99 were fair and 12 were excellent. One hundred and fourteen of the 169 meat markets were in good condition, 45 were rated as fair and 4 as excellent. Three hundred and eighteen drug stores were inspected and 4 were found in excellent condition, 259 were in good shape, 51 were fair, 2 poor and 2 bad. This is the first month drug stores have been reported in as bad condition for a year. These reports come from small towns which have not heretofore been visited by the inspectors. Of the 222 bakeries and confectioneries visited, 115 were in good condition, 84

were fair and 12 were poor. Eighty-four hotels and restaurants were in good condition and 89 were fair. Twenty-four were rated as poor. Inspections were also made of 14 poultry houses, 7 fish markets, 37 slaughter houses, 11 creameries, 65 ice cream parlors, 15 flour mills, 10 bottling works, etc.

Forty-one condemnation notices were issued during the month. In 37 cases unsanitary conditions were found to obtain, and in 31 places the business was conducted in buildings which were poorly or improperly constructed.

But three prosecutions were reported during the month of April, the smallest number of prosecutions reported in a single month since the laboratories were established. This low water mark of court work is perhaps explained by the high water mark reached in sanitary inspection work and in food regulation.

A butcher was fined $10 and costs for maintaining an unsanitary slaughter-house. Another butcher was similarly fined for selling hamburger steak preserved with sulphite of soda. One case involved the sale of adulterated vinegar.

The total fines and costs imposed amounted to $62.75.

SUMMARY OF INSPECTIONS MADE DURING THE MONTH OF APRIL, 1912.

INSPECTIONS.	No. Inspected.	No. Excellent.	No. Good.	No. Fair.	No. Poor.	No. Bad.
Dairies	30	0	0	4	15	11
Grocery stores	467	12	347	99	8	1
Meat markets	169	4	114	45	6	0
Drug stores	318	4	259	51	2	2
Bakeries and confectioneries	222	9	115	84	12	2
Hotels and restaurants	197	0	84	89	24	0
Poultry houses	14	0	3	8	3	0
Fish markets	7	0	3	2	2	0
Slaughter-houses	37	0	11	15	7	4
Creameries	11	0	7	2	2	0
Ice cream parlors	65	1	29	28	7	0
Ice cream factories	2	0	1	1	0	0
Wholesale groceries	12	0	12	0	0	0
Milk depot	1	0	1	0	0	0
Bottling works	10	0	6	2	2	0
Flour mills	15	0	10	3	2	0
Canning factories	4	0	3	1	0	0
Fruit stores	4	0	2	2	0	0
Wholesale fruit and vegetable stores	2	0	0	2	0	0
Cold storage plant	1	0	1	0	0	0
Brewing companies	2	0	2	0	0	0
Chewing gum factory	1	0	1	0	0	0
Total	1,591	30	1,011	438	92	20

NOTICES OF CONDEMNATIONS DURING THE MONTH OF APRIL, 1912.

CLASSIFICATIONS.	Reasons for Condemnations.		Total.
	Unsanitary Conditions.	Improper Constructions.	
Bakeries	5	4	5
Confectioneries	1	.....	1
Dairies	14	15	17
Fertilizer and grease factory	1	1	1
Groceries	2	2	2
Meat markets	3	1	3
Poultry house	.....	1	1
Restaurants	6	4	6
Slaughter-houses	5	3	5
Total	37	31	41

DR. LINDLEY'S GOLDEN REMEDY.

This remedy (?) is manufactured by the Golden Cure Company of Hammond, Ind., and is labeled "Dr. Lindley's Golden Remedy for Epilepsy, Fits, Spasms, Convulsions, St. Vitus Dance, Nervous Headache, Insomnia, Hysteria and Kindred Diseases of the Nervous System."

Just what entitles it to the name of "Golden" was not revealed by the analysis, but we might presume it to be such after purchasing twelve ounces for $1.00, when the actual value is less than one-fifth of that. The analysis, however, did show the following formula:

Ammonium Bromide	5.54 per cent.
Potassium Bromide	10.81 per cent.
Sodium Bromide	5.09 per cent.
Alcohol	2.5 per cent.

And, in addition to this, the "remedy" contained a small amount of a bitter principle, which is probably Gentian.

As is shown by the analysis, the principal ingredients of this preparation are the bromides of sodium, potassium and ammonium. Concerning these, we quote from the National Standard Dispensatory. "The chief influence of potassium bromide, which may be taken as a type of all bromides which are employed in medicines, is exercised upon the nervous system. * * * Its elimination is very slow, and for this reason, when administered day after day, it rapidly accumulates in the body and produces more and more marked effects. When taken for a considerable period, it is very prone to produce, acne, indigestion and constipation and depresses the mind so that considerable length of time is necessary to grasp ideas or express thoughts."

The United States Dispensatory says: "When given to either cold or warm-blooded animals in repeated doses of sufficient amount, potassium bromide produces a condition of universal depression, with failure of the circulation, progressively increasing paralysis, lowering of temperature and finally death from asphyxia or exhaustion. In man, the remedy causes similar results—the series of phenomena being known as bromism. The symptoms are muscular weakness, general mental and bodily sluggishness, loss of memory, often marked sleepiness, depression of spirits deepening into complete apathy, lowering of temperature, and finally a universal depression of function, the patient lying in bed scarcely more than a feeble automaton."

Concerning its value in treatment of epilepsy, the first authority states: "Occasionally, if all other conditions in and about the patient are favorable, it may diminish the frequency of the attacks to so great an extent as to produce a virtual cure, but these cases are, unfortunately, in the minority. Care must be taken that the drug is not used so long and in such full doses as to add its depressant effects to the mental deterioration which sometimes develops in epileptics. Its administration, therefore, must be cautious and carefully watched."

From these authorities it may be readily seen that the "Golden Remedy" is not only sold at an exorbitant price, but is also dangerous in the hands of an inexperienced layman and should only be administered by one who is familiar with its effects and will consequently regulate the dosage and period of treatment.

LIST OF PROSECUTIONS MADE DURING MONTH OF APRIL, 1912.

COUNTY.	Lab. No.	Name and Address of Defendant.	Why Prosecuted.	Date of Trial.	Final Disposition.
Gibson	.....	Henry C. Redman, Princeton	Maintaining unsanitary slaughterhouse	4-10-12	Fined $10 and costs.
Laporte	3792F	Joseph Tittle, LaPorte	Selling hamburger containing sulphites	4-17-12	Fined $10 and costs.
Lawrence	.....	Wm. A. Wilson, Bedford	Selling adulterated vinegar	4- 1-12	Fined $10 and costs.

TWO NUISANCES AT SHOALS: Dr. Long, the town health officer of Shoals, writes us as follows: "There is a small office building here of two rooms, which has been occupied by an old bachelor attorney afflicted with cancer or syphilitic infection. The building is in very bad sanitary condition. The bed clothing is soiled from discharges of sores on his body. The odor about the building is fierce. The patient has been removed to a hospital in New Albany, the house being locked. The Board of Health has no access and no person here is left in control of the building. One dwelling, the inhabitants of which complain, is within six feet of the building complained of.

"The second condition is in regard to a livery stable located in Main street, in the central part of the town. In the rear of this stable, on the alley, there is a large basin or puddle where the refuse of the stable is thrown. This basin becomes filled with water and the manure rots, producing bad odors, offending the people in that community, and of course this affects the public health. The basin or puddle is so low that it can not be drained, and if abated must be filled up. This stable is in the residence district and the citizens are fearful of the consequences this summer. I am petitioned for the abatement of the nuisance. Please give us advice how to proceed."

In reply to this, attention was called to the health law which says: "It shall be unlawful for any person, firm, company or corporation to institute, permit or maintain any conditions whatever, which may transmit, generate or promote disease." The law further provides that if a condition is found which *may* transmit, generate or promote disease, that it shall be the duty of the health officer in whose jurisdiction the condition exists to issue an order in writing, commanding that the condition shall be abated and stating a reasonable time for doing the same. If the order is not obeyed, then the whole matter shall be reported to the prosecuting attorney of the district and he shall, without delay, proceed to bring the matter before the court for the enforcement of the law. If the suit is properly brought the court would be requested to issue a mandate, and at the same time, if the person is found guilty of failure to obey the law, the penalty should be prayed for. The penalty is a fine or not more than $100.

The public nuisance law could also be invoked against this condition. This law simply provides that such conditions as described above shall not exist and that upon complaint of officials or citizens the prosecutor shall bring suit for abatement. How to abate a nuisance has repeatedly been presented in the bulletin and the matter is also fully set forth on page 8 of the "Blue Book."

THE LITTLE FLY: Consider now the little fly, whose name is rhymed with "baby-bye." He has his birth in the manure, crawls forth and loiters in the sewer, and, smeared with deadly typhoid germs, he leaves his brother maggot-worms, unfolds his dainty wings of silk and dumps his microbes in the milk, where their huge numbers mount and mount, increasing the bacterial count until they reach the food supply some woman feeds her "baby-bye."

The fly comes gaily to us, his feet all gummed with poison-pus, and singing clear his song so sweet, alights and cleans them on the meat. He gathers scarlet-fever spores and leaves them on the walls and floors; he is not proud, and oft will stoop to carry heavy loads of croup, and place it where its awful death may come and go with baby's breath. Oh, do not call him indolent! He calls that summer day misspent in which he's failed to load the breeze with the live germs of some disease; and if he finds them not, though hurt, he'll be content with just plain dirt.—Exchange.

DEPARTMENT OF WEIGHTS AND MEASURES OF THE STATE BOARD OF HEALTH.

The Legislature of 1911 increased the work of the State Board of Health by making it responsible for the enforcement of the new Weights and Measures Law, enacted at that session and becoming effective January 1, 1912. During the first four months of the operation of the law, the department has been organized and standard weights and measures for the State purchased and installed in the office of the Food and Drug Department. These weights and measures are the first complete standards ever possessed by the State of Indiana. It is true that metric standards supplied the State by the Federal Government, many years ago, have for some time been on view in the State Museum; but these standards have never been used and have, in fact, been curiosities rather than accurate gauges whereby the business of the State might be conducted.

While the new law is in many respects ideal, unfortunately no provision was made for its enforcement save that it was directed that the funds appropriated for the enforcement of the Food and Drug Law should be drawn upon for the purchase of the State's standards, and for other necessary expenses incident to the enforcement of the act. It has been impossible to develop an entirely satisfactory system of weights and measures inspection without funds, but much progress has been made, especially in the way of enlisting the co-operation of city and county sealers who have for some time been enforcing local ordinances, or who have taken office under the provisions of the new act.

John T. Willett, food and drug inspector, during the month of April has given his entire time to enlisting the interest of county and city officials in the appointment of local sealers. While to date but few sealers have been appointed, it is hoped that his work and the work of other sealers which is now gaining publicity will so impress the necessity for a strict enforcement of the Weights and Measures Law upon the officials and the community that appointments will be made in the near future in all of the larger cities and in most of the counties of the State.

At the request of the department, all the sealers now operating in the State, with the exception of the sealer in the city of Indianapolis, have made a report of their work for the month. A tabulation of their results is complete evidence of the necessity for a stringent enforcement of the law.

During the month the inspectors reporting made 6,603 inspections. Eight hundred and two of the instruments inspected were incorrect and were condemned, 174 were adjusted and 43 were condemned until repaired. The tables show the work done by each inspector, and the results of his examination of scales, weights and measures. While it is not contemplated making a monthly report of the work of the sealers of the State, similar reports will be made from time to time when it seems advisable to give publicity to their work.

REPORT OF BACTERIOLOGICAL LABORATORY FOR APRIL, 1912.

J. P. SIMONDS, SUPERINTENDENT.

Sputum for tubercle bacilli, positive 93, negative 369, total 462; throat cultures for diphtheria, positive 29, negative 109, suspicious 32, unsatisfactory 1, total 171; blood for Widals, positive 1, negative 65, total 66; blood for malaria, positive 1, negative 8, total 9; for rabies, dogs' heads, positive 22, negative 11, unsatisfactory 1; cows' heads, positive 5; total heads, positive 27, negative 11, unsatisfactory 1; urine, 37; carcinoma, 7; sarcoma, 2; miscellaneous pathological tissues and Gasserian ganglions, 56; for gonococci, males, positive 9, negative 5; females, positive 10, negative 6; sex not given, positive 4, negative 2; cerebro-spinal fluid, 2; blood smears, 19; pleural fluid, 5; for spirocheta pallida, negative 1; stomach contents, 2; pus from various sources, 12; cultures other than diphtheria, 4; feces, 5; milk, 2. Total, 936.

Outfits sent out: Sputum, 469; diphtheria, 282; Widal, 109; special, 34; malaria, 18; for cultures from stools, 9. Total, 921.

The month of April closes the first six months of the fiscal year. During this time 13,419 specimens of all kinds have been examined. This exceeds by almost 2,000 the largest number of specimens examined in any one previous twelve months.

COST $300: Dr. J. P. Wilson, county health officer of Scott County, reports an instance where a doctor diagnosed a case of diphtheria as "throat disease." We presume he also reported it as "not catching." This false report caused the loss of two lives, 40 homes to be quarantined and cost the county treasury more than $300. It has been said that ignorance is the only sin. What a fearful price Scott County paid on account of ignorance in this instance.

TEN FOR ONE: Dr. W. J. Hoadley, county health commissioner of Hendricks County, in his monthly report for March, says: "In one instance a physician in this county diagnosed a case of smallpox as chickenpox and insisted upon it. Subsequently ten cases of smallpox were traced to this case of 'chickenpox'." It is thus that medical ignorance contributes to the expense and suffering of mankind.

SEALER OF WEIGHTS AND MEASURES.	Scales.					Measures.					Linear Measures.					Weights.					Total.				
	Correct and Sealed.	Adjusted.	Incorrect and Condemned.	Condemned for Repairs.	Total.	Correct and Sealed.	Adjusted.	Incorrect and Condemned.	Condemned for Repairs.	Total.	Correct and Sealed.	Adjusted.	Incorrect and Condemned.	Condemned for Repairs.	Total.	Correct and Sealed.	Adjusted.	Incorrect and Condemned.	Condemned for Repairs.	Total.	Correct and Sealed.	Adjusted.	Incorrect and Condemned.	Condemned for Repairs.	Total.
H. G. Boyd, Converse, Ind.																									
F. H. Cromb, Elkhart, Ind.	124	13	12	12	161	145	17	24	2	188	22	0	0	0	22	147	22	28	0	197	438	52	64	14	568
A. H. McGlasson, Madison, Ind.	32	0	7	1	40	51	0	0	0	51	0	0	0	0	0	19	0	0	0	19	102	0	7	1	110
F. J. O'Rourke, Hammond, Ind.	47	6	0	5	58	68	0	16	0	84	0	0	0	0	0	123	6	0	0	129	238	12	16	5	271
John W. Peters, South Bend, Ind.	11	0	0	0	11	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	17	0	0	0	17
John F. Sullivan, Crawfordsville, Ind.	5	3	0	2	10	2	0	0	0	2	0	0	0	0	0	24	0	0	0	24	31	3	0	2	36
C. B. Tolan, Fort Wayne, Ind.	101	0	37	0	138	60	0	58	4	122	38	0	8	0	46	101	0	31	0	132	300	0	134	4	438
John C. Wallenmeyer, Evansville, Ind.	320	21	2	7	350	0	0	62	0	62	11	1	0	0	12	190	1	0	0	191	521	23	64	7	615
Otis Wessner, Marion, Ind.	92	5	24	2	123	3,217	22	465	0	3,704	5	0	1	0	6	104	29	19	0	152	3,418	56	509	2	3,985
C. S. Williams, Kokomo, Ind.	141	24	2	1	168	59	4	5	0	68	0	0	0	0	0	0	0	0	0	0	200	28	7	1	236
	126	0	1	7	134	129	0	0	0	129	32	0	0	0	32	32	0	0	0	32	319	0	1	7	327
Totals	998	72	85	37	1,193	3,737	43	630	6	4,416	108	1	9	0	118	740	58	78	0	876	5,584	174	802	43	6,603

A HYGIENE EXHIBIT FOR USE IN SCHOOLS.

J. P. SIMONDS, SUPERINTENDENT BACTERIOLOGICAL LABORATORY INDIANA STATE BOARD OF HEALTH.

The teaching of hygiene should include as far as possible the use of such experiments as will illustrate to the pupils the facts which are presented. Few schools are equipped with apparatus for the preparation of specimens for such use. To meet this need the Bacteriological Laboratory of the State Board of Health has arranged to prepare exhibits to be sent to schools for use in the teaching of hygiene. Each exhibit will be prepared to meet the needs of the particular school requesting it. The attempt is made to furnish materials with which the teachers and pupils can make the experiments themselves, rather than to furnish the finished results of such experiments. The following tentative outline has been prepared and is sent with each exhibit.

Directions for Use of Hygienic Exhibit.

The exhibit consists of microscopic slides, on which are stained specimens of various bacteria, and Petri dishes containing culture media for experiments in the class. All the germs sent with the outfit have been killed and the specimens can be handled without danger.

An oil immersion lens is necessary for proper examination of the stained specimens of bacteria.

Slides.

No. 1. *Bacillus of diphtheria.* Note that the rod-shaped organisms stain unevenly. Some are somewhat club-shaped. These germs are the cause of diphtheria.

No. 2. *Bacillus of tuberculosis.* Note the short, thin rod-shaped bodies are stained red, while the other things on the slide are blue. These tiny red rods, often seen lying together in masses, are the germs that cause tuberculosis.

No. 3. *Staphylococci.* These are small round germs that get together in bunches. They are the cause of boils.

No. 4. *Bacillus of typhoid fever.* Note the plump rods. These germs can swim quite rapidly in water or milk. They cause typhoid fever.

Petri Dishes.

BE VERY CAREFUL NOT TO REMOVE THE TOPS FROM THE DISHES EXCEPT AS DIRECTED BELOW. Germs are everywhere and some will get in every time the dish is opened. The experiment will be spoiled if some get in before you are ready.

Experiment No. 1.

Use Dish No. 1. Have some member of the class whose fingers are visibly dirty touch the jelly-like material in the bottom of the dish over the letter D. Lift the cover just enough for him to get his finger inside and close it immediately after he has touched the jelly. He should not press hard enough on the jelly to mash it out of shape.

Have this same member of the class thoroughly wash his hands in clean water, using soap, and dry them on a *clean* towel. Immediately afterward have him touch the jelly in the same dish over the letter C, raising the lid as before. Set this dish aside in a warm place along with the others, to be examined on the following day.

If the experiment has been properly carried out there should be a copious growth of various kinds of germs at the place touched with the dirty finger and little or no growth at the point touched by the clean finger. This shows the necessity of washing our hands before eating. Touching our food with dirty fingers deposits germs on it just as it did in the case of the jelly. Less than one hundred of the three thousand or more known varieties of germs will cause disease. But there is no way of knowing until it is too late, when we have typhoid or diphtheria, or some other disease-producing germs on our fingers along with the numerous harmless ones. To be always safe, see that your hands are really clean before you eat.

Experiment No. 2.

Use dishes Nos. 2 and 3. Set dish No. 2 on a chair in a quiet room (i. e., in one in which there are no currents of air and no persons walking about), and remove the lid for two minutes *by the watch.* Replace the lid and set this dish aside to be put in a warm place till next day along with the others.

Now sweep the floor vigorously without sprinkling it. Immediately after sweeping, set dish No. 3 on the same chair in the same place as dish No. 2 and remove the lid for two minutes *by the watch.*

After these dishes have been kept in a warm place for twenty-four to forty-eight hours, dish No. 2 should show only a few isolated masses of bacteria, while No. 3 will show very many such masses. This experiment shows how germs are scattered by dry sweeping and dry dusting. The germs of tuberculosis in dried sputum may thus be stirred up, float as dust and be taken into our lungs with the air we breathe.

After the dish has been kept in a warm place for twenty-four hours each mass or spot seen on the surface of the jelly is called a colony and represents a family of bacteria. The mother germ of each colony is so small that it must be magnified many hundred times to be seen at all. The colony is visible because it is made up of many millions of individual germs, all descendants of the original mother germ who "settled" on that spot when the lid was off.

Germs multiply very rapidly. A germ will grow to nearly twice its normal length and then split into two. If we start with one germ and it and each of its descendants split into two every half hour, at the end of twelve hours there will be almost 17,000,000 germs in the family. In twenty-four hours there will be so many that it will require fifteen figures to express the number. This is why we can see the masses of germs after they have been allowed to grow on the jelly.

Experiment No 3.

Use dishes Nos. 4 and 5. Remove the medicine dropper from the glass tube and draw up into it some of the drinking water used by the school, being careful not to allow the point of the dropper to touch anything but the water. Carefully allow one drop of water to fall from the dropper on to the middle of the jelly in dish No. 4. Replace the lid and, by tilting the dish, allow the water to run over the surface of the jelly. Set this dish aside with the others.

Now take some of the same water and boil it *and the medicine dropper* for fifteen minutes. Place one drop of this boiled water in the center of the jelly in dish No. 5, and, by tilting the dish, allow it to run over the surface. Set this dish aside in a warm place for twenty-four hours.

Numerous masses of bacteria will be seen in dish No. 4, where the water came in contact with the jelly. Dish No. 5 should show very few masses of germs, or none at all.

This experiment shows that heat kills germs. The housewife, when she cans fruit and vegetables, uses this same principle. Germs cause canned fruit to spoil. When the fruit is boiled for several minutes and then sealed up in jars that have also been boiled, the germs are all killed, and the fruit keeps. Some germs, however, form *spores.* These correspond somewhat to seeds in fruit. They are very hard to kill and must be boiled for a long time, in some cases for an hour, before they are all dead. The presence

of these spores accounts for the occasional spoiling of fruit even when it has been boiled for some time. If there are any masses of germs on dish No. 5, they probably grew from some of these spores which were in the water and were not killed by boiling.

All ordinary drinking water contains germs, as was shown in this experiment. Most of them are quite harmless. But sometimes typhoid germs may get into water and then it becomes very dangerous. This occurs most often when outhouses are built too close to shallow dug wells when the surface drainage or underground seepage may carry these germs, which are discharged in human excrement, into the well. The bacilli of typhoid fever may also get into drinking water when the sewage of one city is discharged into a river from which another city lower down stream gets its supply of drinking water.

Experiment No. 4.

Use dish No. 6. Straighten out the wire and carefully remove the swab from the small glass tube. Rub the cotton end of the swab over the edge of a common drinking cup. Now rub the swab gently over the jelly in dish No. 6 by drawing it across the surface several times. This should be done quickly, so the lid will be kept off for as short a time as possible.

Before sending the swab from the laboratory it was heated in steam under pressure for a long time and had no live germs on it. All those germs which grew on the jelly came from the drinking cup. If a child with diphtheria or tuberculosis drinks from such a cup he is almost sure to deposit some of the germs of these diseases on the edge of the cup and the next person using it may get them into his mouth and get the disease. Hence the danger of the common drinking cup.

Experiment No. 5.

Use dish No. 7. Remove the lid, hold the open dish two feet in front of the face of a member of the class and have him cough strongly. Be sure the open dish is in line with current of air expelled in coughing. Replace the cover and set dish aside for twenty-four hours.

This experiment will show that the fine, invisible spray expelled in coughing contains germs. The spray from a patient with consumption is loaded with the germs of that disease. This spray is light and floats in the air for some time. There is far greater danger of getting tuberculosis by inhaling the spray from such a patient than from breathing dust containing dried sputum from a consumptive.

Experiment No. 6.

Use dish No. 8. It is necessary to send this specimen already prepared. Typhoid germs were sown evenly over the entire surface of the jelly in dish No. 8. Seven black letters, one inch high and spelling the word TYPHOID, were pasted on the bottom of the dish. The dish was then placed, bottom up, in the bright sunshine for three quarters of an hour. Those germs immediately beneath the letters were protected from the sunlight and were not killed. Those in other parts of the dish were practically all killed. The living germs were allowed to grow for twenty-four hours and we have the word Typhoid written with the bacilli themselves. Place the dish, bottom up, on a black background and the results are plainly seen. If the dish had been left in the sunshine for a longer time there would have been no living germs left except under the black letters. Bright sunlight is one of the best germ-killers known. Let as much of it as possible into your home.

THE BENZOATE OF SODA DECISION.

In the District Court of the United States,
for the District of Indiana.

Williams Brothers Company, Curtice Brothers Company, v. Harry E. Barnard, Fred A. Tucker, George T. McCoy, W. M. Wishard, T. Henry Davis, J. N. Hurty.	No. 10,894, Chancery.

REPORT OF THE MASTER IN CHANCERY.

To the Honorable Albert B. Anderson, Judge of said District Court:

The undersigned, Master in Chancery, to whom said report was referred, with direction to take the testimony and report the same, together with his findings of fact and conclusions of law thereon, respectfully reports as follows:

At the time and places designated in notices to the respective parties for the taking of testimony he was present and was attended by the respective solicitors of the complainants and the defendants; that the complainants introduced and read in evidence the depositions of witnesses produced by complainants, the said depositions comprising Volumes 1, 2, 3 and 4 of the bound volumes of the evidence in this case, and being identified by the signature of said Master in Chancery, and are herewith returned and submitted to the court; that the defendants introduced and read in evidence the depositions of witnesses produced by the said defendants, these depositions being Volumes 13 and 14 of the bound volumes of evidence in this case, and being identified by the signature of said Master in Chancery, and are herewith returned and submitted to the court; that witnesses were produced before said Master by both complainants and defendants and gave their testimony; that the testimony of the witnesses so produced was taken down in shorthand by Mr. Rowland Evans, the official stenographer of said court, and the same was by said stenographer written out in longhand and is contained in Volumes 5, 6, 7, 8, 9, 10, 11, 12, 15, 16 and 17, which are identified by the signature of said Master in Chancery, and are herewith returned, together with all the exhibits referred to by said witnesses and by the witnesses whose depositions were taken and submitted to the court.

Upon the pleadings and testimony, the said Master makes and states the following:

FINDINGS OF FACT.

1. The complainant, Williams Brothers Company, is a corporation organized and existing under and by virtue of the laws of the State of Michigan, having its principal office and place of business in the city of Detroit, in the State of Michigan; and the complainant, Curtice Brothers Company, is a corporation organized and existing under and by virtue of the laws of the State of New York, having its principal office and place of business in the city of Rochester, in the State of New York. The defendants are all citizens of the State of Indiana, and residents of said State of Indiana.

2. The said complainants were, respectively, at the time of the filing of the bill of complaint herein, had been for more than twenty (20) years prior thereto, and still are, engaged in the business of preserving, canning and manufacturing tomato and pickle products for the market; said

William Brothers Company has approximately nine hundred thousand ($900,000.00) dollars in money actually invested and employed in its said business; said Curtice Brothers Company has more than one million five hundred thousand ($1,500,000.00) dollars actually invested in its business. For several years prior to the filing of the bill herein, and especially in the year next preceding such filing, the Williams Brothers Company sold forty thousand ($40,000.00) dollars worth of their products containing benzoate of soda in Indiana annually, upon which its profits were ten thousand ($10,000.00) dollars; for several years prior to the filing of the bill herein, and especially in the year next preceding such filing, the Curtice Brothers Company sold approximately twenty-five thousand ($25,000.00) dollars or thirty thousand ($30,000.00) dollars worth of goods in Indiana annually, of which about one-third contained benzoate of soda, upon which benzoated goods its profits were twelve hundred ($1,200) dollars.

3. The defendant, Harry E. Barnard, is chemist to the State Board of Health for the State of Indiana, and by virtue of being chemist to such State Board of Health, he is State Food and Drug Commissioner; the other defendants are all members of the State Board of Health of the State of Indiana.

4. The amount in controversy in this suit is in excess of two thousand ($2,000) dollars, exclusive of interest and costs.

5. Up to about twenty-five years ago, jams, catsups and pickles were manufactured according to household recipes, and the finished products contained fruit juices, tomatoes and immature cucumbers, together with salt, sugar, vinegar and spices, as the case might be, for condimental and preserving purposes. About that time commercial manufacturers began to use benzoate of soda as a preservative in such products. The benzoin radical is found in cranberries, and possibly some other fruits.

For experimental purposes, benzoate of soda for many years prior to the discovery of toluene, a coal tar product, had been derived from animal urine, but the commercial benzoate of soda is derived from toluene by a process which has been available for some ten years. Even if it were desired so to use it, the benzoate of soda from urine is too expensive in its production to permit of its use for commercial purposes, and the only benzoate of soda used for commercial purposes is derived from toluene, as above stated.

Benzoate of soda is colorless, tasteless and odorless when used in limited quantities as a preservative in foods, but it is not a food in itself, and furnishes neither heat nor energy in passing through the alimentary tract. It is frequently administered as a drug and prescribed as a medicine. It is an antiseptic and mild preservative, and, practically speaking, is used as a preservative only in condimental foods; but it is not used in canned or sealed foods which are to be eaten immediately upon the opening of the vessel, jar or can containing the same.

6. As early as 1901, a dispute existed among physicians, physiological chemists and other scientific men as to the harmful or harmless character of benzoate of soda and benzoic acid when used as a preservative in food products in quantities of one-tenth of one per cent., or more. Prior to the enactment of the National Pure Food Law, in June, 1906, the Congressional Committee on Interstate and Foreign Commerce held hearings, at which a number of witnesses testified as to the effect of benzoate of soda when ingested in food products, and there was at that time a difference of opinion as to the harmlessness or harmfulness of such benzoate of soda and benzoic acid when so taken into the human system as a preservative in food in the quantities above named. Continuously since 1901 there has been a diversity of opinion among physicians and other scientists upon this question, and this diversity of opinion still exists, as is evidenced by the conclusions reached upon the metabolic experiments respectively conducted under the direction of Dr. Harvey W. Wiley, then chief of the Bureau of Chemistry of the United States Department of Agriculture, and the members of the so-called "Referee Board," as hereinafter stated.

Dr. Harvey W. Wiley, late chief of the Bureau of Chemistry of the Department of Agriculture of the United States, superintended an investigation of the metabolic effect of benzoate of soda ingested with food, which was taken under a regimen by a number of normally healthy men, ranging from 21 to 50 years of age, and judiciously selected for the purpose of such experiment. Predicating his opinion upon the records of such experiments upon each of such persons, Dr. Wiley announced his belief that benzoate of soda ingested with food, in any quantity, was harmful to the human system.

The above mentioned referee board consisted of five members, appointed in 1908 under the direction of President Roosevelt, and commenced its work after Dr. Wiley's experiments had been ended, and the work was conducted independently of Dr. Wiley and his bureau. Three sets of experiments were conducted respectively at New York, New Haven and Chicago, and upon the data collected from such experiments prominent physiological chemists and other scientists of the United States have predicated the opinion that benzoate of soda, in quantity of one-tenth of one per cent., may be ingested in food without harmful results.

7. By formal stipulation of the parties to this suit, the following facts for the purposes of this suit are to be taken as true, namely:

On the 7th day of July, 1905, the State Board of Health of the State of Indiana passed a rule prohibiting the use in food products of benzoate of soda and benzoic acid, and declaring that products containing such substances were adulterated. On the 15th day of March, 1907, said State Board of Health passed a rule declaring that the presence of any added antiseptic or preservative substances, except common table salt, saltpeter, cane sugar, vinegar, spices, or in smoked foods, the natural products of the smoking process, constituted an adulteration, but permitting, until further notice, the use of one-tenth of one per cent. of soduim benzoate for the preservation of tomato catsup, provided a statement to that effect was printed plainly upon the principal label. On October 8, 1908, said State Board of Health passed a rule permitting the use of sodium benzoate for the packing season of 1908 for preserving tomato catsup. Said rules are the sole and only rules adopted by the said State Board of Health in respect to the use of sodium benzoate. There is no rule of the State Board of Health now in force which permits the use of sodium benzoate or benzoic acid in food products subsequent to the packing season of 1908, and the use of benzoate of soda in said State is prohibited not by rule of said State Board of Health, but by Section 2 of an Act of the General Assembly of the State of Indiana, being Section 7639 Burns' Revised Statutes of Indiana, 1908.

8. By formal stipulation of the parties to this suit, the following facts for the purposes of this suit are to be taken as true, namely:

The defendants, with the exception of Harry E. Barnard, aside from the part they took as members of the State Board of Health in adopting said rules, have never at any time had anything to do with prohibiting the use of benzoate of soda in food products sold by complainants within

the State of Indiana, except as such rules had such effect. The defendant, Barnard, as State Food and Drug Commissioner, has continuously, since March, 1907, had full charge and control of enforcing the rules of said State Board of Health in reference to the use of preservatives in food products in said State, including benzoate of soda, and in the issuing of orders, directions and bulletins in connection therewith. The defendants, with the exception of Harry E. Barnard, have never at any time in any way intimidated or coerced the public generally or the purchasers of complainants' goods from buying or selling complainants' goods, except as the rules adopted by them had such effect, together with an expectation that they would be promulgated and the public notified that a violation thereof would be a misdemeanor. The defendants, with the exception of said Barnard, have never entered into any conspiracy to ruin any part or portion of complainants' business by bringing to bear upon any of complainants' customers in said State intimidating or coercive means, except as permitting said rules to be promulgated, may have had such effect. None of said defendants have ever instituted or commenced any criminal prosecution or civil suit against the complainants within the State of Indiana, or elsewhere, of any kind, and neither of the complainants has ever been prosecuted for the use of benzoate of soda or for any other alleged violation of the Indiana Pure Food Law, being Sections 7638 to 7649, inclusive, of Burns' Revised Statutes of Indiana, 1908.

9. In a number of instances by letters, correspondence and in verbal interviews, the defendant, Barnard, as State Food and Drug Commissioner and chemist to the State Board of Health, has advised dealers, firms, persons and corporations that the use of benzoate of soda as a preservative in food products would be permitted only in tomato catsup, and that only for the summer of 1908, and that the use of benzoate of soda in any other article of food was prohibited under the laws of Indiana; and said Barnard, during the time mentioned, instructed inspectors of the food and drug department of the State Board of Health to so advise dealers, firms and corporations throughout the State of Indiana. The said defendant, Barnard, has advised personally and through his inspectors, many persons throughout the State of Indiana that the handling of benzoate of soda, except tomato catsup, was prohibited by laws and rules of the State Board of Health for the year 1908, and that during the year 1907 the use of benzoate of soda was prohibited in all food products except tomato catsups and sweet pickles in bulk.

10. That said defendant, Barnard, in so advising said persons and dealers, acted in good faith in the bona fide belief that in so doing he was taking steps in the line of his duty in accordance with law, and his course of conduct was without any ill-will or malice to said complainants, or either of them, and without any intention on his part to injure or harm said complainants or their business within the State of Indiana, but with the bona fide belief that he was enforcing a valid and constitutional enactment of the General Assembly of the State of Indiana, and said defendant, Barnard, never, at any time entered into any conspiracy of any kind with any person or persons to intimidate complainants or their customers, or to ruin any part of their business.

11. Properly manufactured tomato catsup is made of the boiled pulp of whole, ripe, sound tomatoes, with added salt, sugar, vinegar and spices which have the effect of preservatives, or condimentals, or both. Prior to the last thirty years these condimentals and preservatives were the only kind of preservatives that were used for preserving the fruit juices, tomato catsups and pickles from fermenting or spoiling. Within the last thirty years the use of benzoate of soda as such preservative in the tomato catsup of commerce began, and thenceforward has continued to this date in different parts of the United States, and for the last twenty years or more, each of the complainants have used benzoate of soda or benzoic acid in the manufacture of tomato catsup and a few other products which they respectively have commercially prepared and put upon the market.

12. While there is a diversity of opinion among scientific men qualified to speak upon the subject, as to the harmfulness and harmlessness of benzoate of soda, when used in limited amount as a food preservative, and ingested by healthy persons ranging in age from 20 to 50 years, and this diversity of opinion varies between an absolute affirmative and an absolute negative, and is impossible of reconciliation under the testimony taken in this case does not establish as a fact that benzoate of soda when used as a food preservative and ingested by children, aged persons, invalids convalescents or persons suffering from chronic disease is harmless even when the quantity of soda so ingested does not exceed one-tenth of one per cent. It can not be said under the testimony in this case that it is yet established as a scientific fact that benzoate of soda used as a preservative in food products in amounts not exceeding one-tenth of one per cent. when ingested by persons in middle life and in normal health is harmless with respect to the health of such persons.

13. The use of benzoic acid and sodium benzoate in food products does not disguise or cover up the color, odor or taste of decomposed, putrid or rotten tomatoes or other food products, but benzoate of soda and benzoic acid are both preservatives, and as used by the complainants and other food manufacturers do delay or retard the growth of yeast, molds and bacteria. The complainants' products are made of the best selected raw material, and they do not contain putrid, rotten or decomposed material. It is impossible to prepare a tomato catsup from skins, cores, refuse, factory waste, and partially or wholly of rotten, putrid and decomposed tomatoes, and with the addition of sodium benzoate to keep this catsup after the same has been opened until it is consumed, and, by the addition of spices, sugar and vinegar the taste of this product will be covered up and concealed that it will be fairly palatable. It is also possible to prepare a tomato catsup made from decomposed and rotten material without the use of benzoate of soda, but with salt, vinegar, sugar and spices, so that the same may be consumed after the pacakage is opened, and it will be a fairly palatable catsup. Benzoate of soda is frequently used by manufacturers other than the complainants in the preparation of catsup made from rotten, decomposed and putrid tomatoes.

14. The body of the tomato is composed of what are called rotten pectins. These pectins are present in large quantities in the pulp of the tomato, and in small quantities in the skins, cores and peelings. In order to prepare a catsup commercially without the use of benzoate of soda, there must be a heavier body to the catsup, and in order to obtain this body the skins and refuse, if used, must be run through a sieve; and this process makes it impracticable from a financial standpoint to prepare, without the use of benzoate of soda, such a catsup from putrid, rotten and decomposed tomatoes, or from factory waste, skins, cores and peelings. Where factory waste, refuse, cores, skins and peelings of rotten and decomposed tomatoes are used in the preparation of tomato catsup, not being run through a sieve, they produce a thin, watery catsup, and such catsup can not be prepared so that it will keep after opening without the use of benzoate of soda, benzoic acid or similar pre-

servative. The use of benzoate of soda in such catsup delays and retards fermentation, and such non-fermenting products are calculated to deceive the public as to the actual ingredients of which the product is made, and to cause the public to believe that the product is made of pulp of fruit instead of cores, skins and peelings.

15. There is no scientific or financial reason for the use of benzoate of soda or benzoic acid in pickles, jams, jellies or fruit butters, and each and all of said products can be prepared without the use of benzoate of soda or benzoic acid and kept after opening until consumed without spoilage or loss from fermentation. Said pickles, jams, jellies and fruit butters can be so prepared and kept after opening until consumed without the addition of any other ingredient and without the change in quality of the ingredients that are used in said products when benzoate of soda is also used and without the addition of anything that is not essential to the manufacture of said products.

16. In the sense and to the degree stated in the foregoing findings, benzoate of soda when used in food products of inferior quality is approximately efficient in concealing the inferiority of such food products.

17. Neither of the complainants has ever sold, shipped or used in any way skins, cores or peelings, or inferior or rotten fruit, and in so far as either of the complainants has used sodium benzoate, it has not at any time so used sodium benzoate directly or indirectly for the purpose of preserving or concealing fruit products containing skins, cores or peelings, or inferior or rotten fruit.

18. The natural fruit flavor of the catsups of each of the complainants makes these goods popular with the purchasing public, and this popularity is a valuable financial element in the good-will of each of the complainants in its manufactured catsups. Each of the complainants states the fact to be that this natural fruit flavor can not be obtained by it in its manufactured catsups without the use of sodium benzoate or some other tasteless preservative. Competitors of the complainants claim that they can and do obtain and keep the natural fruit flavor of their manufactured catsups without the use of benzoate of soda or other tasteless preservative. The testimony does not show, as a scientific fact, the basis of the claim of the complainants that they can not obtain and keep the natural fruit flavor of manufactured catsups without the use of benzoate of soda or some other tasteless preservative. The testimony does not show that manufacturers of catsups who ceased the use of sodium benzoate, after they had so ceased increased the sugar and vinegar content of their catsup.

19. Each of the complainants in its manufacture of catsup used vinegar which, expressed as acetic acid, ran from sixteen one hundredths of one per cent. to three-tenths of one per cent. This quantity of vinegar, without an added preservative, would make a total average acidity of about eighty-five hundredths of one per cent. of their catsup, and this average acidity is insufficient to keep such catsup from spoiling after it has been opened and exposed to the air without such additional preservative.

20. Until a recent date the method of ascertaining the sodium benzoate contained in food products was not approximately exact, and the delicacy of the process made it very difficult practically to ascertain the sodium benzoate content with reasonable accuracy. Each of the complainants labeled its catsups as containing one-tenth of one per cent. of sodium benzoate, and each of the complainants in so labeling its catsups acted in good faith, believing that such statement was truthful.

Upon the foregoing findings of fact, said Master makes and states the following:

CONCLUSIONS OF LAW.

I.

Inasmuch as it is stated in the above findings of fact, in effect, that it is a fact that benzoate of soda when used in foods, in limited quantity, is so used as a preservative substance, and that it is not an accepted fact in the scientific world that benzoate of soda, even in limited quantities and when ingested in the foods of human beings, is harmless, the State of Indiana has the power to enact a law forbidding the use in any quantity of benzoate of soda in food products, even though the State of Indiana in such legislation by express language permits the use in food products of other harmless added ingredients.

II.

The Act of the General Assembly of the State of Indiana, approved March 4, 1907, being Chapter 104 of the Acts of 1907, entitled "An Act forbidding the manufacture, sale or offering for sale of any adulterated or misbranded foods or drugs, defining foods and drugs, stating wherein adulteration and misbranding of foods and drugs consist, and defining the duties of the State Board of Health in relation to food and drugs, their inspection, purity and misbranding, regulating the slaughter of animals and their preparation for food, providing an appropriation for enforcement, providing for the appointment of a State food and drug commissioner, declaring penalties for the violation of the laws, rules and ordinances concerning food and drugs, repealing acts in conflict therewith, and declaring an emergency,"

(a) is not, nor is either of its sections, violative of any provision of the Constitutiton of the State of Indiana;

(b) the said Act is not, nor is either of its sections, violative of any provision of the Constitution of the United States or its amendments;

(c) but the said act is, in all of its parts, constitutional under both the State and National Constitutions.

III.

The equities of the case are not with the complainants, or either of them, and the bill should be dismissed at complainants' costs.

Respectfully submitted,

.....,
Master in Chancery.

MARRIAGE AND DISEASE: Unfortunately, marriage does not always prove that "asylum pure and chaste," into which diseases of vice can not enter. On the contrary, thousands of pure young women find in this relation, legitimatized by the State and sanctioned by the church, as honorable and virtuous, not a safeguard against syphilitic and gonorrheal infections, but a snare for their entrapment. The matrimonial vow is a chain which binds and fetters a woman completely, making her the passive recipient of the germs of any sexual disease her husband may harbor. On her wedding night she may, and often does, receive unsuspectingly the poison of a disease which may seriously affect her health and kill her children; or by extinguishing her capacity for conception, may sweep away all the most cherished hopes and aspirations of married life. She is an innocent in every sense of the word. She is incapable of foreseeing, powerless to prevent this injury. She often pays with her life for her blind confidence in the man who, ignorantly or carelessly, passes over to her a disease he has received from a prostitute.

DR. PRINCE A. MORROW.

NARCOTIC EFFECTS OF TOBACCO: A farmer's wife in Indiana writes us as follows: "I earnestly hope that you will find it possible to explain to the public the narcotic effects of tobacco. If you had ever lived in the country, as I do, you would know the average farmer is simply a sponge to soak up unlimited quantities of tobacco. His teeth are colored with it, the corners of his mouth are stained with it, his clothes are saturated with it, he can hardly speak without a preliminary spell of expectorating. The aspect of the usual tobacco user is disgusting. That the excessive use of tobacco dulls the perceptions and interferes with clear mental efficiency, I firmly believe. I know from my own observation that it lowers both mental and physical efficiency. It also lowers the powers of resistance. Tobacco users are more liable to disease. I believe there is some connection between tobacco using and pneumonia. Men have pneumonia more frequently than women and I have learned that more men die from the disease than women. I am convinced that an investigation would discover that tobacco and pneumonia are closely connected. I know that death certificates show various diseases as the immediate cause of death, but I believe if the truth could be known that in many instances early death need not have occurred if the system of the deceased had not been loaded to the guards with tobacco poison. After forty years' experience as a farmer's wife, I firmly believe that incalculable harm to race efficiency is the price paid to indulgence in tobacco. The raising of tobacco exhausts the soil, but the tobacco itself exhausts the human race. I see the scientists agree that poisons such as tobacco, alcohol, black coffee, chloral, morphine, etc., have no effect whatever upon the life germ, and I hope this is true; but I do know that those who use these drugs do not beget strong, healthy children as a rule."

* * *

LIGONIER HIGH SCHOOL BUILDING: Dr. John W. Morr, county health commissioner of Noble County, has inspected the new high school building at Ligonier, and says: "The heating and ventilating system is the best I have ever seen in a public school building. It complies fully with the statutes. Each room is lighted from one side only, and the glass area is, in every instance, in excess of what the law requires. The plumbing is first-class and works perfectly. The water closets drain into a stream, and this is wrong." The sewage should flow into a septic tank, where it would be destroyed, and from the septic tank into the stream. The Board of Education of Ligonier is to be commended and will certainly have the everlasting thanks of all parents sending their children to this school.

The State Board of Health wishes to join Dr. Morr in the congratulations he offers to the people of Ligonier.

* * *

THE MILK DEALERS OF SOUTH BEND have formed an association and entered into an agreement to work together for the betterment from a sanitary standpoint of the dairies and milk depots in and about the city of South Bend. In their organization they agree to encourage the enforcement of the pure food and sanitary laws of the State and the ordinance of their city, and to encourage the use of such approved methods in handling milk as will guarantee a clean and wholesome milk supply for South Bend. This is a most commendable movement. The value of a wholesome milk supply to the public health of a city can not be overestimated and the dairymen and milk dealers of South Bend by thus taking the initiative in this important matter, have shown a public spirit worthy of emulation by all dairymen and milk dealers throughout the State.

WHAT CAN BE DONE in an instance of this kind? Miss Gertrude McCleery, General Secretary of the Associated Charities at Anderson, writes us as follows: "Jerry Dowden is about 39 years old. Last March he developed tuberculosis. He was urged to have his sputum examined and to sleep in a well-ventilated room by himself. He was also advised to go to the State institution at Rockville if he could be admitted. He refused to do any of these things. His wife has a fever temperature all the time. She has a cough and looks worse than her husband. The baby, born February 25, 1911, has never been strong. The mother is still nursing it. The oldest girl, Margaret, aged 12 years, has needed an operation for about a year. She has a running ear, and a mastoid operation has been recommended. The parents will not permit the operation to be performed although our society could have it done without charge. This family is absolutely destitute. A small fraternity lodge helps them some and also the trustee gives help. The associated charities has also given help. The father's people are poor and have big families, and they also have poor health. The mother's people have nothing. Probably the children are all infected at this time with tuberculosis. If not, they soon will be. They are ignorant, careless and afraid. However, they are not afraid of taking tuberculosis. The father states he has a contempt for doctors." Would a wise and scientifically administered government permit such conditions as these to exist?

* * *

BAD FOR TIPTON COUNTY: "A man having mild smallpox came from Marion to visit an uncle near Sharpsville in Tipton County. He attended religious meeting every night during revival services, sitting on a front seat. He seemed much interested and was very religious, but nevertheless the infection of the disease with which he was affected was spread to others. From this case we have had 25 cases of smallpox, of greater or less severity." Here again we have an illustration of the necessity why every one should be vaccinated. The infection of smallpox will spread even in a church and even when prayers are being said. However, it will not spread under such circumstances if all the worshipers are successfully vaccinated.

* * *

GARY TO THE FRONT: Dr. W. S. Faulds, city health officer at Gary, has secured an appropriation of $2,500 for the employment of a city chemist and bacteriologist. The laboratory is already equipped and there is also an appropriation of $500 from the local Y. M. C. A. to apply to public health work. This last appropriation seems most extraordinary, but we congratulate the Y. M. C. A. people because they seem to understand that the first step is to make a healthy, well man, and, second, to cultivate his religious nature. We most heartily congratulate the citizens of Gary and their officials upon this wise and economic action.

* * *

SOCIAL DISEASES have most important relations with the family. They are distinctly antagonistic to all that the family stands for as a social institution; they are destructive to its health, its productivity and social efficiency. They occasion an enormous sacrifice of potential wealth from the loss of citizens to the State. Moreover, they distill a double poison, they poison not only the health, but the peace, honor and happiness of the family. Their prevention is one of the most pressing problems that confronts us at the present day.

DR. PRINCE A. MORROW.

ABOUT HOUSES: The Country Contributor, whose bright and illuminating letters are printed every Saturday in the Indianapolis News, has this to say about houses:

"Most houses are a crime against health and beauty. The city woman sits mewed up in a stifling room, cluttered with useless ornaments and hothouse flowers, which do not mean a thing in the world. There isn't a breath of real nature about them. She does things all day long that mean nothing. The insincerity of a city tea is something so nauseating—well, it's a pity the poor things have to do it.

"The country woman humps over the handful of fire in the dining-room (they live in the dining-room to save fuel), and stares at the hideous wallpaper which they bought cheap, and which she, poor soul, struggling with her fate, which she doesn't know any better than to allow to be dingy, thought perhaps would be 'cheerful,' but which is only nerve-racking and injurious to the immortal soul. We are horribly house-bound creatures—women. Many women on farms will open the door just wide enough to poke their noses out when you knock, and shiver when the fresh air touches them. This is because their systems are full of the poisons of rebreathed air. Poison in the system always causes chills. The way for those women to get really warm would be to throw open every door and window in their houses, put on their wraps and go for a tramp over the fields, even though the snow lay thick upon hill and vale."

DECLINED THE ADVERTISING: The North American of Philadelphia recently declined to receive the advertisement of an Indiana quack medical firm. The advertising manager wrote to the State Board of Health, requesting information concerning said quack firm. It got full information, which was convincing, and so this great paper refused to stultify itself by presenting to the people a medicine which is undoubtedly a mighty humbug.

We learned that the North American was probably the first paper in the country to take such a pronounced stand against publishing advertisements which would mislead the people, or which in any way represented humbuggery.

* * *

If you have prevented one case of ophthalmia neonatorum from destroying the sight of one infant, your contribution to the sum total of human happiness is greater than the accomplishments of all the politicians in your State since that State has been admitted into the Union.—The Lancet-Clinic.

* * *

"ALL POISONS": All of our so-called curative agents (drugs) are poisons and, as a consequence, every one diminishes the vitality of those who take them.—Prof. Alonzo Clark, M. D., New York College of Physicians and Surgeons.

BIRTHS, MONTH OF APRIL, 1912.

COUNTIES.	White.		Colored.		Stillbirths Excluded.		Total.	Rate Per 1000.
	M.	F.	M.	F.	W.	Col.		
Adams	17	12					29	16.1
Allen	65	65			3		130	16.6
Bartholomew	24	17					41	20.0
Benton	12	12					24	23.0
Blackford	7	19					26	19.9
Boone	18	19					37	18.2
Brown	7	4					11	16.6
Carroll	16	5					21	14.2
Cass	26	27			1		53	17.5
Clark	14	18			1		32	12.8
Clay	38	23			7		61	22.7
Clinton	21	21					42	19.0
Crawford	9	4					13	13.1
Daviess	25	22			1		47	20.6
Dearborn	14	14		1	2		29	16.4
Decatur	11	16					27	17.4
Dekalb	18	16			2		34	16.4
Delaware	32	32	4		2		68	15.9
Dubois	16	22			1		38	23.3
Elkhart	45	32			4		77	18.9
Fayette	7	9			1		16	13.4
Floyd	31	18	1		4		50	20.1
Fountain	25	17			2		42	24.9
Franklin	6	6					12	9.5
Fulton	14	10			1		24	17.3
Gibson	23	15			3		38	15.3
Grant	34	24			3		58	13.6
Greene	26	44					70	22.6
Hamilton	16	22					38	17.1
Hancock	11	16			1		27	17.3
Harrison	8	11					19	11.4
Hendricks	19	20			2		39	22.8
Henry	19	17		1	2		37	14.8
Howard	20	18					38	13.6
Huntington	18	27			1		45	18.8
Jackson	31	18					49	24.1
Jasper	9	8					17	15.8
Jay	24	26			3		50	24.4
Jefferson	13	19			2		32	19.0
Jennings	12	10			1		22	18.8
Johnson	21	15		1	1		37	22.0
Knox	39	35			5		74	22.6
Kosciusko	23	24			1		47	20.4
Lagrange	19	14			2		33	26.5
Lake	62	63			3		125	17.3
Laporte	37	39			1		76	19.9
Lawrence	32	29			1		61	23.0
Madison	31	51	1	1	2		84	15.6
Marion	70	86	7	1	6	1	164	7.4
Marshall	14	22			3		36	18.1
Martin	13	12			1		25	23.4
Miami	23	13					36	14.8
Monroe	21	29			2		50	25.7
Montgomery	13	21			2		34	14.0
Morgan	14	17			1		31	17.7
Newton	6	3					9	10.4
Noble	20	19			3		39	19.6
Ohio	2	3					5	14.0
Orange	12	21	1				34	24.0
Owen	10	9					19	16.4
Parke	6	8			1		15	8.2
Perry	11	18			1		29	19.4
Pike	12	18					30	18.6
Porter	16	12			3		28	16.5
Posey	28	17					45	25.2
Pulaski	10	9					19	17.4
Putnam	16	12		1	1		29	17.2
Randolph	24	17			4		41	17.1
Ripley	13	14					27	16.8
Rush	17	19			1		36	22.6
Scott	9	1			1		10	14.6
Shelby	15	31			2		46	20.7
Spencer	17	21					38	22.3
Starke	6	13			1		19	21.8
Steuben	12	15					27	23.0
St. Joseph	47	36			4		83	11.6
Sullivan	32	17			1		49	18.0
Switzerland	4	6			1		10	12.3
Tippecanoe	34	24		1			59	17.8
Tipton	7	6			1		13	9.0
Union	4	9	1				14	27.1
Vanderburgh	47	50	1	4	3	1	102	15.8
Vermillion	8	10					18	11.4
Vigo	50	44	2	1	6		97	12.9
Wabash	16	23					39	17.6
Warren	9	10			1		19	21.2
Warrick	29	14		1			44	24.3
Washington	17	15					32	22.3
Wayne	22	24		4	1		50	13.7
Wells	9	16					25	13.5
White	13	18			3		31	21.4
Whitley	17	6					23	16.5

Total Births	3,729
Total Male Births	1,879
Total Female Births	1,850
Total White Male Births	1,861
Total White Female Births	1,833
Total Colored Births	35
Total Colored Male Births	18
Total Colored Female Births	17

(Stillbirths Excluded.)

Stillbirths	122
White Stillbirths	120
Colored Stillbirths	2

	Population.	Number.	Rate.
State	2,700,876	3,729	16.6
Northern Counties	927,229	1,321	17.1
Central Counties	1,114,087	1,354	14.6
Southern Counties	659,560	1,056	19.3

Highest rate—Union 27.1
Lowest rate—Marion 7.4

CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM CERTAIN COMMUNICABLE DISEASES FOR APRIL, 1912.

NORTHERN SANITARY SECTION.

Total population	939,532
Total deaths	1,088
Death rate per 1,000	14.1
Pulmonary Tuberculosis, rate per 100,000	100.0
Typhoid, rate per 100,000	27.2
Diphtheria, rate per 100,000	5.1
Scarlet fever, rate per 100,000	3.8
Diarrheal diseases, rate per 100,000	31.1

CENTRAL SANITARY SECTION.

Total population	1,127,217
Total deaths	1,355
Death rate per 1,000	16.6
Pulmonary Tuberculosis, rate per 100,000	152.7
Typhoid, rate per 100,000	5.4
Diphtheria, rate per 100,000	4.3
Scarlet fever, rate per 100,000	6.4
Diarrheal diseases, rate per 100,000	15.1

SOUTHERN SANITARY SECTION.

Total population	663,757
Total deaths	674
Death rate per 1,000	12.3
Pulmonary Tuberculosis, rate per 100,000	161.7
Typhoid, rate per 100,000	9.1
Diphtheria, rate per 100,000	11.0
Scarlet fever, rate per 100,000	5.5
Diarrheal diseases, rate per 100,000	12.8

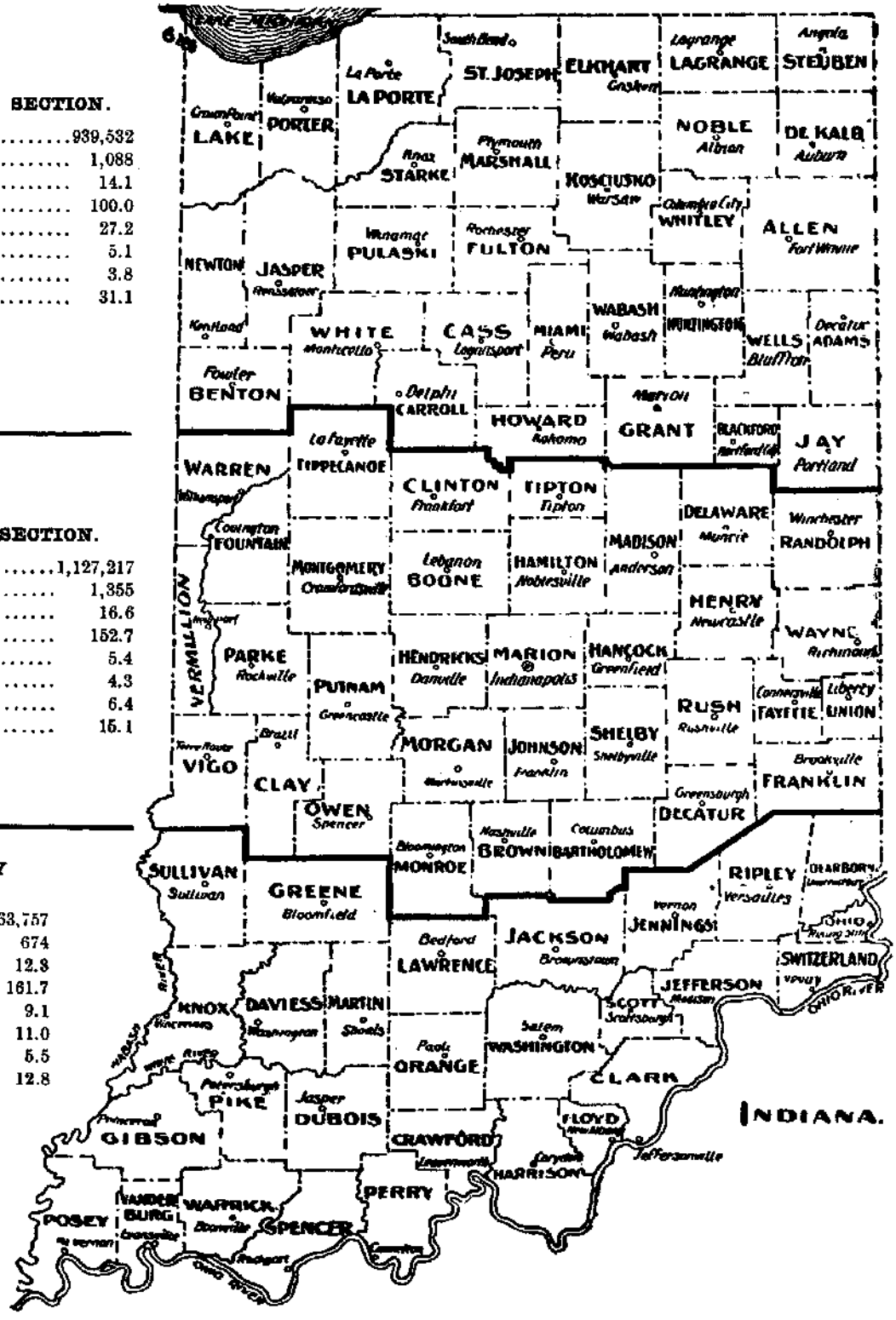

TABLE I. Deaths in Indiana by Counties During the Month of April, 1912. (Stillbirths excluded.)

STATE AND COUNTIES.	Population, Estimated, 1912.	Total Deaths Reported for April, 1912.	Total Deaths Reported for March, 1912.	Total Deaths Reported for April, 1911.	Total Deaths for 1912 to Date.	Total Deaths Reported for Year 1911 to Same Date.	Annual Death Rate Per 1,000 Population. April, 1912.	March, 1912.	April, 1911.	Rate for Year 1912 to Date.	Rate for Year 1911 to Same Date.	Important Ages. Under 1 Year.	1 to 4 inclusive.	5 to 9 inclusive.	10 to 14 inclusive.	15 to 19 inclusive.	65 Years and Over.	Deaths from Important Causes. Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Lobar and Bronchopneumonia.	Diarrhea and Enteritis (under 2 years).	Cerebro-Spinal Fever.	Acute Anterior Poliomyelitis.	Influenza.	Puerperal Septicemia.	Cancer.	External Causes.	Smallpox.	Deaths in Institutions.
State of Indiana	2,730,506	3,117	3,375	3,054	12,662	12,360	13.8	14.5	13.7	13.9	13.9	248	153	60	55	77	1,028	306	70	31	14	12	17	26	359	45	1	1	85	28	174	200	2	260
Northern Counties	930,532	1,088	1,114	1,005	4,248	4,003	14.1	14.5	13.2	13.6	13.1	114	54	19	20	31	358	77	20	21	4	3	1	5	135	24		1	18	7	60	75	1	94
Adams	21,872	22	18	16	78	61	12.2	9.7	8.9	10.7	8.4		1		1		8								4					1	2	3		
Allen	95,267	81	120	85	405	377	10.3	14.7	11.1	12.8	12.2	12	3	1	2	4	19	7	1	2				1	10	1			3		6	6		20
Benton	12,688	7	8	8	35	49	6.7	7.4	7.6	8.3	11.7		1			1	3								2							1		
Blackford	15,895	9	13	18	47	73	6.9	9.6	13.8	9.3	14.0			1			1	2														3		
Carroll	17,972	20	17	15	62	62	13.5	11.1	10.1	10.4	10.4		2		1		11			1					3						2			
Cass	36,652	69	60	43	235	195	22.9	19.3	14.4	19.3	16.3	4	2	2		2	23	1		5		2			4				2	1	2	9		10
Dekalb	25,129	25	25	19	111	91	12.1	11.7	9.2	13.3	11.0				1		10	3	2						1				1		2	1		
Elkhart	41,487	57	47	63	194	235	14.0	11.1	15.4	11.6	14.5	5	2	1	4	1	25	6		1					3	1			2		6	3		3
Fulton	16,879	16	24	12	79	67	11.5	16.7	8.6	14.1	12.0				2		4		1							1				1	1	1		
Grant	51,628	72	97	63	295	255	16.9	22.1	14.9	17.2	15.0		3			2	34	9	1	1	2				7						5	3		17
Howard	33,817	50	31	29	152	129	18.0	10.6	10.6	13.5	11.8	7	4	2	1	1	10	4		1	1				7	1			1	1	3	4		2
Huntington	29,000	35	24	28	123	118	14.6	9.7	11.7	12.7	12.2	6	2	1		2	11		3						6				3		3	2		
Jasper	13,037	8	17	9	44	39	7.4	15.3	8.4	10.1	9.0				1		2								1						1	2		
Jay	24,994	33	27	39	115	122	16.1	12.7	19.0	13.9	14.7			2		1	15	4			1				4	1						1		
Kosciusko	27,980	30	28	32	120	125	13.0	11.8	13.9	12.9	13.5					2	13		2						5							2		
Lagrange	15,148	10	22	19	70	77	8.6	17.1	15.3	13.9	15.4						5												1		1	1		
Lake	87,331	138	109	108	462	383	19.1	14.7	15.9	15.9	14.0	41	14	1	1	4	23	8	3	5				2	23	14			2		6	9		24
Laporte	46,555	60	68	58	246	233	15.7	17.2	15.4	15.9	15.4	13	2	2		2	18	3	2						12	2		1				3		2
Marshall	24,193	23	34	32	110	111	11.5	16.5	16.1	13.7	13.8			1			9	4													2	2		
Miami	29,594	38	30	23	120	134	15.6	11.9	10.8	12.2	13.8	5	3	2	2	1	11	3	3	2				1	4				1		2	1		1
Newton	10,509	8	6	14	34	35	9.2	6.7	16.2	9.7	10.1						3	2							1									
Noble	24,171	34	29	15	116	83	17.1	14.1	7.6	14.5	10.4			1		1	19	2							2						2	3		
Porter	20,610	27	17	28	87	61	15.9	9.7	16.6	12.7	9.0		2				13	3					1		4						1	2		
Pulaski	13,312	14	14	14	57	47	12.8	12.4	12.8	12.9	10.7					1	5	1	1						1						2			
Starke	10,580	11	18	17	49	55	12.6	19.0	19.6	13.9	15.7		1				3	1							2	1						2		
Steuben	14,320	16	18	16	75	59	13.6	14.8	13.6	15.8	12.5		1				5	2							1				1		1			
St. Joseph	86,555	111	95	104	412	384	15.5	12.8	15.0	14.3	13.8	21	9	1		4	30	8	1	2		1		1	18	2			1	1	10	6	1	15
Wabash	26,932	17	31	30	100	111	7.7	13.5	13.5	11.2	12.4				1	1	6	1							2				1	1		2		
Wells	22,468	20	19	15	70	75	10.8	9.9	8.1	9.3	10.1		1			1	8	1							4					1				
White	17,608	10	31	19	70	73	6.9	20.7	13.1	11.9	12.5			1			7	1							1							2		
Whitley	16,939	17	17	11	75	60	12.2	11.8	7.9	13.3	10.8		2		1		4	1							3							1		
Central Counties	1,127,217	1,355	1,492	1,253	5,514	5,290	16.6	15.6	13.7	14.7	14.4	118	60	24	20	25	466	141	30	5	4	6	15	8	150	14			25	17	80	85	1	138
Bartholomew	24,881	30	36	28	114	114	14.7	17.0	13.7	13.7	13.9					1	16	2						1	1	1			1		3		1	
Boone	24,773	30	15	18	108	96	14.7	7.1	8.9	13.1	11.8		1	1	2	1	12	4					1		2					1	1	1		
Brown	7,975	5	8	10	30	16	7.6	11.8	15.2	11.3	6.8				1		3								1						2			
Clay	32,712	39	36	29	145	134	14.5	12.9	10.8	13.3	12.5	8		1	2	2	12	3					3	2	4					1	1	2		
Clinton	26,827	34	27	28	102	113	15.4	11.8	12.8	11.4	12.8		3	2	2		8	1		1			3		5				1		4	1		
Decatur	18,831	18	28	24	104	88	11.0	17.5	15.5	16.6	14.0						9	2							1				1		2			
Delaware	51,720	62	61	47	233	208	14.5	13.9	11.1	13.6	12.2	9	1	1	1	1	20	8	2	1				1	2				1		4	7		1
Fayette	14,507	25	12	18	63	75	21.0	9.7	15.2	13.1	15.8			1			7	2							4						1			
Fountain	20,483	26	23	19	99	90	15.4	13.2	11.3	14.5	14.2	1			2		11	5							1	1			1		3	1		
Franklin	15,335	19	20	14	78	79	15.1	15.4	11.1	15.3	15.6		1		1	1	9	3	3							1					1	2		
Hamilton	27,054	37	33	30	128	130	16.6	14.3	13.5	14.2	15.2		2	1	1		13	2	1				1		3	2			2	1	3	3		
Hancock	19,030	24	20	24	97	96	15.3	12.4	15.3	15.4	15.2		2				11	1	1						4				1			2		
Hendricks	20,840	20	21	16	87	68	14.0	11.8	9.3	12.6	9.8		1	1		1	9	3					1		2						2	2		
Henry	30,362	26	39	26	121	131	10.4	15.1	10.6	12.0	13.3	3	2		1	2	10	1							4	1			2		4	2		2
Johnson	20,443	17	24	16	84	87	11.9	13.8	9.5	12.4	12.9	9					1	2							4				1		2			
Madison	65,454	71	63	77	250	311	13.2	11.3	14.4	11.5	14.4	15	5			1	18	11	2			1			10				3	2	6	3		1
Marion	270,261	338	397	304	1,447	1,396	15.2	17.3	16.8	16.2	16.0	35	23	2	1	7	99	37	8		3	3	3		38	2			3	6	19	19		81
Monroe	23,631	34	41	15	128	102	17.5	20.4	7.8	16.2	13.1		5	1	1		8	5	1		1				6				1			4		
Montgomery	29,368	29	36	24	139	131	11.9	14.3	9.9	14.1	13.4	2	1			1	12	4	1						2				2	1	1	2		
Morgan	21,254	21	38	19	107	102	12.0	21.0	10.9	15.1	14.5			1	1		9	1							5	1			1		2	2		
Owen	14,053	15	11	18	56	59	13.0	9.2	15.6	12.0	12.7		1	1			5								2						1	3		
Parke	22,214	24	49	20	107	99	13.1	26.0	10.9	14.5	13.4			1			9	5	1						7						3	1		
Putnam	20,532	20	19	15	76	102	11.8	10.9	8.9	11.1	15.0		1				8	1	1						1					1	1	2		
Randolph	29,117	36	32	36	131	123	15.0	12.9	15.1	13.4	12.7		2	1	1	1	15	3	3	2				1	3	1				2	1	2		
Rush	19,387	28	27	17	116	77	17.6	16.4	10.7	18.0	12.0		2		1		13	5		1		1			4				1		1			
Shelby	27,035	33	43	27	136	116	14.8	18.7	12.2	15.2	13.1	9	1				12	5	1						3				1		1	1		
Tippecanoe	40,259	66	73	62	252	234	19.9	21.3	18.8	18.9	17.7	2	1	4	1	1	31	9	1				1		3				1		1	8		25
Tipton	17,490	19	14	15	66	71	13.2	9.4	10.4	11.4	12.2				1		8	1				1							1			2		
Union	6,260	3	7	5	30	30	5.8	13.1	9.7	14.4	14.5						2															1		
Vermillion	19,226	27	40	28	115	107	17.1	24.5	16.1	18.0	17.2		1	3	2	1	7	2							5	2					2	3		
Vigo	90,519	117	118	113	495	453	15.6	15.3	15.6	16.5	15.6	18	7	2	2	4	34	10	2				2	2	14	2				1	4	6		14
Warren	10,899	10	12	10	48	46	11.2	12.9	11.1	13.2	12.8		1				3								2						2			
Wayne	44,235	52	70	56	229	216	14.3	18.6	15.6	15.6	15.0	7	3				22	3	2					1	7					1	2	3		14
Southern Counties	663,757	674	769	796	2,900	3,158	12.3	13.6	14.7	13.1	14.5	16	31	17	5	21	204	88	20	5	6	3	1	13	74	7	1		21	4	34	40		28
Clark	30,260	26	41	47	133	148	10.4	15.9	18.9	13.2	14.8	1		2	1		10	5	1												1	2		1
Crawford	12,057	16	13	14	56	50	16.1	12.7	14.1	14.6	12.6			1	1	1	3	4							2				1					
Daviess	27,747	30	37	32	120	108	13.1	15.7	14.6	13.6	11.7		1			1	8	5				1			6				1		1			
Dearborn	21,472	19	34	31	101	115	10.7	18.6	17.6	14.1	16.3						8	1							2						4	2		
Dubois	19,843	17	11	24	63	85	10.4	6.5	14.7	9.5	13.0		1				6	3							2	2					1			
Floyd	30,310	40	43	37	160	149	16.0	16.7	14.9	15.9	14.9	3	1			3	10	10			1			2	2				1	1	2	5		1
Gibson	30,177	28	32	21	125	105	11.2	12.5	8.5	12.8	10.6		2			1	9	4	2					1	1				1			2		
Greene	37,707	41	37	36	164	126	13.2	11.7	11.9	13.1	10.3		2	3			9	7	2			1		1	10				1		3	2		
Harrison	20,232	19	17	16	65	52	11.4	9.9	9.6	9.6	7.8			1	1	1	3	6	1		1	1			1				3		1			
Jackson	24,727	24	26	25	108	96	11.8	12.4	12.2	13.1	11.8			1		1	7	2	1					2	3						3	1		
Jefferson	20,483	30	32	35	115	113	17.8	18.4	20.8	16.9	16.7					1	9	2	1					1	1				1		1	3		3
Jennings	14,212	11	13	12	50	65	9.4	10.7	10.3	10.6	13.9						6		1						2				1		2			
Knox	39,816	36	37	49	160	163	11.0	10.9	15.2	12.1	12.6		6	1			7	2			1			1	5	3			1	1		2		
Lawrence	31,114	29	34	47	126	159	11.3	12.8	18.7	12.2	15.7		1	1		2	7	5	2				1		3				1		2	2		
Martin	13,027	10	17	6	54	47	9.3	15.4	5.6	12.5	10.9		1				1	2							2						1			
Ohio	4,329	7	2	7	25	23	19.6	5.4	19.7	17.4	16.1						4								2									
Orange	17,225	9	18	28	69	78	6.3	12.3	20.3	12.0	13.7				2		5	2			1													
Perry	18,146	20	30	19	93	95	13.4	19.5	12.8	15.4	16.1					1	10	3							2				1			1		
Pike	19,684	26	30	26	96	94	16.1	17.0	16.1	14.6	14.4		5	1	1	1	10	1	1		1			3	1	1	1		2			3		
Posey	21,713	21	16	19	82	85	11.8	8.6	10.6	11.3	12.2		2				7	2	1		1			1					1		2	2		
Ripley	19,528	29	17	21	75	85	18.0	10.2	13.1	11.6	13.7		1	1		3	12	3							4						2	4		
Scott	8,324	7	9	7	38	45	10.2	12.6	10.2	13.7	16.4		1				5								1									
Spencer	20,676	20	28	27	98	94	11.7	15.9	15.9	14.3	13.5							5	1						2				2			1		
Sullivan	33,082	37	29	30	120	129	13.6	10.3	11.2	10.9	12.0		2	1	1	1	11	5	3						4					2	1	1		
Switzerland	9,914	9	13	12	45	49	11.0	15.4	14.7	13.7	14.9						6								1						1	1		
Vanderburgh	78,502	78	108	114	407	488	12.0	16.2	17.9	15.6	19.1	12	3	3	1	4	17	7	3	4					10	1			1		4	4		23
Warrick	22,005	14	26	36	81	93	17.7	13.9	20.0	11.0	12.8		2	1	1		2	2							1				1			1		
Washington	17,445	21	19	17	65	93	14.6	12.5	11.8	11.7	15.8						12			1					4				1		2	1		
Urban	1,164,294	1,540	1,589	1,448	6,112	5,722	16.1	16.1	15.3	15.8	15.4	174	86	21	21	45	428	148	34	21	9	3	7	15	186	32		1	26	14	87	103		179
Rural	1,566,212	1,577	1,786	1,606	6,550	6,738	12.2	13.4	12.6	12.6	12.9	74	67	39	34	32	600	160	36	10	5	9	10	11	173	13	1		59	14	87	97	2	81

TABLE 2. Deaths in Indiana by Cities During the Month of April, 1912. (Stillbirths excluded.)

CITIES.	Population. Estimated, 1912.	Total Deaths Reported for April, 1912.	Total Deaths Reported for March, 1912.	Total Deaths Reported for April, 1911.	Total Deaths Reported for 1912 to Date	Total Deaths Reported for Year 1911 to Same Date.	Annual Death Rate Per 1,000 Population. April, 1912.	March, 1912.	April, 1911.	Rate for Year 1912 to Date.	Rate for Year 1911 to Same Date.	Important Ages. Under 1 Year.	1 to 4 inclusive.	5 to 9 inclusive.	10 to 14 inclusive.	15 to 19 inclusive.	65 Years and Over.	Deaths from Important Causes. Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Lobar and Broncho-Pneumonia.	Diarrhea and Enteritis (under 2 years).	Cerebro-Spinal Fever.	Acute Anterior Poliomyelitis.	Influenza.	Puerperal Septicemia.	Cancer.	External Causes.	Smallpox.	Deaths in Institutions.
Cities of the First Class. Population 100,000 and over	240,098	301	366	325	1,312	1,259	15.2	17.6	16.9	16.7	16.3	28	21	2	3	6	87	30	7		3	3	3		34	2			3	6	16	15		75
Indianapolis	240,098	301	366	325	1,312	1,259	15.2	17.9	16.9	16.7	16.3	28	21	2	3	6	87	30	7		3	3	3		34	2			3	6	16	15		75
Cities of the Second Class. Population 45,000 to 100,000	253,337	268	308	293	1,222	1,251	12.9	14.3	14.5	14.5	15.5	41	14	2	5	14	67	23	7	6				3	26	4			3	1	17	17		82
Evansville	79,711	59	85	94	321	402	10.1	14.1	16.4	13.7	17.5	10	2	2	1	4	13	5	3	3					9				1		3	4		13
Fort Wayne	65,814	59	90	70	310	284	10.9	16.1	13.3	14.2	13.4	7	2	1	1	3	12	5	1	1				1	5	1			2		4	6		20
Terre Haute	60,305	79	80	69	331	321	15.9	15.6	14.4	16.5	16.7	10	4			3	25	8	2					1	10	1					3	4		13
South Bend	56,507	71	53	60	260	244	15.3	11.0	13.6	13.9	13.8	14	6	1	3	4	17	5	1	2				1	2	2				1	7	4		6
Cities of the Third Class. Population 20,000 to 45,000	132,435	193	188	172	635	651	17.7	16.6	16.0	15.8	15.1	27	8	2	2	8	53	24	2	3	1			4	16	1			2	2	8	24		29
Muncie	24,311	32	31	23	107	100	16.0	15.0	11.6	13.2	12.6	6	1				12	1						1					1		1	6		1
Richmond	22,733	28	30	25	98	84	15.0	15.5	13.6	13.0	11.4	7	1				10	3	1					1	5						1	1		
Anderson	22,706	30	27	33	98	123	16.1	14.0	17.9	13.0	16.6	4	2			1	5	6	1						6				1	1	3	1		1
Hammond	21,779	34	27	30	126	111	19.0	14.6	17.4	17.3	16.0	7	2		1	3	4	2		3					4	1					1	3		10
New Albany	20,629	31	30	27	117	102	18.3	17.1	15.9	17.0	14.9	2	1			3	7	8			1			2	1					1	2	5		1
Lafayette	20,277	38	44	34	149	131	22.8	25.6	20.6	22.2	19.7	1	1	2	1	1	15	4							2							8		13
Cities of the Fourth Class. Population 10,000 to 20,000	208,083	330	287	231	1,126	1,024	19.3	16.2	13.4	18.3	14.6	55	27	7	4	16	80	21	8	10	4			5	52	14		1	8	3	18	22		29
Elkhart	19,691	28	19	16	99	85	17.3	11.3	10.1	15.2	13.3	5		1	2	1	11	3							3	1			2		5	1		3
East Chicago	19,666	30	29	21	111	94	18.6	17.4	13.4	16.9	14.9	13	7				3	1						2	9	4			2		2	2		3
Marion	19,561	26	26	19	102	88	16.1	15.6	11.9	15.6	13.8		2			1	9	2	1		2				1						2	3		
Michigan City	19,444	20	30	16	103	88	12.5	18.2	10.2	16.0	13.9	7	1				6	2							6									
Logansport	19,334	33	32	22	115	103	20.8	19.5	14.0	17.8	16.3		1			2	8	1		6					1					1	3	5		4
Gary	17,802	35	26	20	104	69	23.9	17.2	14.5	17.6	12.4	11	3			1	1	1	2	1					8	4					1	3		8
Kokomo	17,650	32	28	9	97	63	22.1	13.3	6.4	16.5	11.2	2	1	2		1	8	2		1	1				6	1		1	1	1	1	3		1
Vincennes	15,359	19	17	23	75	105	15.0	14.0	18.8	14.7	21.4		4				5	2			1				3	1				1				
Mishawaka	12,518	18	14	19	58	65	17.5	13.2	19.5	13.9	16.5	2	2				6								3						1	1		4
Peru	11,154	13	13	7	47	59	14.1	13.6	7.8	12.7	15.5	3	2	1	1		3	1	1	2				1	1							1		
Elwood	11,028	10	11	12	44	34	11.0	11.7	13.2	12.0	9.3	2					2	3							1						1			
Laporte	10,866	26	18	20	71	66	29.1	19.4	23.1	19.7	19.0	2	2	2		1	8		1						5	2		1				2		2
Jeffersonville	10,412	12	21	13	63	59	14.0	23.7	15.2	24.2	17.2	1		1			5	2																1
Huntington	10,350	17	6	14	47	49	19.8	6.8	16.6	13.7	14.5	5	1			2	3		3						4				2		1	1		
New Castle	10,050	11	5	4	35	38	13.3	5.8	5.1	10.5	12.2	2	1		1	1	2	1							2	1			1		2			
Cities of the Fifth Class. Population Under 10,000	330,341	448	439	427	1,722	1,637	16.5	15.6	15.8	14.7	15.1	23	16	8	7	7	141	48	10	2	1		4	5	55	11			10	2	28	25		
Shelbyville	9,733	12	19	13	55	43	15.0	22.9	16.6	17.0	13.7	4					2	1							3							1		
Crawfordsville	9,643	8	13	10	54	45	10.0	15.8	13.0	16.9	14.5		1				2	2	1										1					
Brazil	9,495	19	12	14	52	53	24.3	14.8	7.9	16.5	16.8	7				2	3	2					3	1										
Bloomington	9,075	17	15	5	60	47	22.7	19.5	6.9	19.9	16.1		3		1		2	4							3							2		
Bedford	8,976	9	8	16	41	39	12.1	10.4	22.3	15.6	13.6						3								1						1	1		
Columbus	8,881	7	14	9	43	37	9.5	18.4	12.4	14.6	12.7					1	3	1						1							2			
Frankfort	8,787	19	10	11	37	34	26.2	13.4	15.5	12.7	11.0			2	1		3	2		1					4				1		1			
Wabash	8,693	6	10	12	33	39	8.4	13.5	16.8	11.4	13.6					1	2												1			2		
Goshen	8,584	9	11	17	35	40	12.7	15.0	24.3	12.3	14.2				1		4	1														1		
Washington	7,854	8	11	9	37	35	12.4	16.5	13.9	14.2	13.5						3	2							2									
Connersville	7,828	20	4	7	38	34	31.0	6.0	11.0	14.6	13.3						6	1							3						1			
Valparaiso	7,057	9	4	11	29	29	15.4	6.6	19.2	12.4	12.6		1				4					1			1									
Madison	6,934	8	7	11	29	44	14.0	11.9	19.3	12.6	19.2						3		1						1						1	1		
Whiting	6,847	13	7	11	37	33	23.1	12.0	20.3	16.3	15.2	8	1					2	1	1					1	5								
Clinton	6,560	16	6	8	33	33	11.1	10.8	15.6	15.2	16.1		1	2	1	1	2	1							3	1					1	2		
Princeton	6,488	9	10	4	34	32	16.9	18.2	7.5	15.8	15.0						3	2	1										1			1		
Seymour	6,305	10	8	5	38	35	19.3	14.9	9.6	18.2	16.8			1		1	3	2						2	1						3	1		
Hartford City	6,262	5	10	12	26	40	9.7	18.8	23.6	12.5	19.6						1	2																
Linton	6,189	8	8	3	25	18	15.7	15.2	6.1	12.2	9.2		1				1	2							1							1		
Mt. Vernon	5,606	5	3	8	22	28	10.8	6.3	17.5	11.8	15.2						1	2																
Lebanon	5,574	6	4	6	29	21	13.6	8.4	13.3	15.7	11.6			1			3	2																
Greensburg	5,458	6	13	7	48	30	13.3	28.0	15.7	26.5	16.8						4														2			
Portland	5,163	9	5	9	26	30	21.2	11.4	21.4	15.2	17.7						5								2									
Kendallville	5,143	6	6	3	25	18	14.2	13.7	7.3	14.7	10.0						3	1																
Noblesville	5,101	9	9	2	32	28	21.5	20.7	4.8	18.9	16.7		1	1			3								2	1					1			
Alexandria	5,096	5	8	4	19	37	11.9	18.4	9.5	11.2	22.0	3					2								1				1					
Bluffton	5,037	7	7	5	17	18	16.9	16.3	12.2	10.2	10.9		1				2								2					1				
Rushville	4,963	10	10	9	41	22	24.5	23.7	22.2	24.9	13.5						2	4							3						1			
Martinsville	4,578	6	14	6	34	30	15.9	35.9	16.1	22.4	20.1						3	1							2				1					
Franklin	4,551	1	5	8	18	18	10.7	12.9	16.2	11.9	12.1	1					1	1							2									
Decatur	4,503	3	3	3	19	17	8.1	7.8	8.1	12.7	11.5						2													1				
Aurora	4,486	6	8	8	29	25	16.3	21.0	22.1	19.5	17.6						3								1						1			
Warsaw	4,474	4	3	5	25	17	10.8	7.8	13.7	16.9	11.4																							
Greenfield	4,448	8	7	8	26	26	21.9	18.5	21.9	17.6	17.7		1				6								1									
Winchester	4,322	6	7	7	22	17	16.9	19.1	20.0	15.3	12.1						4									1						2		
Sullivan	4,214	6	3	7	12	21	17.3	8.4	20.7	8.6	15.5						2		2						1									
Garrett	4,172	6	6	4	25	18	17.5	16.9	11.7	18.1	13.1						1		1															
Tipton	4,106	3	4	5	17	21	8.9	11.4	14.9	12.5	15.6						2												1					
Boonville	4,028	6	7	7	27	16	18.1	20.5	21.7	20.2	12.3																					1		
Auburn	3,971	3	3	3	17	10	9.2	8.9	9.3	12.9	7.7						2																	
Lawrenceburg	3,930	6	7	10	18	33	18.6	21.0	31.0	13.8	25.5						4								1						2	1		
Plymouth	3,856	2	6	8	26	27	6.3	18.3	26.6	26.3	21.3						1														1			
Greencastle	3,802	3	4	6	17	22	9.6	12.4	19.3	21.4	17.6						1	1							1									
Mitchell	3,604	5	6	6	19	25	16.9	19.6	21.2	15.9	22.1						3	2											1					
Columbia City	3,495	4	1	3	17	11	13.9	3.3	10.6	14.7	9.7						1																	
Tell City	3,437	5	9	4	25	25	17.7	30.8	14.4	22.0	22.5						1								1									
Attica	3,368	9	9	5	31	17	32.5	31.5	18.2	27.8	15.5						6								1				1		2			
Rochester	3,364	7	8	8	24	31	25.3	28.0	29.0	21.5	28.0						1		1													1		
Union City	3,257	12	3	3	26	14	44.8	10.8	11.4	24.1	13.2		2		1		5	1	2						3									
Gas City	3,224	1	5	5	7	14	3.7	18.3	18.9	6.5	13.2																				1			
Dunkirk	3,031	6	6	9	17	18	24.1	23.3	36.2	16.9	18.0			1			1				1				1									
North Vernon	2,924	1	1	2	9	22	4.1	4.0	8.3	9.2	22.8																				1			
Montpelier	2,786	*	3	1	8	7	*	12.6	4.3	8.6	7.6																							
Bicknell	2,749	6	4		18		26.5	17.1		19.8			1											1	1	2					2			
Rockport	2,736	4	2	4	16	16	17.8	8.6	17.8	17.6	17.7							1							1									
Angola	2,656	2	4	1	18	13	9.1	17.7	4.6	20.3	15.0						1												1					
Crown Point	2,545	4	4		12		19.1	18.5		14.1							2	1							1									
Huntingburg	2,464	4	1	5	6	14	19.8	4.7	24.7	7.3	17.2						2	1								1								
Rensselaer	2,403	4	5	2	14	10	20.2	24.5	10.1	17.5	12.7						1														1	1		
Rensselaer	2,231	3	3	3	11	12	16.3	15.8	16.9	14.8	16.9		1												1						1			
Loogootee	2,227	3	3		10		16.4	15.9		13.5																								
Batesville	2,174	*	8	6	11	13	*	43.4	33.7	15.2	18.2																							
Monticello	2,173	4	2	2	9	6	22.4	10.8	11.2	12.5	8.4					1	3															1		
Ligonier	2,163	4	3	2	10	10	22.5	16.3	11.2	13.9	14.0		1				2								1						1			
Delphi	2,130	2	3	4	14	12	11.4	16.6	22.9	19.8	17.0						2																	
Cannelton	2,069	3	2	4	11	11	17.6	11.4	23.5	16.0	16.5				1																			
Covington	1,818	1	3	2	9	6	6.7	19.4	13.4	14.9	10.0																				1			
Butler City	1,788	4	*	*	13	10	27.6	*	*	22.2	17.3				1			3														1		
Veedersburg	1,513	5	*	5	16	20	40.3	*	40.3	32.0	40.2						3								1									
Rising Sun	1,256	1	1	2	7	6	9.7	9.3	19.4	16.8	14.5																				1			
Vevay																																		

*No deaths.

Mortality of Indiana for April, 1912. (Stillbirths excluded.)

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Population Estimated 1912.	Total Deaths Reported for April, 1912.	Total Deaths Reported for March, 1912.	Total Deaths Reported for April, 1911.	Total Deaths Reported for Year 1912 to Date.	Total Deaths Reported for Year 1911 to Same Date.	Annual Death Rate Per 1,000 Population.					Important Ages.											
							April, 1912.	March, 1912.	April, 1911.	Rate for Year 1912 to Date.	Rate for Year 1911 to Same Date.	Under 1.		1 to 4.		5 to 9.		10 to 14.		15 to 19.		65 and Over.	
												Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
State	**2,730,506**	**3,117**	**3,375**	**3,054**	**12,662**	**12,460**	**13.9**	**14.6**	**13.7**	**13.9**	**13.8**	**248**	**7.9**	**153**	**4.9**	**60**	**1.9**	**55**	**1.7**	**77**	**2.4**	**1,028**	**32.2**
Northern Counties	939,532	1,058	1,114	1,005	4,248	4,003	14.1	14.0	13.2	13.6	13.1	114	10.4	56	5.1	19	1.7	20	1.8	31	2.8	358	32.9
Central Counties	1,127,217	1,355	1,492	1,253	5,514	5,299	16.6	15.6	13.7	14.7	14.4	118	8.7	66	4.8	24	1.7	26	1.9	25	1.8	466	34.4
Southern Counties	663,757	674	769	796	2,900	3,158	12.3	13.6	14.7	13.1	14.5	16	2.3	31	4.5	17	2.5	9	1.3	21	3.1	204	30.2
All Cities	**1,164,294**	**1,540**	**1,589**	**1,448**	**6,112**	**5,722**	**19.1**	**16.1**	**15.3**	**15.8**	**15.1**	**174**	**11.3**	**86**	**5.5**	**21**	**1.3**	**21**	**1.3**	**45**	**2.9**	**428**	**27.7**
Over 100,000	240,098	301	366	325	1,312	1,159	15.2	17.9	16.9	16.7	15.0	28	9.3	21	6.9	2	.6	3	.9	6	1.9	87	28.9
45,000 to 100,000	253,337	268	308	293	1,222	1,251	12.9	14.3	14.5	14.5	15.3	41	15.3	14	5.2	2	1.4	5	1.8	14	5.2	67	25.0
20,000 to 45,000	132,435	193	189	172	695	651	17.7	16.8	16.0	15.8	15.1	27	13.9	8	4.1	2	1.0	2	1.0	8	4.1	53	27.4
10,000 to 20,000	208,683	330	287	231	1,161	1,024	19.3	16.2	13.4	16.8	14.8	55	16.6	27	8.1	7	2.1	4	1.2	10	3.0	80	24.2
Under 10,000	330,341	448	439	427	1,722	1,637	16.5	15.6	15.8	14.7	15.1	23	5.1	16	3.5	6	1.7	7	1.5	7	1.5	141	31.4
Country	1,566,212	1,577	1,786	1,606	6,550	6,738	12.2	13.4	12.6	12.6	13.1	74	4.6	67	4.2	39	2.4	34	2.1	32	2.0	600	38.0

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Deaths and Annual Death Rates Per 100,000 Population From Important Causes.																															
	Pulmonary Tuberculosis.		Other Forms Tuberculosis.		Typhoid Fever.		Diphtheria and Croup.		Scarlet Fever.		Measles.		Whooping Cough.		Lobar and Broncho-Pneumonia.		Diarrhea and Enteritis (Under 2 Years.)		Cerebro-Spinal Fever.		Acute Anterior Poliomyelitis.		Influenza.		Puerperal Septicemia.		Cancer.		External Causes.		Smallpox.	
	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.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate
State	**306**	**136.7**	**79**	**31.2**	**31**	**13.8**	**14**	**6.2**	**12**	**5.3**	**17**	**7.5**	**20**	**11.6**	**359**	**160.4**	**45**	**20.1**	**1**	**.4**	**1**	**.4**	**65**	**29.0**	**28**	**12.5**	**174**	**77.7**	**200**	**89.3**	**2**	**.8**
Northern Counties	77	100.0	20	25.9	21	27.2	4	5.1	3	3.8	1	1.2	5	6.4	135	175.3	24	31.1	....	....	1	1.2	19	24.6	7	9.0	60	77.9	75	97.4	1	1.2
Central Counties	141	152.7	30	32.4	5	5.4	4	4.3	6	6.4	15	16.2	8	8.6	150	162.4	14	15.1	....	....	....	....	25	27.0	17	18.4	80	86.6	85	92.0	1	1.0
Southern Counties	88	161.7	20	36.7	5	9.1	6	11.0	3	5.5	1	1.8	13	23.8	74	136.0	7	12.8	1	1.8	....	....	21	38.5	4	7.3	34	62.4	40	73.5	....	....
All Cities	**148**	**153.0**	**34**	**35.6**	**21**	**22.0**	**9**	**9.4**	**3**	**3.1**	**7**	**7.3**	**15**	**15.7**	**186**	**194.9**	**32**	**33.5**	....	....	**1**	**1.0**	**26**	**27.2**	**14**	**14.6**	**87**	**91.1**	**103**	**107.9**	....	....
Over 100,000	30	152.4	7	35.5	....	....	3	15.2	3	15.2	3	15.2	....	....	34	172.7	2	10.1	....	....	....	....	3	15.2	6	30.4	16	81.3	15	76.2	....	....
45,000 to 100,000	23	110.7	7	33.7	6	28.9	....	....	....	....	....	....	3	14.4	26	125.2	4	19.2	....	....	....	....	3	14.4	1	4.8	17	81.8	17	81.8	....	....
20,000 to 45,000	24	221.1	2	18.4	3	27.6	1	9.2	....	....	....	....	4	36.8	18	165.8	1	9.2	....	....	....	....	2	18.4	2	18.4	8	73.7	24	221.1	....	....
10,000 to 20,000	21	123.1	8	46.9	10	58.6	4	23.4	....	....	....	....	3	17.5	53	310.7	14	82.0	....	....	1	5.8	8	46.6	3	17.5	18	105.5	22	128.9	....	....
Under 10,000	48	177.2	10	36.9	2	7.3	1	3.6	....	....	4	14.7	5	18.4	55	203.1	11	40.6	....	....	....	....	10	36.9	2	7.3	28	103.4	25	92.3	....	....
Country	160	124.6	36	28.0	10	7.7	5	3.8	9	7.0	10	7.7	11	8.5	173	134.8	13	10.1	1	.7	....	....	39	30.3	14	10.9	87	67.7	97	75.5	2	1.5

U. S. Department of Agriculture, Weather Bureau. Condensed Summary for Month of April, 1912.

V. H. CHURCH, SECTION DIRECTOR, INDIANAPOLIS, IND.

TEMPERATURE—IN DEGREES FAHRENHEIT.

Section Average.	Departure from the normal.	Extremes.				
		Station.	Highest.	Date.	Station.	Lowest.	Date.
53.6	+2.4	Madison Seymour	87 87	15 11	Salamonia	13	3

PRECIPITATION—IN INCHES AND HUNDREDTHS.

Section Average.	Departure from the normal.	Extremes.			
		Station.	Greatest monthly amount.	Station.	Least monthly amount.
5.01	+1.83	Jeffersonville	5.66	Rochester	2.21