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 OCTOBER, 1916

Total births 4,744 (Stillbirths excluded); State rate, 19.5.

Males 2,398; females 2,346.

White males 2,361; white females 2,313.

Colored births, 70; males 37, females 33.

Stillbirths, 174; white 166, colored 8.

The Northern Sanitary Section, population, 998,000, reports 1,819 births; rate 21.5.

The Central Sanitary Section, population, 1,178, 368, reports 1,850 births; rate 18.5.

The Southern Sanitary Section, population 684, 552, reports 1,075 births; rate 18.5.

The highest rate, Lake County, 36.4.

Lowest rate, Warrick County, 7.3.

Total births to date for 1916, 53,038.

ABSTRACT OF MORTALITY STATISTICS FOR OCTOBER, 1916

Total deaths reported 2,952; rate 12.1 In the preceding month 2.935 deaths; rate 12.5. In the same month last year 2,646 deaths; rate 11.0. Deaths by important ages were: Under 1 year of age 425 or 14.4 per cent of total; 1 to 4, 188; 5 to 9, 62; 10 to 14, 48; 15 to 19, 86; 65 and over, 977 or 33.1 per cent of total.

SANITARY SECTIONS: The Northern Sanitary Section, population 998,000, reports 997 deaths; rate 11.7. In the preceding month 1,056 deaths; rate 12.9. In the same month last year 907 deaths; rate 10.8.

The Central Sanitary Section, population 1,178,368, reports 1,305 deaths; rate 13.0. In the preceding month 1,271 deaths; rate 13.1. In the same month last year 1,148 deaths; rate 11.5.

The Southern Sanitary Section, population, 684,552, reports 650 deaths; rate 11.2. In the preceding month 608 deaths; rate 10.8. In the same month last year 591 deaths; rate 10.2.

REVIEW OF SECTIONS: The Central Sanitary Section reports the highest death rate, which is 0.9 higher than the rate for the entire state. The Central Section also presents the highest death rate for tuberculosis, typhoid fever, diphtheria, whooping cough and cancer. The Northern Section presents the highest death rate for lobar and broncho-pneumonia, diarrhea, cerebro spinal fever, and external causes. The Southern Section presents the highest death rate for scarlet fever, measles, acute poliomyelitis, influenza and puerperal septicemia.

RURAL: Population 1,552,380, reports 1,367 deaths; rate 10.3. In the preceding month 1,342 deaths; rate 10.5. In the same month last year 1,286 deaths; rate 9.7.

URBAN: Population 1,308,540, reports 1,585 deaths; rate 14.3. In the preceding month 1,593 deaths; rate 13.8. In the same month last year 1,360 deaths; rate 12.7. The cities named present the following death rates: Indianapolis, 14.5; Evansville, 14.9; Ft. Wayne, 14.6; Terre Haute, 12.9; South Bend, 12.2; Gary, 16.7; East Chicago, 14.4; Muncie, 12.9; Hammond, 21.5; Richmond, 15.4; Anderson, 20.4; Elkhart, 13.2; Michigan City, 13.4; Lafayette, 18.4; New Albany, 18.3; Logansport, 13.8; Marion, 15.0; Kokomo, 16.9.

SUMMARY OF MORBIDITY AND MORTALITY FOR OCTOBER, 1916

Typhoid fever, as in the preceding month, was reported as the most prevalent infectious disease. The order of prevalence was as follows: Typhoid fever, scarlet fever, diphtheria, tonsillitis, acute bronchitis, acute rheumatism, chickenpox, pulmonary tuberculosis, influenza, poliomyelitis, diarrhea and enteritis, measles, lobar pneumonia, malaria fever, bronchial pneumonia, intermittent and remittent fever, whooping

cough, other forms of tuberculosis, erysipelas, smallpox, dysentery, cholera morbus, cerebro-spinal fever, puerperal fever, rabies in human, rabies in animals, trachoma.

SMALLPOX: 38 cases reported in 10 counties with no deaths. The counties reporting smallpox present were: Dubois 2, Grant 1, Jay 1, Johnson 1, Knox 6, Lake 1, Randolph 11, Tipton 10, Union 2, Vigo 3.

TUBERCULOSIS: 278 deaths, of which 230 were of the pulmonary form and 48 other forms. Male tuberculosis deaths numbered 154; females 124. Of the males, 29 were married in the age period 18 to 40 and left 58 orphans under 12 years of age. Of the females, 35 were married in the same age period as above, and left 70 orphans under 12 years of age. Total orphans made in one month by this preventable disease, 128. Number of homes invaded, 265.

PNEUMONIA: 160 deaths; rate 66 per 100,000. In the preceding month 105 deaths; rate 44.8. In the same month last year 104 deaths; rate 43.3.

TYPHOID FEVER: 329 cases in 63 counties with 95 deaths. In the preceding month 657 cases in 76 counties with 120 deaths. In the same month last year 249 cases reported from 53 counties with 55 deaths.

DIPHTHERIA: 617 cases reported in 52 counties with 69 deaths. In the preceding month 318 cases in 44 counties with 37 deaths. In the same month last year 543 cases in 60 counties with 43 deaths.

SCARLET FEVER: 410 cases in 54 counties with 5 deaths. In the preceding month 212 cases in 35 counties with 9 deaths. In the same month last year 364 cases in 55 counties with 7 deaths.

MEASLES: 252 cases reported in 21 counties with 3 deaths. In the preceding month 69 cases in 20 counties with 2 deaths. In the same month last year 167 cases in 16 counties with 2 deaths.

POLIOMYELITIS: 57 cases reported in 21 counties with 9 deaths. In the preceding month 64 cases in 34 counties with 14 deaths. In the same month last year 3 cases in 3 counties with 1 death. The deaths occurred in Floyd county, female 2 years; Jennings County, female 28 years; Marion County, 2 males, age 4 and 5; Miami County, female 14 years; Rush County, male 2 months; Tipton County, female 8 years; Vanderburg County, male 1 year; Vigo County, female 4 years.

RABIES: Only one person bitten by a rabid dog and treated by the State Board of Health during October. There were no deaths.

EXTERNAL CAUSES: Total 225, males 165, females 60. *Suicides*: Total 38, males 25, females 13. Suicide by poison 15, by hanging or strangulation 2, by drowning 2, by firearms 17, by cutting or piercing instruments 1, other suicides 1. *Accidental or Undefined*: Total 171, males 129, females 42. Poisoning by food 2, other acute poisonings 4, conflagration 1, burns (conflagration excepted) 10, absorption of deleterious gases (conflagration excepted) 5, accidental drowning 4, traumatism by firearms 10, traumatism by fall 36, traumatism in mines 1, traumatism by machines 5, railroad accidents and injuries 45, street-car accidents and injuries 9, automobile accidents and injuries 17, injuries by other vehicles 5, other crushing 3, injuries by animals 2, electricity (lightning excepted) 2, fractures (cause not specified) 1, other external violence 9. *Homicide*: Total 16, males 11, females 5. Homicide by firearms 12, by cutting or piercing instruments 1, by other means 3.

HEALTH OFFICERS ATTENTION

Delayed Birth and Death Certificates

Each month the statistical department receives certificates for births and deaths that have occured during the preceding months, which are not sent to this department in time to be tabulated with the report for the current month. With the report for October the following counties named below were delinquent in this matter:

BIRTHS

Benton 1 (Fowler); Blackford 1 (Montpelier); Boone 9 (Lebanon 5, Thornton 1); Brown 1; Carroll 1 (Burlington); Clark 9 (Jeffersonville 3); Clay 2 (Knightsville 1); Crawford 1 (Leavenworth); Daviess 2 (Washington 1); Dearborn 1 (Aurora); Dekalb 4 (Garrett 3); Delaware 3 (Muncie 2); Dubois 1 (Huntingburg); Elkhart 4 (City); Fayette 3 (Connersville 1); Floyd 2 (New Albany); Grant 7 (Gas City 1, Fowlerton 2); Greene 1 (Jasonville); Harrison 2; Henry 2 (Knightstown 1); Howard 1; Huntington 3 (City 2 for May, 1 for July); Jasper 1; Jefferson 3 (Madison 1); Jennings 1; Knox 13 (Vincennes 1, Bicknell 1); Kosciusko 1; Lake 24 (Hammond 7, East Chicago 16, Gary 1); Laporte 2 (City); Madison 3 (Alexandria); Marion 1 (Indianapolis 1—for February, 1913); Marshall 2—1 for July, 1915, 1 for September, 1915; Miami 1; Newton 7 (Kentland 4, Brook 1); Noble 3; Parke 2; Perry 1 (Tell City); Pike 1; Porter 4 (Valparaiso 3); Posey 1; Pulaski 2; Ripley 5 (Napoleon 1); Rush 1; Spencer 10; Steuben 7; St. Joseph 2 (South Bend); Sullivan 3 (City 1, Duggar 1); Tippecanoe 5 (Lafayette 4); Vanderburg 6 (Evansville); Vermillion 5 (Clinton 2, Universal 1); Vigo 4—1 for December, 1915 (Terre Haute 2); Wabash 4; Warrick 8; Washington 2 (Salem); Wayne 2; Wells 7 (Ossian 1); White 6 (Reynolds 1, Wolcott 1); Total 211.

DEATHS

Allen 1; Boone 2 (Thorntown 1); Carroll 1; Daviess 2; Dearborn 1 (Lawrenceburg for April); Dekalb 1; Delaware 3 (Muncie 2); Hendricks 1; Henry 1 (Blountsville); Jackson 2 (Crothersville 1); Jefferson 1; Knox 2 (Monroe City 1); Morgan 1; Newton 1; Owen 1 (Spencer); Parke 3; Pike 2; Porter 2 (Hebron 1); Posey 2 (Cynthiana 1); Pulaski 1; Putnam 1 (Bainbridge); Ripley 1; Spencer 7; Sullivan 1; Vermillion 4; (Clinton 3); Wabash 6; Wayne 1 (Spring Grove); Wells 4 (Bluffton 3); White 1; Whitley 1; Total 58.

REPORT OF BACTERIOLOGICAL LABORATORY, INDIANA STATE BOARD OF HEALTH FOR OCTOBER, 1916

Will Shimer, M. D., Superintendent

Sputum for tubercle bacilli—		
Positive	116	
Negative	352	
		468

Pus for tubercle bacilli—

Positive	1	
Negative	1	
		2

Cerebro-spinal fluid for tubercle bacilli—

Negative		2

Feces for tubercle bacilli—

Negative		2

Throat cultures for tubercle bacilli—

Negative		1

Widal tests for typhoid fever—

Positive	47	
Negative	150	
		197

Widal tests for paratyphoid fever—

Positive	5	
Negative	192	
		197

Throat cultures for diphtheria bacilli—

Positive	284	
Suspicious	60	
Negative	410	
Unsatisfactory	6	
		760

Epidemic cultures for diphtheria bacilli—

Positive	56	
Suspicious	27	
Negative	1845	
Unsatisfactory	26	
		1954

Brains for rabies—

Dogs:

Positive	4	
Negative	2	

Cows:

Positive	3	

Cats:

Negative	1	

Oxen:

Rotten	1	
		10

Blood for counts 8

Blood for malaria plasmodia—

Negative		19

Pus for gonococci—

Females:

Positive	12	
Suspicious	4	
Negative	35	
Unsatisfactory	2	

Males:

Positive	23	
Suspicious	2	
Negative	23	

Sex not given:

Negative	1	
		102

Pus miscellaneous 2

Pathological tissues—

Carcinoma:

Carcinoma of shoulder	1	
Carcinoma of breast	2	
Carcinoma of pyloric end stomach	1	
Miscellaneous tissues	24	
Gasserian ganglions	8	
		36

Urine for chemical analysis 28

Feces for typhoid bacilli—

Negative		6

Cerebro-spinal fluid for meningococci—

Positive	1	
Suspicious	1	
		2

Total number examinations made 3,796

Guinea pigs inoculated for rabies—

Negative		7

Guinea pigs inoculated for tuberculosis—

Negative		2

Doses of antityphoid vaccine prepared and sent out 2,229

OUTFITS PREPARED AND SENT OUT DURING OCTOBER, 1916

Tuberculosis	509
Diphtheria	970
Diphtheria Epidemics	4,155
Windals	209

Gonococci	177
Blood counts	5
Bile Media	12
Malaria	7
Total number sent out	6,044

PATIENTS TAKING "PASTEUR" TREATMENTS
OCTOBER, 1916

Name	Town	County	Age	Sex	Treatment began	Treatment finished
1. Peter J. Steimel	Indianapolis	Marion	36	M	10-8-16	10-27-16

THINGS OF INTEREST FROM THE LABORATORY

When any new procedure is originated it is heralded as a specific and typhoid vaccination is not an exception.

The splendid results of typhoid vaccination of the United States troops in Texas during the year 1912 lead a great many people to believe that typhoid vaccination would absolutely protect against typhoid infection. The ordinary vaccination will protect if the number of bacilli taken in at any one time after the vaccination is small or if the bacilli be taken into the digestive tract at infrequent intervals.

During the present war among the French and English troops in the trenches typhoid appears as high as 10 per cent among the vaccinated. This is probably due to the poor means for the disposal of feces and urine in the trenches and the inadequate means for keeping the hands clean of fecal and urine contamination.

If persons who have been vaccinated drink milk or water containing large numbers of typhoid bacilli 10 per cent or more will contract the disease. Careless persons taking care of typhoid patients even if they have been vaccinated are liable to become infected.

Typhoid vaccine is no substitute for good personal hygiene or for pasteurized milk or filtered water. This failure of typhoid vaccine to protect is no surprise to those who have followed the report of animal experiments with typhoid vaccine.

Metchinkoff found that if monkeys were vaccinated with dead typhoid bacilli they would promptly develop typhoid if fed on feces containing living typhoid bacilli. If a few living bacilli were given by mouth the animals gradually developed an immunity that protected against any mode of infection and the infection tended to become chronic in these animals, that is, they became carriers of virulent typhoid bacilli.

Metchnikoff partially killed the bacilli by adding anti-typhoid serum and then used these sensitized organisms as a vaccine. This vaccine protected the animals as well as unchanged bacilli.

This sensitized vaccine has not been adapted for human beings because it is feared that the sensitized bacilli will become virulent in the human body and create chronic typhoid bacilli carriers.

REPORT OF THE DEPARTMENT OF FOOD AND DRUGS, INDIANA STATE BOARD OF HEALTH, FOR OCTOBER, 1916

H. E. Barnard, Ph. D.,
State Food and Drug Commissioner

During the month of October 90 samples of food were analyzed of which 75 were reported as legal and 15 as illegal. Of 45 milk samples analyzed 5 were illegal. Of the 13 butters examined 7 were classed as illegal because of their high moisture content.

Nineteen of the 23 drug samples examined were found to be legal. But two samples were reported as illegal. Fifteen samples of aspirin were analyzed and in every case was up to standard.

ANALYSES OF FOOD AND DRUGS DURING THE MONTH OF OCTOBER, 1916

CLASSIFICATION	Legal	Illegal	Total
FOOD			
Beverages—			
Ciders, Orange	6		6
Sodas	3		3
Grape Juice		1	1
Flour	1		1
Cocoa	1		1
Milk Products—			
Butter	6	7	13
Cream	4		4
Ice Cream	1		1
Milk	40	5	45
Milk, Condensed	10		10
Milk, Mothers	3		3
Oysters	1		1
Vinegar		1	1
Total	75	15	90
DRUGS			
Aspirin	15		15
Linseed Oil	3	1	4
Sweet Spirits of Nitre	1		1
Oil of Turpentine		1	1
Miscellaneous			2
Total	19	2	23

INSPECTORS' REPORT FOR THE MONTH OF OCTOBER, 1916

During the month of October the inspectors visited 730 places where food was handled. But four places were found to be in excellent condition, 227 were reported as good, 288 fair and 210 poor. The unsatisfactory showing for the month is due to the fact that special attention was paid to saloons. Of 169 saloons inspected 156 were graded as poor. They were dirty from front to back. The floor in front of the bar was usually littered with tobacco wastes and wet down with expectoration. The toilets in the rear were almost always foul smelling and unsanitary. Out of 169 places but 5 were listed as good. The saloon is a food distributing establishment of exactly the same class as the restaurant. The same conditions will be exacted of the saloon keeper as of any other handler of foods. If the bartender or porter is diseased he will be prosecuted. If the toilets are unsanitary the place will be closed.

No prosecutions were reported during the month.

But six condemnation notices were issued, six because of

unsanitary conditions and two in addition, because the business was being conducted in improperly constructed buildings.

INSPECTOR'S REPORT FOR THE MONTH OF OCTOBER, 1916

INSPECTIONS	Number Inspected	Number Excellent	Number Good	Number Fair	Number Poor	Number Bad
Dairies	6	0	3	1	2	0
Grocery stores	241	3	110	126	2	0
Meat markets	86	1	34	48	3	0
Drug stores	19	0	13	6	0	0
Bakeries and confectioneries	98	0	47	42	9	0
Hotels and restaurants	101	0	12	51	38	0
Fish markets	3	0	1	2	0	0
Ice cream factories	3	0	2	1	0	0
Bottling works	4	0	0	3	0	1
Saloons	169	0	5	8	156	0
Total	730	4	227	288	210	1

NOTICES OF CONDEMNATION DURING THE MONTH OF OCTOBER, 1916

CLASSIFICATION	Reasons for Sanitary Conditions	Condemnation Improper Construction	Total
Confectionery and Ice Cream Plants	1	.....	1
Groceries	3	.....	3
Grocery and Restaurants	1	1	1
Restaurants	1	1	1
Total	6	2	6

SHE DIDN'T KNOW

A young mother and her little daughter were making calls on Christmas day. As they stood in a corner drug store waiting for a street car, the child pressed her hand to her head and complained of headache. Thereupon, her mother purchased fifteen cents worth of aspirin, saying, "Take this, dear, I don't want you to suffer with your head today." And this loving mother in her ignorance wronged her child, for she did not know that aspirin merely deadened the pain and did not effect cure. No one had told her that the drug was a heart depressant and like other drugs in the hands of the unskilled, very dangerous. She had never heard the old adage, "He who doctors himself has a fool for a doctor."

Illness and sickness come through neglect or refusal to obey Nature's laws of health. It is the penalty she imposes for disobedience. The wise will learn and observe her laws. Then *drugs* and *cures* will not be needed.

THE REMY ELECTRIC COMPANY of Anderson, Indiana, requests the State Board of Health to make a sanitary inspection of their plant and return such recommendations for sanitary improvement as may be deemed necessary. Everywhere large business concerns are giving serious consideration to the health surroundings of their employes and we welcome most heartily the request for sanitary inspection received from the Remy Electric Company.

A PROMINENT DENTIST of Shelbyville requests a certificate of his birth. The records of his family have been lost and now it is essential for him to prove in court the exact date of his birth. He was born in 1888 or 1889. This is the point which must be settled. His birthplace was Crawford county. The records there are silent and the presumption is that his birth was never reported by the physician who attended. This is the way physicians are continually causing trouble to their families, bringing them expense and disappointment.

POLLUTION OF STREAMS by cities will probably now cease in New York. Damages has been awarded against Batavia, New York, because of the pollution of a stream and this will undoubtedly wake up the city fathers to the importance of not turning a stream into an open sewer and damaging people living on the stream. Property owners along the stream into which Batavia deposited its sewage showed that the stream was severely polluted. The New York Supreme Court affirmed the judgment of the lower court and awarded damages. The New York Supreme Court says: "The inhabitants of a city or village collectively have no more right to pollute the waters of a stream than a single individual and where a city empties its sewer system into a living stream as the defendant has done in this case and damage results to the riparian owners it must respond in damages."

"SMALLPOX IN COURT" is the heading to a newspaper item in a Princeton, Indiana, paper. The item says: "Bert Hope was being tried in the court for attempting to murder his mother. The prisoner took sick and the physicians pronounced it smallpox. He was badly broken out in the court. The judge hastily continued the trial and the five or six hundred people who packed the court room made a very hasty exit."

DROPPING LIQUOR ADVERTISEMENTS has become quite epidemic among the newspapers. The Hearst papers now refuse to take liquor advertisements. In its campaign against alcohol as a public health menace, the New York City Department of Health has urged the newspapers to refuse all advertisements of liquors. The said health department called the attention of the newspapers to the fact that while the editorial pages have carried on forceful and no doubt profitable propaganda against alcohol, the advertising columns have blazed with advertisements of whisky and patent medicines which contained large amounts of alcohol. Mr. Hearst, owner of the Hearst papers, issued a formal order on Sunday, January 9, that no more liquor advertisements would be received for his papers.

THE INDUSTRIAL BOARD OF INDIANA has established a precedent in holding that employers are liable for medical attention on account of injury to employes, but only in such instances where employers would be liable for compensation to the injured employes. The Board refused to order the Horace Wood Company to pay a fee charged by Dr. Colin Dunbar who treated an employe of the Wood Company. The evidence showed the employe was injured while scuffling and was not in the service of the Wood Company at the time.

THE TREATMENT OF INFANTILE PARALYSIS.
(With especial reference to the earlier stages.)

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Infantile paralysis or acute poliomyelitis is a general infection characterized especially by its attack on the cerebrospinal axis. The pathological condition is essentially a hemorrhagic myelitis accompanied by a mild meningitis, both of which are often more widely distributed than the clinical symptoms would seem to indicate.

The changes in the cord consist of hemorrhages for the most part punctate most marked in the anterior part of the gray matter and of a very extensive perivascular infiltration. The latter process causes a narrowing of the lumen of many of the terminal arteries supplying the motor cells, so that anemic changes even to the point of necrosis may occur in them. In addition to this the posterior root ganglia are involved. From this stage the process in cases which do not die consists in an absorption of the infiltration about the vessels, allowing the blood to flow through them to the anemic cells which resume their function unless too severely damaged, and absorption of hemorrhage. This is the period of so called "spontaneous improvement" supervening directly upon the acute process.

For purposes of treatment the disease may be divided into three stages: (a) the *acute stage* beginning with the acute attack and ending with the disappearance of the tenderness (a matter generally of from four weeks to three months); (b) the *convalescent stage* from the disappearance of the tenderness until the disease has become practically stationary (a matter of about two years); (c) the *chronic stage* which begins about two years from the onset.

Acute Stage.

From the pathology it may be seen that the physiological requirement of this stage is rest, in order that nature may be given a chance to repair the damage so far as possible by absorption It is not reasonable during this time to excite the peripheral ends of hemorrhagic and anemic nerve centers by massage, electricity and attempted movements. The tenderness must be accepted as evidence of an active process still going on in the cord and so long as it exists the patient should be *let alone*. Massage at this time may cause great increase of pain and tenderness and may seriously delay recovery and there is no evidence whatever to show that the use of electricity at this stage is of any value.

During this stage the patient should be kept quiet. Joints will not anky lose, hopeless muscular atrophy will not occur, and by this proceeding the damaged cord will have the best chance to repair, and repair to the highest degree is desirable. One of our chief gains of late has been the avoidance of meddlesome and useless early therapeutic measures. There is evidence that the use of hexamethylenamin in monkeys diminishes in them the risk of infection somewhat but there is nothing to show that it has any effect after infection has occurred, but as the drug in moderatiou is harmless, it is extensively used at this stage and may be of value. There is no serum or drug or proceeding that is known to avert the infection or to limit the paralysis, although Netter of Paris has administered the blood serum of recovered patients to those in the acute stage in a small series of cases, but the method is wholly experimental. The use of strychnine and ergot is not to be advised. *Deformities* should at this stage be carefully prevented. The feet should be kept at right angles to the legs to avoid the most common deformity "dropped foot". The knees should be extended unless this causes great pain. Lateral curvature of the spine should be looked for, and if it is present, attitudes increasing it should be avoided. These deformities may begin in the first weeks after the onset, and are largely preventable, and if they are allowed to occur, constitute a great obstacle in the later treatment.

When the tenderness has diminished it is desirable to place the patient in a warm saline bath into which he may be lowered on a sheet once a day, and in which he may be able to move his limbs without pain. This is not desirable in the first days of the disease.

The treatment of this stage may be summarized as consisting of rest and the prevention of deformities.

The Convalescent Phase.

With the disappearance of the tenderness the acute process in the cord may be assumed to have reached a stage when therapeutic measures may be begun, but probably in no case should they be undertaken in less than four to six weeks from the onset. Of late much has been said as to the advisability of keeping such convalescents in bed for an indefinite time, and there is no question that most cases of this disease are allowed to overdo to their own detriment. But prolonged recumbency for children is unnatural and undesirable, physiologically and mentally. Moreover it has been too much the custom to allow such children to sit and lie around until they have acquired flexion deformities of the hips, knees and ankles, and the best practice at present consists in getting these children into the upright position early in the convalescent stage.

The upright position is desirable not only because it antagonizes the evils of the permanent sitting position, but because the effort to balance on the feet instructively excites to effort a large number of muscles not otherwise to be reached, and is a valuable form of muscle training.

If the patient can stand and walk without leg braces, so much the better. If such apparatus is needed to permit ambulatory activity it should be used but only during walking, and in early cases never continuously. The most commonly required form of apparatus is the Thomas Caliper knee splint which holds the legs extended and prevents the foot from dropping. Crutches may or may not be required. If gastrocnemius paralysis is present, high heels should be continuously worn. If abdominal weakness is present (a condition most often overlooked) a supporting abdominal corset should be worn continuously and scoliosis demands the same treatment from the outset.

A patient who has been long in bed when first put on his feet in braces is often unable to balance even if he has the requisite muscular strength and the cultivation of his sense of equilibrium must be taken up separately. A good general rule with regard to the use of apparatus is that it should be used when the patient cannot stand without it or if in standing a position of deformity is assumed. Deformity leads to stretching of soft parts, which is always detrimental, and if persisted in, to permanent bony changes.

Fatigue is always detrimental and a source of danger at this stage. Muscles are more often weakened than totally paralyzed in this disease (in the proportion of about 9 partial to 1 total paralysis in the Vermont figures) and danger of overusing such partly paralyzed muscles even by mild activity is very great and retards recovery and if persisted in does permanent damage. The worst advice that can be given to a patient in the light of our modern knowledge is to use his muscles as much as he can. Patients in the convalescent stage should be most carefully guarded in the matter of too much walking.

There are four therapeutic measures to be considered at this stage: (1) massage, (2) electricity, (3) heat, (4) muscle training.

1. Massage empties mechanically the viens and lymphatics, it apparently helps to preserve the condition of the muscles and it stimulates the flow of blood to the limb and nothing more, so that too much must not be expected of it. It does not promote the transmission of impulses from brain to muscle, and its action seems wholly local. Given for too long a period, or roughly, it does harm and fatigues the muscles.

2. Electricity. The use of Faradic electricity gives a mild form of muscular exercise which will cause muscles to contract which will not do so voluntarily, and apparently does nothing more, and Galvanic electricity and the newer currents are supposed in some mysterious way to do good, but in experience of many years with and without electricity used in all forms and under many conditions of control, the writer has been unable to satisfy himself that it was of any use whatever in any given case. There is no possible objection to its use if strong currents are not used, provided the other measures of proved usefulness are also employed. But electricity has done an indefinite amount of harm in this disease because it has deluded the parents, and often the physician, into thinking that the patient was being adequately treated by that alone, while serious deformities were developing and valuable time being lost.

3. Heat is of value in promoting circulation and in raising the temperature of the limb to a point where musuclar action is better performed. It also probably adds to the efficiency of massage by bringing the blood to the surface and should precede rather than follow the rubbing.

4. Muscle training is doubtless the most valuable and reliable of these measures. It consists in an attempt to drive an impulse from the brain to the affected muscle by a new route. The bundles of motor centers are connected with each other and with the muscles by most intricate connections and in the partial destruction of such centers, which is more common than their total destruction (as shown by the predominance of partial paralysis), it is obviously reasonable to attempt to find and cultivate a new route for an impulse by calling for the performance of a motion and aiding the performance of that motion by the hand. With subsequent attempts the voluntary control is likely to increase and in the opinion of the writer we have in carefully directed muscle training at this stage the most valuable part of our therapeutic equipment.

In Vermont in a period of three months a quantitative examination of the muscles showed that in cases treated by muscle training the expectation of improvement was as follows: under treatment by an expert 6 to 1; under home muscle training under supervision 3.5 to 1; home training without supervision 2.8 to 1.*

Deformity in this stage is to be removed as it occurs. This can be done by stretching with or without anesthesia anatomy, myotomy, fasciotomy. It must be remembered that it is easier to prevent than to correct deformity. *When fixed deformity is present it must be removed before undertaking mechanical or operative treatment.*

The Chronic Stage.

This begins in about two years from the onset and it is in this stage that the question arises of performing operations to improve function or to increase stability of the paralyzed joint. In the first class are to be mentioned tendon and nerve transplantation and in the second, the artificial ankylosis of joints (arthrodesis), silk ligaments to support dropped feet, the removal of the astragalus (astragalectomey) and similar operations.

Surgeons of experience are agreed in all parts of the world that these serious operations are not to be undertaken until at least two years after the onset of the paralysis. But in this stage probably the majority of cases will still be non-operative because the distribution and extent of the paralysis is too often of such a character as to make operative interference unlikely to be of much value. In such cases the same general principles of support by apparatus will remain much as they were in the preceding stage, but as one gets further away from the acute attack the prospect of muscular gain becomes less good, a consideration which emphasizes the importance of seeing that the care of these cases in the early stages is as efficient as it can be made.

*Lovett & Martin, American Journal of Orthopedic Surgery, July, 1916.

ASPHYXIA NEONATORUM.

William J. Fairfield, M. D.,
Norwich, N. Y.

What may be termed "The Mechanical and Passive Respiration Method," is going the rounds in medical literature, setting it forth as a new method of resuscitation of the new born, given by Dr. Serafino Marmon. He gives a detailed description of the placement of the operators' hands as a first step called the "inspiratory position" for the procedure embracing two movements made close together in two or three seconds, accomplishing what he terms "the mechanical and passive inspiration," followed immediately by a "mechanical and passive expiration" produced by a concentric pressure over the walls of the thorax by the spread-out hands of the operator.

This procedure, in the main, is not new, but has been employed under more or less similar technique by doctors and midwives from time almost immemorial.

Blocked or delayed respiratory function of the new born, seldom if ever requires such artificial, mechanical, outside force to be applied; yet its use is most usually relied upon to overcome such a condition.

The potential, latent energies of the body, in both child and adult, represent great and unmeasured possibilies of power, which, when rightly called into action by a forceful or extraordinary stimuli, will often prove most dependable as the capsheaf in saving and preserving life to a remarkable extent,—and too, at times when most needed and least expected.

At the termination of the second stage of labor, when the child, suddenly liberated from stressed pressure and the warm, protective fluid around it, is plunged into the cooling, stimulating air, and does not begin to breathe, the physician must quickly install such measures as will resuscitate and establish respiration. To call into play sufficient or extraordinary stimuli on the life forces to inititate this most vital function, takes but a moment if successful, and it almost invariably so proves when properly directed.

The writer's technique is as follows: See that the upper air passages are clear for the entrance of air; place the infant facing the physician in a slightly inclining backward, upright position of the body with his hands supporting the infant's back and head, held just at the right pitch to favor the most direct ingress of the air. Have the nurse at hand with a glass of cold water, the colder the better, to give the physician a mouthful of it from time to time. He then spurts it from his mouth in forceful jets against the front of the thorax,—the first time or two even including the neck and face.

From such a water slap, the regional reflexes awaken with a fury. The diaphragm and all of the accessory muscles of inspiration, ordinary and extraordinary, become thrilled with active life and start up like clock work. The lungs inflate. We hear the suction of air as the child gets its first intake. This is at first a most rushing, hurried vital inspiration, due

to the explosive muscular action distending the chest. This is quickly followed by reaction, the muscles relaxing and the chest contracting, forcing the air out, and producing a normal exhalation. Thus the in-and-out-lung-air-route is inaugurated. A few repetitions of water blowing at the rate of one time to every four seconds,—and the respiratory function is a certainty. The emergency crisis is passed. The baby hails it with a cry, and all are happy.

This method I have employed for a long time. Many babies, if they but knew, could testify, as their mothers can, of its life saving value. It came to me, as it were, somewhat, if not altogether, spontaneously in my emergency needs, yet the buccal action I probably got from observing the Chinese manner of clothes sprinkling. Nurses and students under me have learned it, but so far as I know my method has never been published. For aught I know, it may be very old, but it is valuable for doctors to practice,—physiologic method, the easiest, best and first that should be used. It will never occasion damage to shoulder, muscular or bony attachments from inexpertness or nervous haste.

The new born child is a bunch of physiologic forces with their reflexes and exhilarators, at hand for a touch and go. The brand new mechanism, though unadorned, is all harnessed in full preparedness to respond. Life is there to render highest service. Catch it before it sparks out and away beyond recall.

Great is the super-vito-motor human machine! Unhandicapped, as Nature intends, it starts running with all of its parts adjusted and balanced, having their normal physiological division of work allotted them and accurately gauged for a long and successful life of service.

Colonia Bldg.

"FATAL DISEASES ARE NOW ON THE DECREASE," is the statement made in a recent bulletin issued by the Federal Census Bureau at Washington. The diseases mentioned as showing reduced death rates since 1900 are tuberculosis, pneumonia, diarrheal diseases, diphtheria and typhoid fever. Tuberculosis in the decade from 1904 to 1914 fell from 200.7 to 146.8 per 100,000. Diphtheria fell from 43.3 per 100,000 in 1900 to 17.9 in 1914. This was a decline of 59 per cent. Diarrheal diseases among infants show a decline of from 133.2 in 1900 per 100,000 to 79.4 in 1914. Typhoid shows a decrease from 35.9 in 1900 to 15.4 in 1914.

ONLY PASTEURIZED MILK will be sold in Gary. The city council of that city has passed an ordinance making it unlawful for other than pasteurized milk to be sold in the city. This is a wise restriction. The ordinance also requires that the milk furnished to the city shall be from clean dairies and healthy cattle and collected and transported in a clean way. On top of all this parteurization is required. As said, this is wise and it certainly is economical. Pasteurization makes certain that the milk does not carry any disease and does not in the slightest degree interfere with the nutritive power of the milk.

THE ADVANCE IN COST of medical supplies and surgical instruments since the war began is very considerable. Surgeon General Braisted of the U. S. Navy reports that in some instances the advance is from 200 to 1,200 per cent. The American output of surgical instruments meets but ten per cent of the domestic demand.

A SANITARY SURVEY of South Bend is being made by Surgeon Carrol Fox of the U. S. Public Health Service. The City Council of South Bend appropriated $2,000 to pay the expenses of a health and housing survey, and the city board of health, and Dr. Chas. Bosenbury, together with the State Board of Health, invited Surgeon General Blue of the U. S. Public Health Service, to detail an officer to make the health study of South Bend. Surgeon Fox began his work November 27. We shall look forward with great interest to this survey. We feel certain it will prove as valuable to South Bend as did the survey made by the public health department for Richmond.

NORVAL W. BEESON writes us from Detroit, Michigan, asking for a transcript of his certificate of birth. He says "Being an employe of the Ford Motor Company it is necessary for me to prove my age, and I desire to know whether there is any record by which I can prove the date of my birth. I was born in Howard County, November 19, 1892. We were compelled to write to Mr. Beeson that birth registration did not begin in Indiana in regular legal fashion until 1907. We could not help him.

HEALTH AND MORALS.

No social agency is more earnest in its demands upon the church for coöperation than is the cause of public health; no agency, to my mind, offers a greater return for such coöperation. Public health asks the church to join hands with it in giving men better bodies, and it promises that when men's bodies shall be stronger, their spirits will be nobler. Public health asks the church to assist it in making sanitary the community to which the church ministers, and it pledges the experience of the world to show that, when this is done, none will benefit more than the church. All things being even, the healthy man is the moral man; other considerations alike, the sanitary community is the spiritual community.—Dr. Ennion G. Williams.

VALUE OF BIRTH REGISTRATION.

The registration of a child's birth forms a legal record that is frequently useful and may be of the greatest importance. It establishes the date of birth and the child's parentage. It may be required to establish the child's age for attendance at public schools or for a working certificate in States where restrictions are placed upon child labor; to show in courts of law whether a girl has reached the age of consent, or whether individuals have attained the age when they may marry without the parents' permission; to establish age in connection with the granting of pensions, military and jury duty, or voting. It may be important in connection with the bequeathing and inheritance of property or to furnish acceptable evidence of genelogy.—Bulletin N. C. Board of Health.

THE LABORERS of the United States number 30,000,000. On the average every man of them is ill and incapacitated for work nine days in the year; and this means an economic loss of $800,000,000. Fifty per cent of this can be saved by hygiene at a cost of one-tenth of the loss. Yet in face of this fact, our law makers allow this loss to go on. incompetency.

CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM IMPORTANT CAUSES FOR OCTOBER, 1916.

NORTHERN SANITARY SECTION

Total population	998,000
Total deaths	997
Death rate per 1,000	11.7
Pulmonary Tuberculosis, rate per 100,000	72.1
Other forms of Tuberculosis, rate per 100,000	9.4
Typhoid Fever, rate per 100,000	30.7
Diphtheria and Croup, rate per 100,000	7.7
Scarlet Fever, rate per 100,000	....
Measles, rate per 100,000	1.1
Whooping Cough, rate per 100,000	2.3
Lobar and Broncho-Pneumonia, rate per 100,000	69.7
Diarrhoea and Enteritis (under 2 years), rate per 100,000	89.9
Cerebro-Spinal Fever, rate per 100,000	2.3
Acute Anterior Poliomyelitis, rate per 100,000	1.1
Influenza, rate per 100,000	....
Puerperal Septicemia, rate per 100,000	5.9
Cancer, rate per 100,000	78.0
External causes, rate per 100,000	101.7
Smallpox, rate per 100,000	....

CENTRAL SANITARY SECTION

Total population	1,178,368
Total deaths	1,305
Death rate per 1,000	13.0
Pulmonary Tuberculosis, rate per 100,000	121 2
Other forms of Tuberculosis, rate per 100,000	26.1
Typhoid Fever, rate per 100,000	41.0
Diphtheria and Croup, rate per 100,000	37.0
Scarlet Fever, rate per 100,000	2 0
Measles, rate per 100,000	1.0
Whooping Cough, rate per 100,000	8.0
Lobar and Broncho-Pneumonia, rate per 100,000	68.1
Diarrhoea and Enteritis (under 2 years , rate per 100,000	82.1
Cerebro-Spinal Fever, rate per 100,000	2.0
Acute Anterior Poliomyelitis, rate per 100,000	5.0
Influenza, rate per 100,000	2.0
Puerperal Septicemia, rate per 100,000	5.0
Cancer, rate per 100,000	4.1
External causes, rate per 100,000	101.2
Smallpox, rate per 100,000	....

SOUTHERN SANITARY SECTION

Total population	684,552
Total deaths	650
Death rate per 1,000	11.2
Pulmonary Tuberculosis, rate per 100,000	82.8
Other forms of Tuberculosis, rate per 100,000	24.1
Typhoid Fever, rate per 100,000	28.3
Diphtheria and Croup, rate per 100,000	29.3
Scarlet Fever, rate per 100,000	5.1
Measles, rate per 100,000	1.7
Whooping Cough, rate per 100,000	6.9
Lobar and Broncho-Pneumonia 100,000	56.9
Diarrhoea and Enteritis (under 2) rate per 100,000	53.4
Cerebro-Spinal Fever, rate per 100,000	1.7
Acute Anterior Poliomyelitis, rate per 100,000	5.1
Influenza, rate per 100,000	3.4
Puerperal Septicemia, rate per 100,000	10.3
Cancer, rate per 100,000	65.5
External causes, rate per 100,000	65.5
Smallpox, rate per 100,000	....

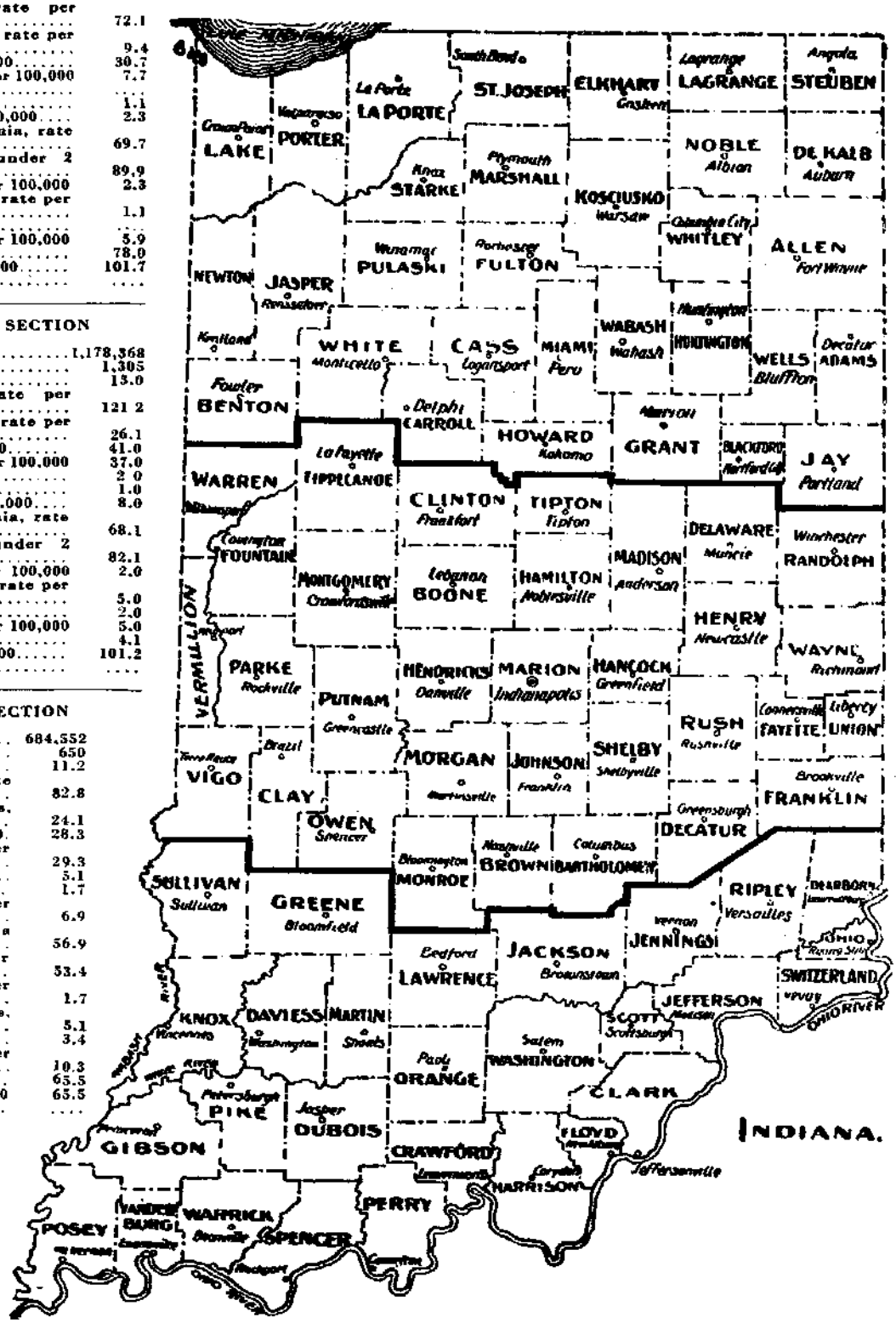

TABLE 1. Deaths in Indiana by Counties During the Month of October, 1916. (Stillbirths Excluded.)

STATE AND COUNTIES.	Population, Estimated 1916.	Total Deaths Reported for October, 1916.	Total Deaths Reported for September, 1916.	Total Deaths Reported for October, 1915.	Total Deaths Reported for the Year 1916 to Date.	Total Deaths Reported for the Year 1915 to Same Date.	Annual Death Rate per 1,000 Population.					Important Ages.						Death from Important Causes.															
							October, 1916.	September, 1916.	October, 1915.	Rate for Year 1916 to Date.	Rate for Year 1915 to Same Date.	Under 1 Year.	1 to 4 Inclusive.	5 to 9 Inclusive.	10 to 14 Inclusive.	15 to 19 Inclusive.	65 Years and Over.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Lobar and Broncho-Pneumonia.	Diarrhœa and Enteritis (under 2 years).	Cerebro-Spinal Fever.	Acute Anterior Poliomyelitis.	Influenza.	Puerperal Septicemia.	Cancer.	External Causes.	Smallpox.	Deaths in Institutions.	Deaths of Non-Residents.
State of Indiana	2,860,920	2,952	2,935	2,646	32,176	28,772	12.1	12.5	11.0	13.4	12.2	425	188	62	48	86	977	230	48	95	69	5	3	14	169	189	5	9	4	16	198	225	...	329	....
Northern Counties	998,000	997	1,056	907	11,304	9,618	11.7	12.9	10.8	13.6	11.7	163	57	10	14	22	337	61	8	26	15	...	1	2	59	76	2	1	...	5	66	86	...	133	....
Adams	22,000	12	22	18	175	193	6.4	12.1	9.6	9.5	10.5	1	1	...	...	...	6	1	...	...	...	...	...	...	1	3	...	...	...	1	...	...	...	...	....
Allen	102,791	119	97	79	1,065	949	12.9	11.4	9.1	12.3	11.2	18	7	3	1	2	35	8	1	1	1	...	...	1	10	9	...	...	...	...	3	13	...	27	10
Benton	12,688	7	5	12	106	90	6.5	4.8	11.1	10.0	8.5	1	2	...	...	...	3	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	1	1
Blackford	16,195	16	20	11	146	143	11.6	15.0	8.0	10.8	10.6	6	...	...	...	...	4	2	...	...	...	...	...	...	...	4	...	...	...	...	...	1	...	...	....
Carroll	17,980	17	13	17	179	146	11.1	8.8	11.1	11.9	9.7	3	...	...	1	...	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	....
Cass	37,788	35	52	51	519	464	10.9	16.7	16.0	16.4	14.8	4	...	1	...	1	15	3	...	...	...	...	...	...	...	...	...	...	...	...	2	7	...	6	....
DeKalb	25,429	18	23	25	255	263	8.2	11.0	11.6	12.0	12.4	...	1	1	...	...	11	...	...	...	1	...	...	1	1	...	...	...	...	...	2	2	...	...	1
Elkhart	51,403	53	52	43	558	503	12.1	12.3	9.9	13.0	11.8	12	3	...	...	1	17	1	...	*1	1	...	...	...	2	5	...	...	...	...	1	3	...	10	1
Fulton	16,879	11	13	21	189	168	7.8	9.3	14.6	13.4	11.9	2	...	...	...	...	3	1	1	...	...	...	...	...	2	1	...	...	...	1	2	1	...	...	....
Grant	52,436	62	75	69	791	644	13.9	17.4	15.5	18.0	14.7	7	2	1	1	2	29	2	...	3	1	...	...	...	4	2	...	...	...	...	5	...	17	3
Howard	36,377	45	43	32	421	342	14.5	14.4	10.5	13.0	11.5	2	4	1	2	1	22	4	1	2	2	...	...	...	5	1	...	...	...	3	4	...	4	2
Huntington	29,372	26	28	26	317	280	10.4	11.6	10.4	12.9	11.4	6	1	...	1	...	11	1	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	...	....
Jasper	13,109	10	11	16	138	98	9.0	10.0	14.3	12.6	8.0	2	...	...	...	...	2	1	...	...	...	...	...	...	2	...	...	...	...	...	1	2	...	...	1
Jay	25,126	20	29	28	269	233	9.4	14.0	13.1	12.8	11.1	2	1	...	...	...	6	...	...	2	...	...	...	...	3	2	...	...	...	...	3	2	...	...	....
Kosciusko	28,156	22	39	22	301	258	9.2	16.8	9.1	12.8	11.0	3	...	...	...	...	9	...	...	...	1	...	...	...	...	1	...	...	...	...	3	...	...	...	....
Lagrange	15,148	14	15	9	196	165	10.9	12.0	6.9	15.5	13.0	1	2	...	...	...	8	1	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	....
Lake	115,165	162	151	99	1,695	1,208	16.5	16.0	10.7	17.6	18.4	40	14	4	3	1	19	16	...	5	7	...	...	...	9	22	...	...	...	1	8	24	...	36	1
Laporte	49,170	45	50	50	569	460	10.8	12.4	12.2	14.1	11.5	6	1	1	...	1	15	2	1	...	...	...	...	...	4	3	...	...	...	...	3	6	...	6	....
Marshall	24,265	22	22	16	244	227	10.6	11.0	7.7	12.5	11.2	2	3	...	...	2	9	1	...	...	...	...	...	...	2	2	...	...	...	...	1	2	...	...	....
Miami	30,570	24	30	18	338	286	9.2	11.9	6.9	13.2	11.3	3	1	...	1	...	8	1	...	...	...	...	...	...	2	...	...	1	...	...	2	1	...	...	....
Newton	10,529	7	4	8	91	76	7.8	4.6	8.8	10.3	8.6	1	...	...	...	...	4	1	...	...	...	...	...	...	1	...	...	...	...	...	2	1	...	...	....
Noble	24,819	24	21	15	283	261	11.4	10.3	7.1	13.6	12.7	...	1	...	1	...	14	...	...	1	...	...	...	...	3	1	1	...	...	...	2	2	...	...	....
Porter	20,890	24	22	17	214	213	13.5	12.8	9.6	12.2	12.2	4	...	...	1	2	7	2	...	1	...	...	...	...	3	...	...	...	...	...	2	2	...	2	1
Pulaski	13,312	4	13	13	122	113	3.6	11.9	11.4	10.9	10.1	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
Starke	10,632	5	18	9	108	99	5.5	20.5	9.9	12.2	11.1	...	...	1	...	1	3	...	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	....
Steuben	14,504	20	12	15	174	138	16.2	10.0	12.2	14.3	11.4	2	1	...	...	1	9	2	...	1	...	...	...	...	...	1	...	...	...	...	5	...	...	...	....
St. Joseph	96,884	101	116	93	1,085	906	12.2	14.6	11.5	13.4	11.6	21	8	2	2	3	27	11	3	3	...	...	...	...	6	10	...	...	...	1	8	1	24	2	....
Wabash	26,956	26	17	28	250	263	11.3	7.6	12.2	11.1	11.7	7	...	1	1	...	12	1	1	...	...	...	...	...	...	2	1	...	...	1	1	4	...	...	....
Wells	22,668	18	16	12	174	153	10.4	8.6	6.2	9.2	8.1	5	...	...	...	...	8	...	...	1	...	...	...	1	1	1	...	...	...	...	4	...	...	...	....
White	17,632	18	14	18	175	122	12.0	9.6	13.0	11.9	8.3	1	...	...	...	1	9	3	...	2	...	...	...	...	2	1	...	...	...	...	...	...	...	...	....
Whitley	17,127	14	13	17	154	151	9.6	9.2	11.7	10.7	10.6	1	3	...	...	...	5	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	....
Central Counties	1,178,368	1,305	1,271	1,148	13,724	12,595	13.0	13.1	11.5	13.8	12.9	180	81	30	25	44	421	121	26	41	37	2	1	8	68	82	2	5	2	5	94	101	...	159	....
Bartholomew	25,153	18	15	21	247	268	8.4	7.2	9.8	11.4	12.8	...	2	...	1	1	7	3	...	1	...	...	...	1	...	...	...	...	...	...	2	1	...	...	....
Boone	25,173	22	22	15	266	214	10.3	10.6	7.0	12.6	10.2	2	...	1	1	...	8	2	3	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	....
Brown	7,975	5	9	4	75	57	7.4	13.7	5.8	11.5	8.5	...	...	2	...	...	2	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	....
Clay	33,398	25	28	29	307	274	8.9	10.2	10.2	11.0	9.8	2	1	...	...	1	10	3	...	...	1	...	...	...	1	1	...	...	...	...	2	2	...	...	....
Clinton	27,439	33	30	15	308	263	14.1	13.3	6.4	13.4	11.5	5	1	...	1	1	14	3	1	2	1	...	...	1	4	1	...	...	...	1	6	3	...	3	....
Decatur	18,983	25	19	17	218	188	14.9	13.1	10.5	13.7	11.9	3	1	...	1	1	13	2	1	2	2	...	...	...	3	...	...	...	...	...	1	...	...	1	....
Delaware	52,944	53	65	39	565	474	11.8	14.9	8.6	12.7	10.8	10	5	...	...	2	17	4	...	5	...	...	1	...	5	3	...	...	...	...	3	2	...	3	....
Fayette	14,873	20	16	18	195	174	15.8	13.1	14.2	15.7	14.1	1	4	...	...	1	8	1	1	...	1	...	...	...	2	1	...	...	1	...	1	2	...	...	....
Fountain	20,659	8	15	15	222	188	4.5	8.8	8.5	12.8	10.9	2	1	...	...	...	4	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	....
Franklin	15,335	22	11	12	181	155	16.9	8.7	9.2	14.1	13.1	4	1	...	1	...	13	...	1	...	...	...	...	...	1	2	...	...	...	...	...	1	...	...	....
Hamilton	27,166	21	30	21	257	276	9.1	13.4	9.0	11.3	12.1	1	...	...	...	1	12	3	...	3	...	...	...	...	1	...	...	...	...	...	1	...	...	1	....
Hancock	19,030	13	22	12	205	185	7.0	14.1	7.4	12.9	11.6	...	...	1	...	...	2	1	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	....
Hendricks	20,840	10	17	25	220	210	5.6	9.9	14.1	12.6	12.0	...	1	...	...	1	4	2	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	....
Henry	31,431	35	48	37	341	348	13.1	18.6	14.1	12.9	13.5	5	4	2	2	3	10	2	1	1	2	...	...	...	2	6	...	...	...	...	3	1	...	1	....
Johnson	20,639	20	19	18	204	204	11.4	11.2	10.2	11.8	11.8	3	1	...	...	1	10	1	1	...	...	...	...	...	...	...	...	...	...	...	3	3	...	1	....
Madison	66,374	82	63	62	692	625	14.5	11.5	11.0	12.4	11.3	17	2	1	1	2	27	3	3	4	1	...	...	2	5	7	...	...	...	...	3	6	...	9	1
Marion	296,661	367	378	347	4,038	3,599	14.6	15.5	14.0	16.3	14.8	34	13	12	7	14	91	42	5	8	9	...	...	1	20	13	2	2	...	1	28	30	...	100	16
Monroe	24,683	31	40	26	240	233	14.8	19.7	12.5	10.6	11.5	7	6	...	...	1	11	1	...	2	4	...	...	...	3	2	...	...	...	1	1	...	...	1	....
Montgomery	33,664	28	32	35	333	340	10.7	12.7	7.1	13.5	13.0	4	2	...	2	1	11	2	...	2	...	...	...	1	1	3	...	...	...	...	2	...	...	2	....
Morgan	21,544	25	21	17	236	212	13.7	11.8	9.3	13.1	11.8	2	3	...	...	2	7	5	1	...	...	...	...	...	...	1	...	...	...	1	3	3	...	...	....
Owen	14,053	12	10	9	147	123	10.0	8.6	7.5	14.5	10.5	2	...	2	1	1	4	4	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	....
Parke	22,214	20	18	20	256	207	10.6	9.8	10.6	13.8	11.1	4	1	1	...	...	6	3	...	...	3	...	...	...	...	3	...	1	...	...	3	2	...	3	3
Putnam	20,580	19	21	21	200	210	10.8	12.4	12.0	11.6	12.2	4	...	...	2	...	7	2	1	...	...	...	...	...	1	2	...	...	...	...	1	4	...	...	....
Randolph	29,533	37	26	29	304	290	14.7	10.7	11.6	13.3	11.8	7	3	...	1	2	14	2	...	...	...	...	...	...	2	4	...	...	...	...	...	4	...	...	....
Rush	19,539	17	14	16	204	201	10.2	8.7	9.6	12.2	12.3	5	2	...	...	1	5	1	...	...	...	...	...	...	1	...	...	1	...	...	1	3	...	...	....
Shelby	27,967	29	9	16	270	324	12.2	3.9	6.7	11.5	14.0	1	2	2	...	...	17	5	...	...	1	...	...	...	1	1	...	...	...	...	3	2	...	...	....
Tippecanoe	41,043	51	55	42	583	559	14.6	16.4	12.0	17.1	16.4	5	2	...	...	2	18	4	...	...	...	...	...	...	5	...	...	...	...	...	5	3	...	20	6
Tipton	17,614	20	21	17	187	179	13.4	14.5	11.3	12.7	12.2	...	...	1	...	...	11	4	1	1	...	...	...	...	1	...	...	1	...	...	3	...	...	...	....
Union	6,260	5	4	7	65	70	9.4	7.7	13.1	11.4	13.3	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	....
Vermillion	20,670	34	25	18	306	230	19.4	14.7	10.4	17.7	13.5	9	6	...	1	1	1	1	1	3	3	...	...	...	1	5	...	...	...	...	2	7	...	...	....
Vigo	100,885	127	110	113	1,132	1,064	14.8	13.3	13.3	13.4	12.9	30	11	2	2	4	30	9	3	4	5	...	...	2	7	18	...	1	...	1	6	14	...	8	1
Warren	10,899	5	6	7	101	96	5.4	6.7	7.5	11.1	10.5	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	....
Wayne	46,147	66	52	48	603	559	16.8	13.7	12.3	15.6	14.6	11	4	1	...	1	25	5	2	2	2	...	...	...	1	7	...	...	...	...	5	5	...	8	4
Southern Counties	684,552	650	608	591	7,148	6,559	11.2	10.8	10.2	12.5	11.6	82	50	16	9	20	219	48	14	28	17	3	1	4	33	31	1	3	2	6	38	38	...	37	....
Clark	30,260	26	23	28	318	264	10.1	9.2	10.8	12.6	10.4	3	1	...	...	...	9	3	1	...	...	...	...	...	...	...	...	...	...	...	1	1	4	...	...	....
Crawford	12,057	4	12	10	123	101	3.9	12.1	9.7	12.2	10.0	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
Daviess	27,747	29	27	19	294	226	12.3	11.8	8.0	12.7	9.7	3	1	...	...	...	10	2	2	...	...	...	...	...	1	1	...	...	...	...	2	2	...	...	....
Dearborn	21,776	31	25	17	239	207	16.8	14.0	9.2	13.1	11.4	3	...	...	...	...	18	1	...	3	...	...	...	...	3	...	...	...	...	...	3	3	...	...	....
Dubois	19,877	16	27	17	198	200	9.5	16.5	10.0	11.9	12.1	...	...	...	1	...	8	2	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	....
Floyd	30,378	34	31	29	360	345	13.1	12.4	11.2	14.2	13.6	1	2	...	...	4	10	3	1	...	...	...	...	...	1	1	...	1	1	...	2	3	...	...	....
Gibson	30,337	22	27	21	299	295	8.5	10.8	8.1	11.8	11.6	3	...	1	...	...	4	...	...	1	...	...	...	...	1	1	...	...	...	...	2	2	...	...	....
Greene	41,043	32	25	31	330	317	9.1	7.4	9.0	9.6	9.4	2	3	2	1	...	9	2	...	2	2	1	...	...	1	3	...	...	...	...	2	2	...	...	....
Harrison	20,232	16	11	9	189	148	9.3	6.6	5.2	11.2	8.7	3	1	...	...	...	8	1	...	...	...	...	...	...	1	1	...	...	...	...	2	1	...	...	....
Jackson	24,727	20	30	26	287	243	9.5	14.7	12.3	13.9	11.7	6	1	1	1	1	4	1	...	1	3	...	...	...	1	...	...	...	...	...	1	...	...	...	....
Jefferson	20,483	28	20	21	308	307	16.1	11.9	12.0	18.0	17.9	...	1	...	...	...	13	5	1	1	...	...	...	...	1	...	...	...	...	...	1	1	11	8
Jennings	14,248	9	8	13	135	163	7.4	6.8	10.7	11.2	13.7	1	...	1	...	...	4	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	....
Knox	42,358	38	53	48	506	400	10.5	15.2	13.5	14.3	11.4	7	9	...	...	2	9	2	...	1	3	1	...	...	4	4	...	...	...	...	2	3	...	1	....
Lawrence	33,070	34	22	27	294	301	12.1	8.1	9.7	10.6	11.0	8	1	1	1	...	5	2	1	3	1	...	...	...	...	1	1	...	...	2	1	2	...	3	....
Martin	13,335	14	8	10	132	103	12.3	7.3	8.8	11.8	9.3	3	4	1	...	1	5	...	...	...	2	...	...	...	1	3	...	...	...	...	1	1	...	...	....
Ohio	4,329	4	3	1	44	37	10.8	8.4	2.7	12.1	10.2	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	....
Orange	17,324	16	17	10	195	192	10.8	11.9	6.7	13.5	13.3	2	2	...	...	2	8	2	...	1	...	...	...	...	1	1	...	1	...	...	2	...	...	...	....
Perry	18,418	21	17	12	160	152	13.4	11.2	7.6	10.4	9.9	3	1	...	1	2	5	1	1	3	...	...	...	...	2	2	...	...	...	1	1	1	...	...	....
Pike	19,684	13	26	20	186	200	7.7	16.1	11.9	11.3	12.3	4	3	1	...	...	2	...	2	...	...	...	...	...	1	...	...	...	...	...	...	3	...	...	....
Posey	21,885	18	11	15	196	180	9.7	6.1	8.0	10.7	9.8	2	2	...	...	...	6	1	...	...	...	...	...	...	1	2	...	...	...	...	1	1	...	...	....
Ripley	21,918	20	17	14	210	179	10.7	9.4	8.3	11.4	10.8	3	2	...	...	2	6	3	...	2	...	...	...	...	2	1	...	...	...	...	...	...	...	...	....
Scott	8,728	10	6	7	75	74	13.5	8.3	9.3	10.2	10.1	3	...	1	...	...	4	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	....
Spencer	20,676	20	14	22	222	162	11.4	8.2	12.5	12.8	9.3	4	2	2	...	...	8	3	1	2	...	...	...	...	2	3	...	...	...	...	...	...	...	1	....
Sullivan	35,664	30	17	21	273	277	9.9	5.8	7.0	9.1	9.4	5	5	...	...	2	13	1	1	2	...	...	1	...	2	2	...	...	...	...	3	1	...	...	....
Switzerland	9,914	7	6	10	114	101	8.3	7.3	11.8	13.7	12.2	1	1	...	...	1	4	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	....
Vanderburgh	84,258	109	101	101	1,113	1,038	15.2	14.5	14.5	16.0	15.2	9	5	4	4	1	35	10	3	4	4	...	1	2	7	1	...	1	...	1	7	7	...	22	2
Warrick	22,381	15	15	20	174	186	7.9	8.1	10.5	9.3	10.0	1	4	...	...	...	6	...	...	1	...	...	...	...	1	1	...	...	...	...	1	1	...	...	....
Washington	17,445	14	9	12	170	164	9.4	5.9	8.1	11.6	11.2	1	...	...	...	...	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	....
Urban	1,388,540	1,585	1,593	1,360	16,490	14,393	14.3	13.8	12.7	15.1	13.5	237	103	35	21	45	441	130	27	39	31	2	2	8	90	112	3	5	2	9	97	132	...	243	....
Rural	1,552,380	1,367	1,343	1,286	15,686	14,379	10.3	10.5	9.7	12.1	11.1	188	85	27	27	41	536	100	21	56	38	3	1	6	70	77	2	4	2	7	101	93	...	86	....

*1 resident of Marcellus, Mich., died in Goshen.

CITIES	Population, Estimated, 1916	Total Deaths Reported for October, 1916	Total Deaths Reported for September, 1916	Total Deaths Reported for October, 1915	Total Deaths Reported for the Year 1916 to date	Total Deaths Reported for the Year 1915 to same date	Annual Death Rate per 1,000 Population: October, 1916	September, 1916	October, 1915	Rate for Year 1916 to Date	Rate for Year 1915 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	Diarrhoea and Enteritis (under 2 years)	Cerebro-Spinal Fever	Acute Anterior Poliomyelitis	Influenza	Puerperal Septicemia	Cancer	External Causes	Smallpox	Deaths in Institutions	Deaths of Non-Residents
Cities of the First Class. Population 100,000 and over	**265,890**	**327**	**353**	**314**	**3,645**	**3,212**	**14.5**	**16.2**	**14.2**	**16.3**	**14.8**	**29**	**11**	**10**	**4**	**14**	**77**	**39**	**5**	**8**	**5**			**1**	**18**	**13**	**2**	**1**		**1**	**25**	**28**		**90**	
Indianapolis	265,890	327	353	314	3,645	3,212	14.5	16.2	14.2	16.3	14.8	29	11	10	4	14	77	39	5	8	5			1	18	13	2	1		1	25	28		90	16
Cities of the Second Class. Population 45,000 to 100,000	**282,282**	**330**	**313**	**290**	**3,290**	**2,852**	**13.8**	**13.5**	**12.4**	**13.9**	**12.4**	**52**	**23**	**6**	**8**	**8**	**91**	**23**	**8**	**8**	**3**		**1**	**4**	**24**	**25**		**2**		**3**	**17**	**25**		**62**	
Evansville	76,467	97	78	80	923	802	14.9	12.4	12.7	14.4	12.9	8	4	3	4	1	32	6	2	4	3		1	2	7			1		1	7	7		17	8
Fort Wayne	73,338	91	77	66	807	722	14.6	12.7	10.8	13.1	12.1	14	7	1	1	2	28	2	1	1					10	8					1	8		25	10
Terre Haute	68,897	70	79	78	819	765	12.9	13.9	13.5	14.2	13.6	16	6		1	2	16	7	2	2				2	2	10		1		1	5	9		7	1
South Bend	63,580	66	79	66	741	563	12.2	15.0	12.5	13.9	11.0	14	6	2	2	3	15	8	3	1					5	7				1	4	1		13	4
Cities of the Third Class. Population 20,000 to 45,000	**304,643**	**420**	**339**	**292**	**4,151**	**3,157**	**16.2**	**15.9**	**13.5**	**16.3**	**13.7**	**79**	**30**	**8**	**4**	**14**	**104**	**26**	**3**	**11**	**10**				**26**	**38**		**1**	**1**	**1**	**19**	**49**		**70**	
Gary	33,802	48	67	33	516	320	16.7	24.1	11.8	18.3	11.7	18	4	1	2		2	2		1	5				2	9				1	2	6		17	
East Chicago	26,938	33	26	24	391	305	14.4	11.7	13.2	47.3	17.1	11	8	1	1			4			1				2	7						2			
Muncie	25,535	28	32	18	275	235	12.9	15.2	7.3	12.9	11.1	4	2			2	9	3		2					4	2					1	1		1	
Hammond	25,195	46	40	23	438	301	21.5	10.3	11.1	20.8	14.8	7	2			1	8	2		2					4	3					2	12		11	6
Richmond	24,369	32	29	22	303	253	15.4	14.5	10.8	14.9	12.6	8	3	1			10	3		1	1				1	7					3	2			
Anderson	23,626	41	24	27	298	242	20.4	12.3	13.5	15.1	12.4	6				2	15		1	3	1				2	2					2	4		8	1
Elkhart	21,327	24	26	20	235	223	13.2	14.8	11.2	13.3	12.8	8	2				8				1				1	5						2		6	
Michigan City	21,112	24	21	23	237	211	13.4	12.1	13.0	13.4	12.2	5	1	1			4	1							1	2					1	3		5	3
Lafayette	21,061	33	31	27	331	324	18.4	17.9	15.2	18.8	18.6	4	1	1		2	9	4							3						5	3		13	2
New Albany	20,629	32	24	22	293	274	18.3	14.1	12.5	17.0	15.9	1	2			4	9	2	1						1	1		1	1		2	3			
Logansport	20,470	24	29	20	276	222	13.8	17.2	11.6	16.1	13.2	4		1		1	10	1													1	6		2	
Marion	20,360	26	22	33	291	248	15.0	13.1	19.2	17.1	14.7	2	2	1		2	5	1		1					2	1						3		3	2
Kokomo	20,210	29	28	19	265	207	16.9	16.8	11.4	15.7	12.6	1	3	1	1		15	3	1	1	1				3	1						2		4	3
Cities of the Fourth Class. Population 10,000 to 20,000	**152,429**	**160**	**202**	**135**	**1,775**	**1,454**	**12.3**	**16.1**	**11.4**	**13.9**	**12.6**	**27**	**15**	**5**	**4**	**4**	**55**	**13**	**6**	**1**	**5**	**1**		**1**	**7**	**14**				**2**	**9**	**10**		**13**	
Vincennes	17,215	21	22	20	233	181	14.4	15.5	14.0	16.2	12.9	3	4				6				1	1			2	2					2	2		2	
Mishawaka	15,046	13	16	11	145	143	10.2	12.9	8.9	11.5	11.5	5	2				3	1								3					1			5	4
Peru	12,996	13	14	5	136	119	11.8	13.1	4.6	12.5	11.1	1					5	1													1				
Laporte	12,266	13	19	12	158	123	12.5	18.9	11.8	15.4	12.3					1	8	1	1												2	2		1	
New Castle	11,258	10	33	13	137	107	10.4	35.6	15.2	14.5	12.7	1	2	2	1	1	2		1	1	2					3									
Elwood	11,028	15	11	13	115	101	16.0	12.1	13.7	12.4	10.9	5	1	1	1		2	2	2						1	2						1			
Crawfordsville	10,731	13	14	18	131	135	14.3	15.8	20.2	14.5	15.3	2	1		1		4	2						1	1	2								2	
Shelbyville	10,665	12	8	6	124	120	13.2	9.1	6.7	13.8	13.8			1			8	2													1	1			
Huntington	10,062	6	16	9	141	104	6.6	18.2	9.9	15.7	11.7	2	1				2																		
Jeffersonville	10,412	10	9	9	118	103	11.3	10.5	10.1	13.5	11.8	2	1				4	1	1													1			
Brasil	10,115	11	16	12	119	103	12.7	19.2	14.1	14.0	12.3	2	1				4	2			1				1	1					2	2			
Bloomington	10,019	13	19	18	119	119	15.2	22.9	21.6	14.1	14.5	4	1			1	6								2	1				1				1	
Bedford	10,016	10	5	6	99	91	11.7	6.0	7.2	11.7	11.1		1	1	1	1	1	1	1		1									1		1		2	
Cities of the Fifth Class. Population under 10,000	**303,296**	**348**	**326**	**329**	**3,629**	**3,718**	**13.5**	**13.1**	**11.7**	**14.3**	**13.5**	**50**	**24**	**6**	**1**	**5**	**114**	**29**	**5**	**11**	**8**	**1**	**1**	**2**	**15**	**22**	**1**	**1**	**1**	**2**	**27**	**20**		**8**	
Frankfort	9,399	11	19	11	139	121	13.7	24.5	13.9	17.5	15.6	3					4	1						1	2	1					3	2		1	
Columbus	9,153	5	8	5	99	101	6.4	10.6	6.4	12.9	13.3						3														1				
Goshen	8,864	9	13	12	108	109	11.9	17.4	15.9	13.5	14.8	1					1			*1											1	1		2	1
Wabash	8,717	8	6	6	97	88	10.8	8.4	8.1	13.2	12.0	1					7			1												3			
Connersville	8,188	11	8	15	108	105	15.8	11.9	21.7	15.7	15.5		3				5	1	1		1								1						
Whiting	7,887	10	9	3	115	90	14.9	13.8	4.6	17.4	14.1	3		1			1	3		1						3									
Clinton	7,884	15	5	6	104	88	22.3	7.7	9.3	15.8	13.9	6	3					1			2					3						1			
Washington	7,854	12	11	7	114	81	18.0	17.0	10.4	17.3	12.3		1				3	1	1												1	1			1
Valparaiso	7,337	11	5	8	70	62	17.6	8.3	12.9	11.0	10.2	2				2	3	1													1	2		2	1
Linton	7,321	7	6	6	72	47	11.2	9.9	10.0	11.7	7.9						2	1		1					1										
Lebanon	6,947	5	6	7	83	62	8.4	10.4	14.0	14.2	12.6						3	1													1				
Madison	6,934	5	5	5	86	92	8.5	8.7	8.4	14.8	15.9						2			1											1	1		1	
Princeton	6,648	7	11	4	85	78	12.3	20.1	7.1	17.3	14.1			1			2														1	1			
Hartford City	6,562	7	9	8	52	61	12.5	16.6	14.4	9.4	11.2	4					2									3									
Seymour	6,305	3	8	9	72	88	5.6	15.4	16.7	13.6	16.7	1	1								1														
Kendallville	5,781	3	5	2	61	56	6.1	10.5	4.1	12.6	11.9		1				1								2									1	1
Mt. Vernon	5,778	6	5	2	61	71	12.2	10.5	4.1	12.6	14.8		1				1	1																	
Greensburg	5,610	8	5	8	75	81	16.8	10.8	16.8	15.9	17.4						6	1																1	
Portland	5,295	5	11	8	81	51	11.1	25.3	17.8	18.3	11.6	1	1				1			1					1	1					1				
Bluffton	5,237	9	2	4	52	50	20.2	4.6	9.0	11.9	11.5	3					1			1						1					3				
Noblesville	5,213	5	4	2	54	69	11.3	9.3	4.5	12.4	15.9						1	2		1															1
Rushville	5,115	5	4	4	66	66	11.5	9.5	9.2	15.4	15.5	1				1	1	1														2			
Alexandria	5,096	4	7	3	50	61	9.2	16.7	6.9	11.7	14.3	2						1						1											
Aurora	4,790	7	9	6	57	54	17.2	22.8	14.9	14.2	13.7	1					5								2						1				
Martinsville	4,774	9	5	4	67	66	22.2	12.7	9.9	16.8	16.7	1	1				1	2	1												1				
Franklin	4,747	2	3	7	45	74	4.9	7.7	17.5	11.3	18.8	1					1																		
Warsaw	4,650	8	6	7	64	54	20.2	15.7	17.8	16.5	14.0						2														1				
Decatur	4,631	4	5	6	36	52	10.1	13.0	15.3	9.3	13.5	1					2								1	1									
Garrett	4,613	5	5	7	57	44	12.8	13.2	19.3	14.8	12.4			1			3				1										1				1
Sullivan	4,610	2	4	2	37	43	5.1	10.5	5.2	9.6	11.4						2																		
Winchester	4,546	9	6	6	57	56	23.3	16.0	15.7	15.0	14.9	3	1				5									1									
Greenfield	4,448	4	4	4	57	49	10.6	10.9	10.5	15.3	13.1			1																					
Boonville	4,404	7	6	8	57	61	18.7	16.6	21.2	15.5	16.9		1				3													1					
Mitchell	4,268	8	2	2	40	43	22.0	5.7	5.7	11.2	12.5	4														1	1			1					
Tipton	4,230	5	3	3	48	53	13.9	8.6	8.4	13.5	15.1						3														1				
Auburn	4,178	2	6	7	44	50	5.6	17.4	19.9	12.6	14.5		1				1						1												
Lawrenceburg	3,930	5	4	1	52	41	15.0	12.4	2.9	15.8	12.5	1					1														1				
Plymouth	3,928	4	4	6	36	57	12.2	12.4	18.0	10.9	17.4	1	2				1																		
Greencastle	3,850	4	2	3	30	43	12.2	6.3	9.1	9.3	13.4						3								1						1	1			
Tell City	3,709	3	2	2	25	47	9.5	6.5	6.4	8.0	15.4	1					1	1																	
Columbia City	3,683	5	1	2	39	31	16.0	3.3	6.4	12.6	10.2					1	1								1										
Attica	3,500	1	2	3	52	36	3.3	6.9	10.1	17.7	12.4		1								1														
Union City	3,449	6	1	1	33	36	20.5	3.5	3.4	11.4	12.7					1	3	1														1			
Rochester	3,364	2	4	6	57	48	7.0	14.4	20.9	20.2	17.0	1														1					1				
Jasonville	3,310	8	2	2	32	28	28.4	7.3	7.1	11.5	10.1	1	1		1		1	1			1					2					1				
Gas City	3,224	2	7	4	38	28	7.3	26.4	14.6	14.1	10.4						1																		
Dunkirk	3,031	1	3	1	21	28	3.8	12.0	3.8	8.2	11.0	1																				1			
North Vernon	2,960	2	4	1	29	45	7.9	16.4	3.9	11.7	18.2							1										1							
Angola	2,840	2	†	5	35	27	8.3	†	21.0	14.7	11.5		1				1														1				
Bicknell	2,809	7	8	7	62	47	29.4	34.7	29.3	26.4	20.1	1	2					1							1	1									
Montpelier	2,786	3	7	2	38	25	12.6	30.5	8.4	16.3	10.7	1						1								1						1			
Rockport	2,736	10	3	3	47	29	4.3	13.3	12.9	20.5	12.6	1	1	1			6	1	1	2					2										
Crown Point	2,621	3	8	2	48	25	13.5	37.2	9.0	21.9	11.5			1			1				1				1							1			
Loogootee	2,539	3	†	2	25	27	13.9	†	9.5	10.8	13.1		1				2																		
Batesville	2,531	2	4	4	30	27	9.3	19.2	19.1	14.2	13.2						1	1																	
Huntingburg	2,464	4	5	4	33	41	19.1	24.7	19.0	16.0	19.9						2	1																	
Rensselaer	2,458	1	3	3	35	28	4.8	14.8	14.4	17.0	12.9	1																							
Jasper	2,400	4	3	3	26	9	19.6	15.2	14.9	14.0	11.2						2	1				1									1				
Monticello	2,190	6	†	2	35	18	22.3	†	10.7	19.1	9.6	1					2	1								1									
Ligonier	2,173	5	1	1	31	22	27.1	5.6	5.4	16.5	12.1						3									1					1	1			
Delphi	2,171	3	1	2	24	23	16.2	5.6	10.8	13.2	12.7						1																		
Cannelton	2,130	4	3	1	39	23	21.1	17.1	5.5	21.9	12.9								1												1				
Covington	2,069	†	2	2	24	21	†	11.5	11.3	13.9	12.1																								
Butler	1,818	1	3	1	28	23	6.4	20.1	6.4	18.4	15.1						1																		
Veedersburg	1,812	2	1	2	16	16	13.0	6.7	13.0	10.5	10.6						1																		
Rising Sun	1,513	2	2	1	25	21	15.6	16.1	7.7	20.0	16.6						1			1															
Vevay	1,256	†	†	†	12	13	†	†	†	11.4	12.3																								

Mortality of Indiana for October, 1916. (Stillbirths Excluded.)

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL	Population Estimated 1916	Total Deaths Reported for October, 1916	Total Deaths Reported for September, 1916	Total Deaths Reported for October, 1915	Total Deaths Reported for the year 1916 to date.	Total Deaths Reported for the Year 1915 to same date	Annual Death Rate per 1,000 Population					Important Ages											
							October, 1916	September, 1916	October, 1915	Rate for Year 1916 to date	Rate for Year 1915 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	2,860,920	2,952	2,935	2,646	32,176	28,772	12.1	12.5	11.0	13.4	12.2	425	14.4	188	6.3	62	2.1	48	1.6	86	2.9	977	33.1
Northern Counties	998,000	997	1,056	907	11,304	9,618	11.7	12.9	10.8	13.6	11.7	163	16.3	57	5.7	16	1.6	14	1.4	22	3.2	337	33.8
Central Counties	1,178,368	1,305	1,271	1,148	13,724	12,595	13.0	13.1	11.5	13.8	12.9	180	13.8	81	6.2	30	2.3	25	1.9	44	3.3	421	32.2
Southern Counties	684,552	650	608	591	7,148	6,559	11.2	10.8	10.2	12.5	11.6	82	12.6	50	7.6	16	2.4	9	1.3	20	3.0	219	33.6
All Cities	1,308,540	1,585	1,593	1,360	16,490	14,393	14.3	13.8	12.7	15.1	13.5	237	14.9	103	6.4	35	2.2	21	1.3	45	2.8	441	27.8
Over 100,000	265,890	327	353	314	3,645	3,212	14.5	16.2	14.2	16.3	14.8	29	8.8	11	3.3	10	3.0	4	1.2	14	4.2	77	23.5
45,000 to 100,000	282,282	330	313	290	3,290	2,852	13.8	13.5	12.4	13.9	12.4	52	15.7	23	6.9	6	1.8	8	2.4	8	2.4	91	27.6
20,000 to 45,000	304,643	420	399	292	4,151	3,157	16.2	15.9	12.5	16.3	13.7	79	18.8	30	7.1	8	1.9	4	.9	14	3.3	104	24.7
10,000 to 20,000	152,429	160	202	135	1,775	1,464	12.3	16.1	11.4	13.9	12.6	27	16.8	15	9.3	5	3.1	4	2.5	4	2.5	55	34.3
Under 10,000	303,296	348	328	329	3,629	3,718	13.5	13.1	11.7	14.3	13.5	50	14.3	24	6.8	6	1.7	1	.2	5	1.4	114	32.7
Country	1,552,380	1,367	1,342	1,286	15,686	14,379	10.3	10.5	9.7	12.1	11.1	188	13.7	85	6.2	27	1.9	27	1.9	41	2.9	536	39.2

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		Diarrhœa 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	230	94.9	48	19.8	95	39.2	69	28.4	5	2.0	3	1.3	14	5.7	160	66.0	189	78.0	5	2.0	9	3.7	4	1.6	16	6.6	198	81.7	225	92.8	...	...
Northern Counties	61	72.1	8	9.4	26	30.7	15	7.7	...	...	1	1.1	2	2.3	59	69.7	76	89.9	2	3.2	1	1.1	...	...	5	5.9	66	78.0	86	101.7	...	...
Central Counties	121	121.2	26	26.1	41	41.0	37	37.0	2	2.0	1	1.0	8	8.0	68	68.1	82	82.1	2	2.0	5	5.0	2	2.0	5	5.0	94	94.1	101	101.2	...	...
Southern Counties	48	82.8	14	24.1	28	28.3	17	29.3	3	5.1	1	1.7	4	6.9	33	56.9	31	53.4	1	1.7	3	5.1	2	3.4	6	10.3	38	65.5	38	65.5	...	...
All Cities	130	117.3	27	24.3	39	25.2	31	27.9	2	1.8	2	1.8	8	7.2	90	81.3	112	101.0	3	2.7	5	4.5	2	1.8	9	8.1	97	87.6	132	119.1	...	...
Over 100,000	39	173.1	5	22.2	8	35.5	5	22.2	...	...	...	...	1	4.4	18	79.9	13	57.7	2	8.8	1	4.4	...	...	1	4.4	25	111.0	28	124.3	...	...
45,000 to 100,000	23	96.2	8	33.4	8	33.4	3	12.5	...	...	1	4.1	4	16.7	24	100.3	25	104.5	...	...	2	8.3	...	...	3	12.5	17	71.1	25	104.5	...	...
20,000 to 45,000	26	100.7	3	11.6	11	42.6	10	38.7	...	...	...	...	...	...	26	100.7	38	147.2	...	...	1	3.8	1	3.8	1	3.8	19	73.6	49	189.9	...	...
10,000 to 20,000	13	100.7	6	46.4	1	7.7	5	38.7	1	7.7	...	...	1	7.7	7	54.2	14	108.4	...	...	...	...	...	...	2	15.4	9	69.7	10	77.4	...	...
Under 10,000	29	112.9	5	19.4	11	42.8	8	31.1	1	3.8	1	3.8	2	7.7	15	58.4	22	85.6	1	3.8	1	3.8	1	3.8	2	7.7	27	105.1	20	77.8	...	...
Country	100	76.0	21	15.9	56	42.5	38	28.9	3	2.2	1	.7	6	4.5	70	53.6	77	58.5	2	1.5	4	3.0	2	1.5	7	5.3	101	76.8	93	70.7	...	...

U. S. Department of Agriculture, Weather Bureau. Condensed Summary for Month of October, 1916.

J. H. ARMINGTON, SECTION DIRECTOR, IN CLIMATOLOGICAL DIVISION

TEMPERATURE—IN DEGREES FAHRENHEIT

Section Average	Departure from the Normal	Extremes				
		Station	Highest	Date	Station	Lowest	Date
54.5	−0.2	Rome	97	7	Rome	21	22

PRECIPITATION—IN INCHES AND HUNDREDTHS

Section Average	Departure from the Normal	Extremes			
		Station	Greatest Monthly Amount	Station	Least Monthly Amount
2.13	−0.50	Columbus	3.84	Greenfield	0.69