

# 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.

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## BIRTHS FOR OCTOBER, 1919.

Total births, 5,091; (stillbirths excluded); state rate, 20.7.  
Males numbered, 2,605; females, 2,486.  
White males, 2,549; white females, 2,414.  
Colored births, 128; males 56; females, 72.  
Stillbirths, 156; white, 148; colored, 8.

The Northern Sanitary Section, population 1,042,514, reports 1,859 births; rate 21.4.

The Central Sanitary Section, population 1,219,131, reports 2,037 births; rate 20.0.

The Southern Sanitary Section, population 686,443, reports 1,195 births; rate 20.9.

The highest birth rate, Vermillion County, 39.5.

The lowest birth rate, Union County, 5.7.

Total birth to date for 1919, 48,046.

Total births to date for 1918, 64,404.

## ABSTRACT OF MORTALITY STATISTICS FOR OCTOBER, 1919.

Total deaths reported, 2,503; rate 10.2. In the preceding month, 2,364 deaths; rate 9.6. In the same month last year, 5,889; rate 24.3. Deaths by important ages were: Under 1 year of age, 395; or 15.7 per cent of total; 1 to 10, 178; 10 to 20, 104; 65 and over, 922 or 36.8 per cent of total.

**SANITARY SECTION: THE NORTHERN SANITARY SECTION**, population, 1,042,514, reports 870 deaths. In the preceding month 849 deaths; rate, 9.8. In the same month last year, 2,276 deaths; rate 6.9.

**THE CENTRAL SANITARY SECTION**, population, 1,219,131, reports 1,130 deaths; rate 11.1. In the preceding month, 1,015 deaths; rate 9.9. In the same month last year, 2,544 deaths; rate 25.2.

**THE SOUTHERN SANITARY SECTION**, population, 686,443, reports 503 deaths; rate 8.8. In the preceding month 500 deaths; rate 8.7. In the same month last year, 1,069 deaths; rate 18.7.

**REVIEW OF SECTIONS:** The Central Section presents the highest death rate, 11.1, which is .9 higher than that for the entire state. The Central Section also presents the highest death rate for scarlet fever, lobar and bronchopneumonia, cerebrospinal fever, poliomyelitis, puerperal septicemia and cancer. The Northern Section presents the highest death rate for typhoid fever, measles, whooping cough, diarrhea and enteritis, influenza and external causes. The Southern Section presents the highest death rate for tuberculosis, diphtheria and croup.

**RURAL:** Population, 1,701,179, reports 1,340 deaths; rate 9.5. In the preceding month, 1,242 deaths; rate 8.7. In the same month last year, 2,889 deaths; rate 20.4.

**URBAN:** Population, 1,246,909, reports 1,163 deaths; rate 11.2. In the preceding month, 1,122 deaths; rate 10.8. In the same month last year 3,000 deaths; rate 29.7. The cities named present the following death rates: Indianapolis, 11.2; Evansville, 9.5; Fort Wayne, 8.9; Terre Haute, 11.5; South Bend, 7.9; Gary, 8.3; East Chicago, 9.8; Hammond, 11.6; Muncie, 18.1; Richmond, 17.4; Anderson, 15.2; Elkhart, 11.1; Michigan City, 8.0; Lafayette, 12.2; Kokomo, 14.9; Logansport, 7.8; New Albany, 9.1; Marion, 21.6.

## SUMMARY OF MORBIDITY AND MORTALITY FOR OCTOBER, 1919.

Scarlet fever was reported as the most prevalent infectious disease. The order of prevalence was as follows: Scarlet fever, typhoid fever, diphtheria and croup, pulmonary tuberculosis, tonsillitis, influenza, acute rheumatism, chickenpox, diarrhea and enteritis, dysentery, bronchial pneumonia, lobar pneumonia, measles, whooping cough, malaria fever, poliomyelitis, intermittent and remittent fever, other forms of tuberculosis, erysipelas, rabies in animals, cerebrospinal fever, trachoma, smallpox, anthrax, puerperal fever, ophthalmia neonatorum, rabies in human.

**SMALLPOX:** 159 cases in 33 counties with no deaths. The counties reporting smallpox present were: Allen, 1; Cass, 1; Clinton, 1; Dearborn, 4; Elkhart, 4; Fountain, 19; Fulton, 1; Grant, 8; Hamilton, 3; Howard, 30; Huntington, 2; Jackson, 5; Jasper, 1; Jefferson, 1; Knox, 1; Kosciusko, 1; Lake, 6; Laporte, 19; Madison, 5; Marion, 6; Noble, 3; Porter, 1; Randolph, 1; Shelby, 1; Steuben, 6; St. Joseph, 5; Tippecanoe, 8; Tipton, 2; Vermillion, 9; Vigo, 1; Warren, 1; Warrick, 1; Wayne, 1.

**TUBERCULOSIS:** 211 deaths of which 174 were of the pulmonary form and 37 other forms. The males numbered 107; females 104. Of the males, 17 were married in the age period 18 to 40 and left 34 orphans under 12 years of age. Of the females 24 were married in the same age period as above, and left 48 orphans under 12 years of age. Total number of orphans made in one month by this preventable disease, 82. Number of homes invaded, 196.

**PNEUMONIA:** 116 deaths, rate 47.2 per 100,000. In the preceding month, 67 deaths; rate 27.3. In the same month last year, 1,261 deaths; rate, 519.7.

**INFLUENZA:** 146 cases in 18 counties with 27 deaths. In the preceding month, 62 cases in 17 counties with 18 deaths. In the same month last year, 45,430 cases in 92 counties with 2,030 deaths.

**TYPHOID FEVER:** 145 cases reported in 44 counties with 40 deaths. In the preceding month, 147 cases in 50 counties with 48 deaths. In the same month last year, 180 cases in 52 counties with 75 deaths.

**SCARLET FEVER:** 420 cases in 64 counties with 4 deaths. In the preceding month, 257 cases in 44 counties with 4 deaths. In the same month last year, 164 cases in 40 counties with 3 deaths.

**DIPHTHERIA:** 265 cases in 64 counties with 28 deaths. In the preceding month, 194 cases in 47 counties with 17 deaths. In the same month last year, 173 cases in 38 counties with 34 deaths.

**MEASLES:** 47 cases in 10 counties with 1 death. In the preceding month, 30 cases in 8 counties with 1 death. In the same month last year, 62 cases in 14 counties with 1 death.

**POLIOMYELITIS:** 13 cases in 9 counties with 7 deaths. In the preceding month, 6 cases in 6 counties with 3 deaths. In the same month last year, 5 cases in 4 counties with 4 deaths.

**SYPHILIS:** 422 cases reported in 29 counties with 18 deaths.

**GONORRHEA:** 425 cases reported in 45 counties.

**EXTERNAL CAUSES:** 182; males, 127; females, 55.

**SUICIDES:** 22; males, 13; females, 9.

Suicide by poison, 9; by hanging or strangulation, 3; by drowning, 2; by firearms, 7; by other means, 1.

**ACCIDENTAL OR UNDEFINED:** 152; males, 108; females, 44.

Poisoning by food, 1; other acute poisonings, 2; conflagration, 1; burns, conflagration excepted, 7; absorption of deleterious gases, conflagration excepted, 7; accidental drowning, 7; traumatism by firearms, 3; traumatism by fall, 20; traumatism in mines, 10; traumatism by machines, 7; railroad accidents and injuries, 26; automobile accidents and injuries, 36; injuries by other vehicles, 2; bicycles, 1; motorcycles, 1; injuries by animals, 4; starvation, 1; lightning, 1; electricity, lightning excepted, 2; fractures, cause not specified, 1; other external violence, 12.

**HOMICIDE:** 8; males, 6; females, 2.

Homicide by firearms, 7; homicide by other means, 1.

### HEALTH OFFICERS, ATTENTION Delayed Birth and Death Records

Each month the statistical department receives certificates for births and deaths that have occurred during the preceding month, 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.

Adams, 1; Allen, 2; Bartholomew, 1; Benton, 5; Boone, 1; Brown, 2; Cass, 3; Clark, 4; Clay, 3; Clinton, 1; Crawford, 2; Daviess, 5; Decatur, 2; Dekalb, 33; Delaware, 4; Elkhart, 1; Floyd, 4; Franklin, 1; Gibson, 5; Grant, 10; Greene, 7; Hancock, 2; Harrison, 2; Henry, 2; Howard, 2; Huntington, 2; Jasper, 4; Jay, 1; Johnson, 1; Knox, 12; Kosciusko, 1; Lagrange, 1; Lake, 27; Laporte, 11; Lawrence, 7; Madison, 5; Marion, 5; Miami, 22; Monroe, 1; Montgomery, 1; Morgan, 2; Newton, 3; Noble, 2; Orange, 1; Perry, 1; Porter, 2; Putnam, 3; Randolph, 1; Ripley, 8; Rush, 2; Spencer, 1; Starke, 2; Steuben, 2; St. Joseph, 19; Sullivan, 10; Tippecanoe, 5; Vanderburgh, 13; Vermillion, 4; Vigo, 13; Wabash, 1; Warrick, 10; Washington, 1; Whitley, 2.

#### DEATHS.

Allen, 1; Benton, 5; Boone, 2; Clark, 5; Clay, 2; Clinton, 1; Crawford, 1; Dearborn, 1; Dekalb, 18; Delaware, 2; Dubois, 1; Elkhart, 3; Floyd, 1; Fountain, 1; Fulton, 1; Gibson, 3; Grant, 5; Harrison, 1; Hendricks, 1; Henry, 1; Huntington, 1; Jackson, 1; Jackson, 1; Jasper, 1; Jay, 1; Knox, 2; Kosciusko, 2; Lake, 5; Laporte, 3; Madison, 3; Marion, 9; Marshall, 2; Martin, 3; Miami, 8; Monroe, 1; Montgomery, 2; Morgan, 2; Orange, 1; Parke, 1; Pike, 1; Porter, 1; Randolph, 1; Ripley, 6; Starke, 1; St. Joseph, 2; Sullivan, 3; Vanderburgh, 2; Vermillion, 5; Vigo, 1; Warrick, 2; Wayne, 1; Whitley, 1.

### REPORT OF BACTERIOLOGICAL LABORATORY INDIANA STATE BOARD OF HEALTH FOR OCTOBER, 1919

WILL SHIMER, M. D., Superintendent.

Sputum for tubercle bacilli—		
Positive.....	137	
Negative.....	590	
		727
Urine for tubercle bacilli—		
Negative.....	3	
		3
Feces for tubercle bacilli—		
Negative.....	1	
		1
Throat cultures for diphtheria bacilli—		
Positive.....	189	
Suspicious.....	26	
Negative.....	264	
Unsatisfactory.....	17	
		496

Epidemic cultures for diphtheria bacilli—	
Positive.....	45
Suspicious.....	49
Negative.....	587
Unsatisfactory.....	2
	683
Widal tests for typhoid fever—	
Positive.....	11
Negative.....	139
	150
Widal tests for paratyphoid fever "A"—	
Negative.....	4
	4
Widal tests for paratyphoid fever "B"—	
Negative.....	4
	4
Wassermann tests for syphilis—	
Positive.....	343
Negative.....	600
Unsatisfactory.....	92
	1,035
Brains for rabies—	
Dogs:	
Positive.....	2
Cats:	
Positive.....	1
	3
Blood for counts.....	18
	18
Blood for malaria plasmodia—	
Positive.....	2
Negative.....	13
	15
Pus for gonococci—	
Females:	
Positive.....	260
Suspicious.....	89
Negative.....	121
Unsatisfactory.....	9
Males:	
Positive.....	158
Suspicious.....	58
Negative.....	122
Unsatisfactory.....	5
Sex not given:	
Positive.....	1
Suspicious.....	3
Negative.....	8
Unsatisfactory.....	14
	848
Pus miscellaneous.....	3
	3
Pathological tissues—	
Carcinoma:	
Carcinoma of lip.....	2
Carcinoma of mouth.....	1
Carcinoma of breast.....	1
Carcinoma of hand.....	2
Carcinoma location not given.....	2
Miscellaneous tissues.....	15
Gasserian ganglions.....	2
	25
Urine for general analysis.....	20
Urine for gonococci, positive.....	1
Stomach contents.....	1
	20
Total number examinations.....	4,037
Doses of antityphoid vaccine prepared and sent out..	135

### OUTFITS PREPARED AND SENT OUT DURING OCTOBER, 1919.

Tuberculosis.....	969
Diphtheria.....	648
Diphtheria epidemics.....	800
Widals.....	262
Wassermanns.....	1,458
Malaria.....	19
Blood counts.....	23
Gonococci.....	772
Total number.....	4,951

### REPORT ON "NEO-SALVARSAN" SENT DURING THE MONTH OF OCTOBER 1919 TO U. S. P. H. S. CLINICS.

CLINICS.	15 gr.	3 gr.	45 gr.	6 gr.	75 gr.	9 gr.	1.5 gr.	1.8 gr.	3 gr.	Total.
Anderson.....	0	0	0	20	0	25	0	0	0	45
Columbus.....	0	0	0	0	0	15	0	0	0	15
East Chicago.....	0	0	0	0	0	0	0	0	0	0
Evansville.....	0	10	10	40	0	50	0	0	0	110
Hammond.....	0	0	0	0	0	0	0	0	0	0
Indianapolis, Clinic	40	50	55	100	0	95	0	40	0	380
Indianapolis, Hos-										
pital.....	5	0	5	0	0	35	10	10	1	66
Kokomo.....	0	0	0	70	0	50	5	10	5	140
Madison.....	3	3	3	9	0	2	0	0	0	20
Marion.....	0	0	0	0	0	0	0	0	0	0
Michigan City.....	10	0	0	10	0	20	0	0	0	40
Muncie.....	0	0	10	20	0	25	0	0	0	55
New Castle.....	12	0	0	6	0	6	0	0	0	24
South Bend.....	0	0	0	25	0	25	0	0	0	50
Terre Haute.....	0	25	25	70	0	70	0	0	0	190
Total to Clinics.....	70	88	108	370	0	418	15	60	6	1,135
Misc. sent.....	0	1	0	15	0	1	0	0	0	17
Total.....	70	89	108	385	0	419	15	60	6	1,152

### THINGS OF INTEREST FROM THE LABORATORY.

We are continually finding out new things about the recent influenza epidemic. Among others are the following:—

1. Influenza and the complicating pneumonia were present among the troops in the United States Army at least a year before the epidemic appeared.

2. Influenza and the complicating pneumonia are now present in the civil population but does not become epidemic.

3. Influenza and the complicating pneumonia killed most in the age groups having the greatest resistance against diseases, sparing the very young and the very old.

4. Influenza and the complicating pneumonia killed more of the races and peoples having the fewest cases of tuberculosis, while the negroes and the Irish among whom tuberculosis is so prevalent, had a lower death rate in the age group most affected in other races.

As a guide to a comprehensive study of the last influenza epidemic the committee on statistical investigation of the American Public Health Association, formulated the following outline:—

In any phenomenon of infectious disease there are three physical elements. (1) *Invading organism or group of organisms*; (2) the *host or population receiving the invader*; (3) the *external environment of both invader and host*.

#### 1. The invader:—

- (a) The size of the dose of infection.
- (b) The frequency of infection.
- (c) Tendency of invader to *specific localization*.
- (d) *Infectivity* (or power of invader to produce disease)

(e) *Virulence* (or power of invader to produce death).

2. The host:—

(a) Opportunity for receiving dose of infectious material

- (1) Density of population
- (2) Transport system
- (3) Public assembly.

(b) Natural and acquired immunity to

- (1) Invasion
- (2) multiplication of invader and
- (3) poisons produced by invader.

(c) Resistance factors:—

- (1) Nutrition
- (2) Physical condition
- (3) Fatigue
- (4) Personal habits
- (5) Other diseases.

3. External environment:—

(a) Temperature and humidity may affect

- (1) Explosiveness or epidemicity of epidemic
- (2) Time distribution
- (3) Aggregate of epidemic damage regardless of explosiveness or time distribution.
- (4) Infectivity of the invader at various stages of the epidemic wave.
- (5) Virulence of the invader at various stages of the epidemic wave.

We are continually learning new things about influenza but not the fundamental things, *e. g.*, what is the etiology and its nature? However, we must always keep in mind that the invader and host are living organisms capable of modifying their infectivity, virulence and power of resistance for each other.

There is some consolation in the thought that when we discover the cause of influenza we will probably be able to do the same for measles, scarlet fever, chickenpox and smallpox, a group of diseases having many of the general epidemic characters of influenza.

## REPORT OF THE DEPARTMENT OF FOOD AND DRUGS FOR THE MONTH OF OCTOBER, 1919

H. E. BARNARD, State Food and Drug Commissioner.

During the month of October 6 canning factories were graded "bad" by food and drug inspectors: one cream station, 1 drug store and 1 restaurant, also, of the 800 food and drug establishments inspected, were similarly classified.

These plants, station, store and restaurant were given official notice to make improvements of a sanitary character, and forbidden to continue business until such changes were effected. Follow-up inspections will determine whether the orders of the inspectors have been complied with and are being observed.

The inspectors, during the month found 20 canning factories which they classed as "poor", 61 "fair", 65 "good", and 4 "excellent," of the 156 visited.

Of 104 drug stores inspected, 10 were graded "excellent", 63 "good", 20 "fair", and 11, "poor".

Notices were issued to 78 plants, 70 of which were unsanitary, and 8 of which were improperly constructed, that unless specific alterations are made within five days, condemnations would operate against them. These included 43 soft drink parlors, which were not sterilizing their service glasses, 15 drug stores, 3 bakeries, 4 cream stations, 1 grocery, 3 restaurants and 1 dairy.

During the month 18 analyses of foods were made, disclosing illegal samples of beer, cider and ice cream.

The following tables represent the activities of the Food and Drug Department for the month.

SUMMARY OF SANITARY INSPECTIONS DURING THE MONTH OF OCTOBER, 1919.

CLASSIFICATION	Number Inspected	Number Excellent	Number Good	Number Fair	Number Poor	Number Bad
Bakeries.....	27		23	12	2	
Bottling Works.....	2		2			
Canning Factories.....	156	4	65	61	20	6
Cold Storage Houses.....	2		1	1		
Confectioneries.....	49	1	26	18	4	
Creameries.....	22		17	6		
Cream Stations.....	66		29	23	11	1
Dairies.....	9		6	3		
Drug Stores.....	104	10	52	20	11	1
Fruits and Vegetables (Stands).....	1			1		
Flour Mills.....	9		8	1		
Groceries (Wholesale).....	3		3			
Groceries (Retail).....	135	1	102	30	1	
Hotels and Restaurants.....	62		34	27		1
Ice Cream Factories.....	10		4	5	3	
Ice Cream Parlors.....	51		9	38	4	
Meat Markets.....	38		26	10	2	
Milk Plants.....	4		3	1		
Poultry and Produce Houses.....	4		1	3		
Slaughter Houses.....	4		1	2	1	
Soft Drink Parlors.....	32			32		
Total.....	80	16	422	263	91	9

SUMMARY OF NOTICES ISSUED DURING THE MONTH OF OCTOBER, 1919

CLASSIFICATION	Reasons for Condemnation		Total
	Unsanitary Conditions	Improper Construction	
Bakeries.....	3	2	5
Cream Stations.....	4		4
Dairies.....	1	3	4
Drug Stores.....	15		15
Groceries.....	1		1
Restaurants.....	3	3	6
Soft Drink Parlors.....	43		43
Total.....	70	8	78

ANALYSES OF FOODS AND DRUGS DURING THE MONTH OF OCTOBER, 1919

CLASSIFICATION.	Number Legal	Number Illegal	Total
Beverages—			
Beer.....		1	1
Cider.....		2	2
Cocoa.....	1		1
Milk Products—			
Milk (dairy).....	4		4
Milk (cream).....	2		2
Butter.....	5		5
Ice cream.....		1	1
Sausage.....	1		1
Vinegar.....	1		1
Total.....	14	4	18
DRUGS			
Aspirin Tablets (5 gr.).....	4		4
Hair Tonic.....	1		1
Linsed.....		2	2
Salol Tablets (5 gr.).....	1		1
Total.....	6	2	8

**EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS:** Impairment of resonance early appears at the following points: Point 1, is one centimeter below the clavicle, at the junction of the inner third and the outer two-thirds. Point 2, is the same distance above the clavicle on the same vertical line. Point 3, is at the center of a line drawn from

the acromion to the spinal process of the second dorsal vertebra. Point 4, is at the intersection of the acromio-mastoid line and the line named under point 3. Point 5, is one centimeter below the clavicle. Point 6, is just inside the acromion and above the acromio-cervical line. Percussion should be with the middle finger on the nail of the index finger applied horizontally, the patient seated or standing, the arms pendant. The percussion should be light and then heavy. The less the difference between the results of light and strong percussion at point 6 the greater the probability of a lesion of the apex.

**BENJAMIN FRANKLIN ON COLDS:** Franklin was indeed a close observer. He could and did perceive important facts and truths when other people saw nothing. In regard to catching cold he wrote over one hundred years ago as follows:

I am satisfied from observation that, besides the general colds, now termed influenza (which may possibly spread by contagion as well as by a particular quality of the air), people often catch cold from one another when shut up together in close rooms and coaches, and when sitting near and conversing so as to breathe in each other's transpiration. \* \* \* From these causes, but more from too full living, with too little exercise, proceed, in my opinion, most of the disorders which, for about 150 years past, the English called colds.

#### UNSANITARY.

Secretary Hurty has been very radical along many lines, but it will be a long time before he gets everything cleaned up, and according to his notion.

We are impressed however, that the secretary is not a regular attendant at church service, for if so, it is hardly possible that he would overlook a matter of very great importance.

We refer to the manner in which the song books are used.

All over Indiana, and in every church there is a pile of song books lying on the table, and in some instances have been the property of the church for years. These books are passed out every Sunday, and during revivals every night for year in and year out. They are touched and handled by every hand in the church, and in not a few instances persons may be seen gnawing at the corners of the cover.

Churches are very careful about their communion cups, and other features of a sanitary character, but have overlooked one of the important things.

Churches should make it a rule to fumigate all their singing books at least once a quarter. The time is rapidly approaching when all church music will be rendered by the choir only.—Milford Mail.

#### TUBERCULOSIS.

The Indiana State Board of Health took up the fight against tuberculosis in 1900. The first step was to issue a circular for general distribution. This consisted of 8 pages without illustrations. The edition was 10,000. These circulars were sent out from time to time to families where the disease existed, only a few of them being sent to well persons.

At least a more mature idea appeared, and that was to place special emphasis upon prevention. The circular was rewritten, and its whole tone was concerning the anti-consumption life. The second edition of the circular was for 10,000 and was distributed within two years. The third

edition was still larger and contained illustrations. All of the illustrations referred to the outdoor life. This circular also contained a dietary which was recommended for those who found themselves slipping backward in health.

In 1906, the circular which is at present used by the State Board of Health was published. In all, 200,000 of these circulars have been sent out to the people of Indiana. In 1907 the Board placed its exhibit on the road. The Secretary looked after it himself. By correspondence, arrangements were made to show the exhibit for one day in county seats. One lecture upon the prevention and cure of the disease being given in the evening, and illustrated with stereopticon. This work was continued by the Secretary until August, 1910, when Dr. Wm. F. King, now assistant Secretary was employed as Educational Secretary. The exhibit was enlarged and trunks of special make purchased to contain it. New slides were prepared, illustrating tuberculosis conditions in Indiana. Previously, stock tuberculosis slides purchasable from dealers were used. During 1910 and 1911, Dr. King took the exhibit from town to town, staying a week in each place, giving illustrated lectures every night, also visiting the schools, also through the county superintendents seeking an opportunity to talk to the township trustees upon the subject of school hygiene.

Beginning 1911, a moving picture machine was added to the exhibit, and Dr. John Owens was employed as Educational Secretary with an assistant to help him. Again, the exhibit was enlarged, and at the present time consists of over 80 charts showing graphically the status of consumption in Indiana; also pictures illustrating the same subject; also diagrams, mottoes, photographs, models, and pathological specimens. Several large cartoons, 3 by 4 feet, prepared by an artist also belong to the collection. Several banners, having upon them legends concerning consumption are used. One of these banners has on it—"Consumption is always preventable" and is 12 feet long. Another of the same length has upon it—"Consumption is curable in the beginning". These banners attract much attention. The moving picture machine was, of course, a great addition, and has materially strengthened the exhibit.

During the time the exhibit has been on the road, about 500 lectures upon consumption have been given, all of them illustrated, and the number of people addressed has been estimated at 100,000. One hundred and ten thousand consumption circulars have been distributed.

Shortly after the first circulars were printed and their distribution begun, letters of inquiry concerning the disease were frequently received, and the correspondence of this character has been steady ever since. The number of letters of inquiry that have been answered, and the number of special letters of instruction concerning the disease cannot be stated.

In 1901, the State Board of Health sent a communication to the legislature recommending that a consumption hospital be created. No attention whatever was paid to the letter. In the two years preceding the legislature of 1903, an active campaign by letter was carried on with influential persons, and considerable progress made, fully 50 persons becoming interested in the matter. The legislature of 1905 created a commission to examine into the matter and report to the succeeding legislature. Governor Hanley took a great interest in the work and with very considerable pains selected the members of the commission. This commission, after organization, traveled over the country examining the various sanatoria and gathered information upon the subject. The outcome of the commission's work was a bill "to establish a hospital in the state of Indiana for the treatment of incipient pulmonary tuberculosis and making an appropriation therefor." The bill met with very considerable opposition,

the usual cry of economy being set up against it. The law created a commission composed of five members who were given power to purchase land for the hospital. An appropriation of \$30,000 was made for this purpose. After careful examination of several sites offered, it was finally decided to purchase ground in Parke county near Rockville. Finally about 500 acres, well adapted for the purpose, were purchased. The legislature of 1909 appropriated money for the building and furnishing of the same, the institutions being completed and occupied in 1910. The State Board of Health was active in all this work, carrying on an active propaganda for eight years.

Through its accurate vital statistics, the State Board has made a special study of tuberculosis since 1909. It is now known that the highest state rate occurred in 1904, it being 195 per 100,000 people. The lowest rate occurred in 1911, the same being 153.9 per 100,000. The average state rate for the ten years ending with 1911 was 178.8 per 100,000. A map of the state constructed from these statistics show that Crawford county has the highest death rate, namely 272.4; and Benton county the lowest, namely 71.8.

The exhibit spoken of above is still on the road, and its bookings show that one town will be visited each week in the year, and the usual number of public lectures, each illustrated with still and moving pictures will be delivered. The vital statistics for 1911 have been put into graphic form and they show a decreased death rate from consumption of about 7 per cent. This is not a heavy decrease, but it was expected that results from the anti-consumption work would be slow, and so there is no disappointment. It is certainly true the people are now pretty well informed as to the cause of consumption and the method of life through which it is generally engendered. The next step is to induce them to comply with the natural conditions of health which are necessary to successfully combat the disease.

**PIGS, CHICKENS AND COWS** when kept in cities and towns are almost certain to produce insanitary conditions. The exclusion of animals from towns is immediately attended by an improvement in street and yard cleanliness and a decrease of flies and other insects. A sanitary inspector of experience entered a small town and found hogs, chickens and cows were kept by about one-half of the inhabitants. He immediately said—"In the warm months these people suffer from flies, bed bugs, ants, roaches, lice and all kinds of insects." He said this because it was his observation that where these animals were closely associated with human beings, as in this particular town, these insects abound. Insects frequently carry disease, and, of course, those communities which foster insects must suffer therefrom. We hear people talk about "keeping pig pens clean". This is an impossibility, unless a pig pen has a cement floor and bell trap sewer and there is plenty of water on hand to flush the pen. I never yet have seen in a little town what could be called a sanitary pig pen, nor have I ever seen what could be called a sanitary hen house; nor have I ever seen what could be called a sanitary stable. If any reader of this item knows where such sanitary conditions exist, please let the office of the State Board of Health know that a monument may be built on the site.

#### A PROBABLE SOLUTION FOR FEMINISM.

There has been no advance either in intellect or morals, from the days of the earliest Egyptians to the keel-laying of the dreadnoughts.

Now it is in this inherent and unchangeable character itself that tends to be transmitted to offspring, and this being the case, there can be no progressive improvement in character without some selective agency tending to such improvements.

The higher intellectual or moral powers are so rarely of life preserving value, and are not infrequently the reverse, that they are not cumulative, though they are hereditary. For the evolution of man's moral and intellectual nature, then, we must look to some selective agency. Such an agency will become operative when women achieve real freedom of choice in marriage. Then we shall find a system of truly natural selection will come spontaneously into action, which will steadily tend to eliminate the lower, the less developed, or in any way defective types of men, and will thus continuously raise the physical, moral and intellectual standard of the race.—Dr. Alfred Russell Wallace.

**NEW YORK STATE SOCIETY CONDEMNS HEALTH INSURANCE.**—A special meeting of the House of Delegates of the Medical Society of the State of New York was recently held, to consider the report of the Committee on **COMPULSORY HEALTH INSURANCE**. After full consideration of the subject, the committee recommended that the House of Delegates and the Medical Society of the State of New York unqualifiedly oppose the enactment by the legislature of any law instituting a system of compulsory health insurance against sickness. The majority report of the committee was unanimously adopted.

**CORNELL UNIVERSITY** has established a department of Hygiene and Preventive Medicine. Dr. Haven Emerson has been appointed professor of hygiene and preventive medicine, and director of the department. Dr. James Stevenson Allen has been appointed assistant professor of hygiene and preventive medicine, and assistant director of the department. Dr. F. C. Balderrey has been appointed medical advisor. We hope soon to receive a catalog of this school.

**MEDICAL INSPECTORS OF SCHOOL CHILDREN** should be specially trained in the work. The very best general practitioner in any community is not fully fitted for this work until he has made a special study of it. Dr. Taliaferro Clark, asst. Surgeon General of the U. S. Public Health Service has this to say of the requirements of School Medical Inspector—

"The minimum requirements of an acceptable school physician are: (1) That he should devote his full time to the supervision of the health of school children; (2) that he should be skilled in medical diagnosis, able to advise with and assist the family physician when it is so desired; (3) that he should have a knowledge of bacteriology sufficient to enable him to take cultures, detect 'carriers', and otherwise assist the health authorities so that it may be unnecessary to close schools during epidemics of communicable diseases; (4) that he should be well grounded in the principles of personal and general hygiene and, have the ability to apply them to school purposes; (5) that he should be competent to prescribe suitable exercises in individual cases to overcome postural defects, and advise with regard to regulated group exercises designed to promote the best physical development of normal children; (6) and that he should notify all parents of the presence of physical defects in their children as soon as these defects are discovered and make reasonable efforts to have his recommendations carried out.

In the selection of a school physician due regard should be given to his ability to direct the seating of children, to make observation of atmospheric conditions in class rooms, to measure illumination and to advise in regard to changes necessary to secure the maximum of illumination with the minimum of visual discomfort, and finally to advise janitors in respect to the heating and ventilation of school buildings. The employment of a physician engaged in private practice to devote a part of his time to the medical inspection of school children is not productive of good results. On the average it requires the full time of a specially qualified physician to supervise effectively the health of 2,000 school children. Furthermore, the employment of a practicing physician for this purpose is frequently the cause of jealousy and opposition on the part of other local practitioners that negative the efforts of the school physician.

One of the greatest drawbacks to the employment of a school physician heretofore has been the apparent unwillingness of the school and health authorities to recognize and clearly define their duty in respect of school health-supervision. Fundamentally, the duty of the school organization is to impart instruction, and this should include instruction in health through courses in personal and general hygiene adapted to the needs of various age-groups and by the organization of classes in physical training.

On the other hand the function of the health department is preventive and corrective, and as applied to school health-supervision should include the medical examination of the children for the detection and removal of the hampering physical defects and for the control of communicable diseases as well as supervision of the sanitation of the school buildings and grounds and playgrounds. In fact, the measure of the mental and physical efficiency of the children of a community will be largely proportional to the completeness of the cooperation of these two responsible agencies in this work.

### SCHOOL CHILDREN AND SLEEP.

School children and all others, are not efficient if the proper amount of that mystery called sleep is not secured. The braggarts of science have not yet been able to explain sleep satisfactorily. The physiologists seem even to shy away from it. However, the poets tell us of sleep abundantly. Bartlett's Quotations gives seventy-six references. Southey speaks of sleep as "the friend of woe." Young terms it—"Tired nature's sweet restorer", and Shakespeare says sleep is "Nature's soft nurse." Sleep not only "knits up the ravelled sleeve of care" for adults, but also for children, even very young children.

Sleep has its educational and economical, as well as its physiological and biological aspects. It is not simply a function, or possibly a partial suspension of function of the brain, for it involves the entire body.

Sleeplessness is a danger signal which it is folly to disregard, for it is frequently a symptom of approaching mental disorder. When a school child does not sleep well, then it is surely time for according it special attention, and teachers will do well to inquire into the sleeping habits of their pupils who show so called "nervous symptoms". If found to be bad, attention should be called to the matter, and parents tactfully urged to act. It is in order, of course, that a physician be consulted.

Someone has aptly said—"Sleep recharges the batteries of life". Learning processes started in school hours are benefited by sleep and it has a settling and fixing influence upon proceeding mental activities. While quantity of sleep is the first point to be considered, it must not be forgotten that quality is a matter of great importance.

We have no certain knowledge as to the amount of sleep that is necessary. Many investigators have made more or less good guesses, and I give the average of the authorities to hand.

SLEEP NEEDS

Age.....	7	8	9	10	11	12	13	14	15	16	17	18
Hours in 24.....	11.5	11	11	11	10	10	10	10	9.5	9	9	9

Although these figures are guesses, they are good guesses, for it will be found if less sleep is secured than is required in the table, nervous symptoms will appear.

A mother consulted the doctor about Mary's nervousness. She said the child slept poorly, she cried out in her sleep and rolled much in her bed. Yes, the bedroom was well ventilated and light suppers had been tried over a period. Her school grades were falling, especially in deportment. A careful search discovered that Mary sat at a desk which did not fit her body, and in consequence, her spine and shoulders were suffering deformity. It is not strange that the imposition of deformity upon children by ill fitting seats and desks, should make them "nervous".

Constipation murders sleep. A clean bowel is necessary for natural, placid sleep. A heavy meat diet, and coffee and tea, will cause nervousness with disturbed sleep. An unbalanced diet and indigestion will interfere with sleep. Teachers will do well, indeed, to make sleep surveys of their schools. They will find enough to deeply interest and astonish them. A temperature above 60 degrees is unfavorable to sleep, and bad ventilation will be found in 50 per cent of the investigations. Children who sleep with adults are always sufferers. The child who does not have a bed to himself is most unfortunate. Sometimes home study robs children of sleep. Other common causes of disturbed sleep are, eye-strain, earache, decayed teeth, and obstructed breathing. A sleep survey may be made by means of a series of questions, answers to which should be required before any talk upon the subject. It is obvious why this procedure is best. Here are a few suggestions for making a sleep survey:

1. What time do you go to bed?
2. Do you go to sleep quickly?
3. Do you wake up in the night?
4. Do you have nightmare or bad dreams?
5. Are your bedroom windows always wide open?
6. How many other persons sleep in the same room with you?
7. How many other persons sleep in the same bed with you?
8. Does some one call you in the morning?
9. Do you study your lessons at home?
10. Do you drink coffee or tea?

Other questions may, of course, be added to the above, and have visits sometimes made.



**DON'T CLOSE THE SCHOOL** and don't close churches and theatres and lodges for the purpose of stopping the spread of infectious diseases, especially when the diseases have even a medium start. Experience has abundantly proved that "closing" will not stop the spread of infection. Anyone having the power of observation would have noticed this truth during the great flu epidemic in November and December of 1918. It is true the law gives the power to health officers to close schools, churches, public meetings, etc., to stop epidemics, but it does not command that it shall be done. The doing is left to the judgment of the officer in command. The isolation and quarantine of smallpox, together with disinfection, will, of course, prevent the spread of infection of the disease from an infected person; but, strange to say, the epidemic does not cease. The reason is—that all infectious and contagious diseases may exist in mild as well as in medium-severe and severe form. We may depend upon it there are not a few mild cases, "carriers" in that community that are going about coughing and sneezing and carrying smallpox infection in the secretions of their noses and mouths. These are the spreaders. At present we can not diagnose these "blind cases" as smallpox; medicine not being sufficiently advanced and skilled to make the diagnosis. Yet, we know by experience and abundant evidence, that cases of so-called colds—when smallpox is present, in a community—are actually cases of smallpox. The only prophylaxis for smallpox is vaccination. Depend upon it and it alone. Health officers and physicians should tell their people that the only safety lies in vaccination. They should be told that smallpox sooner or later will surely attack them unless they have had an attack of smallpox in mild form, or have been successfully vaccinated. Schools should not be closed because of diphtheria, scarlet fever, etc., unless the attendance falls at least to 60 per cent, and then it is not profitable to conduct the school. The rational, scientific procedure is to inspect the school children and send home all who are sick in any way. The law commands this shall be done at all times, and imposes a fine of ten dollars upon teachers and health officers and school trustees who do not fulfill its commands. Of course, they must know, or be reasonably certain that the child is sick before he is sent home. It does not matter what the sickness is, for the law says, "ill in any way." Obviously, a child should not be permitted in school who is ill in any way. School is not the place for that child. Justice and humanity demands that the child be given attention at home, and not be forced into school, amidst surroundings which are really unnatural to all children. Naturally, children should be in the open air, running freely about like animals on a farm. However, our civilization will not permit this; therefore, the children must stand the unnatural conditions of home, schools and movies if it can. Closing a school on account of one or two cases of diphtheria or scarlet fever is rather a silly procedure.

**THROUGH HAND INFECTION** disease is frequently passed from one to another. How often we see people cough into their hands, instead of by protecting their hands with a handkerchief, or better, by a paper napkin. The coughing process sends forth the infection from which the individual who coughs always suffers. Any person infected with any disease is almost certain to have infected hands. It is only when the hands of such persons have been thor-

oughly washed that they may be considered measurably free from the infection of the transmissible disease which they are carrying. Without doubt our custom of shaking hands has been the means of transmitting disease to a great extent. It is safe to predict that when we give up the custom of hand shaking, and substitute the salute, transmissible disease will be reduced. Disease germs cannot move; they are "non-motive," they have no legs, wings or arms. They must be passed from one person to another.

**DR. GEO. W. GOLER**, the veteran hygienist and sanitarian, and health officer of Rochester, New York, has this to say of milk:

"Milk should be produced from clean, healthy cows; in clean, light stables, by clean-skinned, clean-clothed, disease-free men and women; using clean utensils. It should immediately be delivered to refrigerator cars at a price to the producer based on fat, solids, 'count and score'; pasteurized by the holding process, packaged and dated. It should then be delivered by the municipality at cost."

**DIPHTHERIA QUARANTINE:** A certain city health officer writes us as follows in regard to his failure to establish and enforce quarantine. He says: "Our sanitary inspector was interfered with when he placarded a house wherein diphtheria existed. The householder declared diphtheria did not exist there and so the inspector returned to the office to make sure he was right. He was right and returned, posted the quarantine card and established the quarantine. The householder tore down the card and he and other members proceeded in going about their regular work, although frequently in contact with the patient. We warned him and he defied us and threatened us with the State Board. Our inspector intercepted him as he was leaving the house and called the police department. They refused to arrest him, saying a warrant had to be made out. Later we arrested him and brought him before the city judge and a date for the trial was set. Our sanitary inspector appeared (note the health officer was not there) and no one showed up. The inspector 'phoned the judge, who said he would postpone the trial to some future date." We have not been notified that the trial will be held. All is silence in the court.

The city health officer says further: "It looks like there is an effort to do nothing and we are not getting proper support. If we can do nothing to enforce this quarantine business, I do not want to be a party to any 'farce comedy stuff.' Neighbors say if this man can break the quarantine, they will do the same thing if they are ever quarantined. I can see no reason for so much delay." This city health officer, and it is not a small city, is evidently "poor stuff." Enforcement of the law here depends upon him. If he is intelligent, conscientious, informed and alive to his duties, he will enforce the law and not have "farce comedy stuff" going on in his city. We have written him that he must enforce the law. If he cannot, then he should resign and give his place to some one who can.

**TO INCREASE** the duration of life with efficiency and happiness, we must cease table excesses and abandon sexual faults. Sanitary garbage and sewage disposal, pure air and pure water are potent sanitary forces, but good health will not be secured if we continue to gorge and over-nutritize our bodies, and refuse to practice sexual restraint.



# CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM IMPORTANT CAUSES FOR OCTOBER, 1919.

## NORTHERN SANITARY SECTION.

Total population.....	1,042,574
Total deaths.....	870
Death rate per 1 000.....	10.0
Pulmonary Tuberculosis rate per 100 000.....	43.8
Other forms of Tuberculosis rate per 100 000.....	8.0
Typhoid Fever rate per 100 000.....	25.3
Diphtheria and Croup rate per 100 000.....	11.5
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.....	49.5
Diarrhoea and Enteritis (under 2 yrs.) rate per 100 000.....	74.8
Cerebro-Spinal Fever rate per 100 000.....	.....
Acute Anterior Poliomyelitis rate per 100 000.....	2.3
Influenza rate per 100 000.....	16.1
Puerperal Septicemia rate per 100 000.....	1.1
Cancer rate per 100 000.....	77.1
External causes rate per 100 000.....	79.4
Smallpox rate per 100 000.....	.....

## CENTRAL SANITARY SECTION.

Total population.....	1,219,131
Total deaths.....	1,130
Death rate per 1 000.....	11.1
Pulmonary Tuberculosis rate per 100 000.....	80.7
Other forms of Tuberculosis rate per 100 000.....	17.7
Typhoid Fever rate per 100 000.....	9.8
Diphtheria and Croup rate per 100 000.....	9.8
Scarlet Fever rate per 100 000.....	2.9
Measles rate per 100 000.....	.....
Whooping Cough rate per 100 000.....	.9
Lobar and Broncho-Pneumonia rate per 100 000.....	51.2
Diarrhoea and Enteritis (under 2 yrs.) rate per 100 000.....	72.8
Cerebro-Spinal Fever rate per 100 000.....	.8
Acute Anterior Poliomyelitis rate per 100 000.....	3.8
Influenza rate per 100 000.....	10.8
Puerperal Septicemia rate per 100 000.....	7.9
Cancer rate per 100 000.....	93.7
External causes rate per 100 000.....	77.8
Smallpox rate per 100 000.....	.....

## SOUTHERN SANITARY SECTION.

Total population.....	686,443
Total deaths.....	50.3
Death rate per 1 000.....	8.8
Pulmonary Tuberculosis rate per 100 000.....	87.4
Other forms of Tuberculosis rate per 100 000.....	20.9
Typhoid Fever rate per 100 000.....	13.9
Diphtheria and Croup rate per 100 000.....	13.9
Scarlet Fever rate per 100 000.....	1.7
Measles rate per 100 000.....	.....
Whooping Cough rate per 100 000.....	.....
Lobar and Broncho-Pneumonia rate per 100 000.....	38.7
Diarrhoea and Enteritis (under 2 yrs.) rate per 100 000.....	28.7
Cerebro-Spinal Fever rate per 100 000.....	.....
Acute Anterior Poliomyelitis rate per 100 000.....	1.7
Influenza rate per 100 000.....	3.5
Puerperal Septicemia rate per 100 000.....	3.5
Cancer rate per 100 000.....	75.2
External causes rate per 100 000.....	59.4
Smallpox rate per 100 000.....	.....

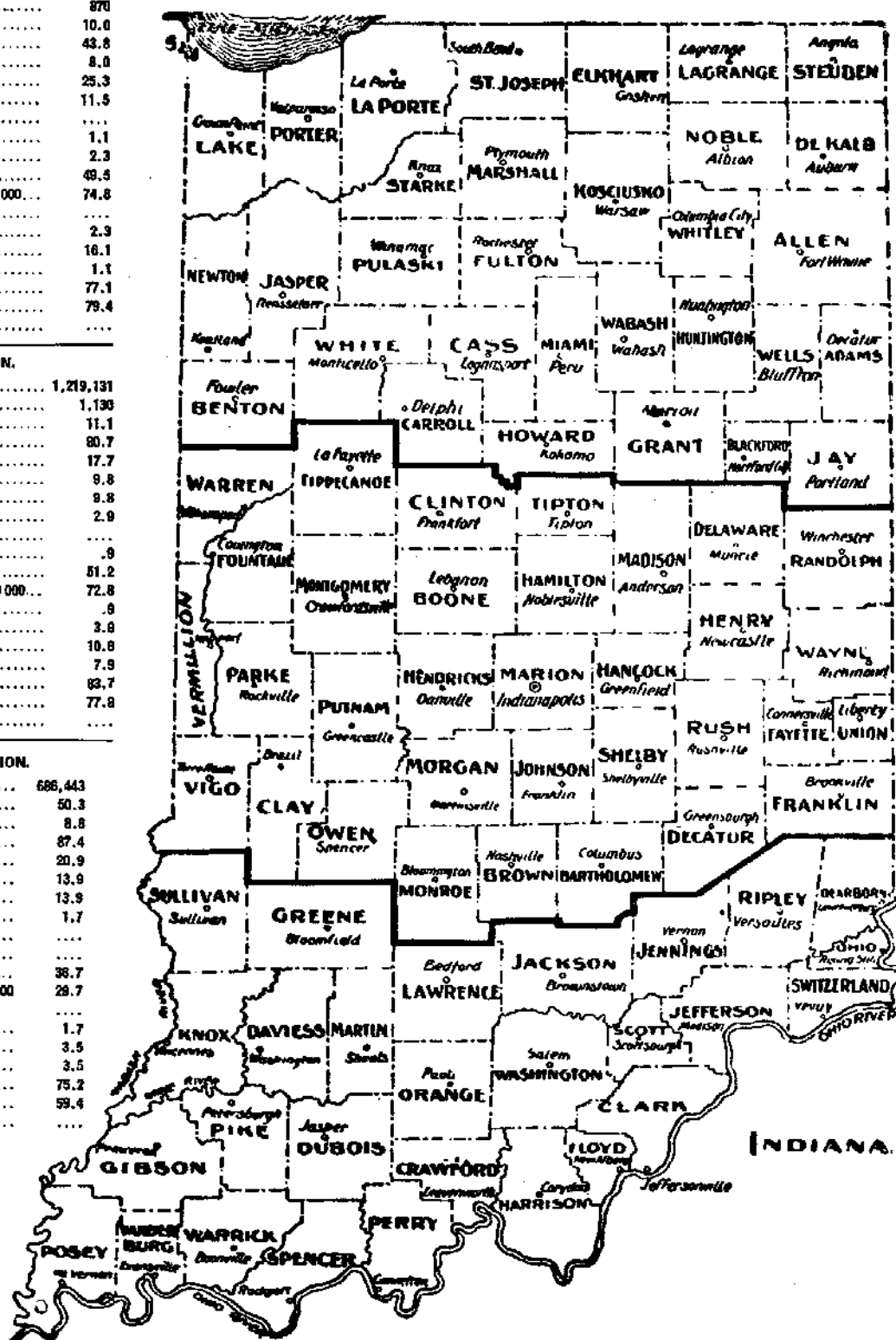


TABLE 1. Deaths and Births in Indiana, by Counties and Sections during the Month of October, 1919.

(Stillbirths Excluded.)

STATE AND COUNTIES.	Estimated Population, 1919.	Deaths Reported for				ANNUAL DEATH RATE PER 1000.	IMPORTANT AGES.										DEATHS FROM IMPORTANT CAUSES.															BIRTHS		
		October, 1919.																																
		Total Deaths Reported for October, 1919.	Total Deaths Reported for October, 1918.	Total Deaths Reported for the Year 1919 to Date.	Total Deaths Reported for the Year 1918 to Same Date.		Under 1 Year.	Age 1 to 10.	Age 10 to 20.	25 Years and Over.	Pneumonia.	Other forms of Tuberculosis.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.	Malaria.	Whooping Cough.	Lobar and Bronchopneumonia.	Dysentery and Enteritis (under 2 years).	Cerebro-Spinal Fever.	Acute Anterior Polio-myelitis.	Influenza.	Puerperal Septicemia.	Cancer.	External Causes.	Smothering.	Infantile Death.	Total Births.	Rate per 1,000 Population.					
State of Indiana	2,948,088	2,508	5,889	31,222	35,387	10.2	24	336	178	104	922	174	37	40	28	4	1	3	116	156	1	7	27	11	195	182	395	5,091	20.7					
Northern Counties	1,042,514	870	2,276	10,801	12,621	10.0	28	158	83	36	338	42	7	22	10			2	43	65		2	14	1	67	69	148	1,859	21.4					
Adams	21,840	14	19	187	188	7.2	10	3	2	1	4			1															43	23.6				
Allen	106,791	79	135	1,088	1,217	8.9	15	12	2	5	28	7	1						1									31	173	19.4				
Benton	12,888	13	32	98	124	12.3	30	3	1										1										33	31.2				
Blackford	16,820	17	32	136	150	12.9	16	4																					23	21.9				
Carroll	17,970	15	27	168	180	10.0	18	3											1										35	23.4				
Cass	37,881	43	65	487	538	13.8	30	4			17	2		1														10	54	17.1				
DeKalb	25,054	21	28	301	338	16.0	13	4			9	1																	17	8.1				
Elkhart	52,295	49	104	565	697	11.2	23	5			26	1	1																65	21.8				
Fulton	18,879	12	32	190	183	8.8	22	3											2										39	16.3				
Grant	51,476	65	71	661	730	15.2	16	6			33	2		1															22	38	10.8			
Howard	37,602	40	72	494	451	12.9	23	3			12		2																4	78	25.3			
Huntington	29,048	26	24	342	328	10.7	3	1			19																			1	18	6.6		
Jay	13,041	8	26	132	129	7.3	23	3			6																			1	40	19.2		
Jasper	24,961	14	19	215	233	6.7	9	2			1								1										2	35	15.0			
Kosciusko	27,638	18	67	281	327	7.3	28	3			1																			1	25	19.8		
Lagrange	15,148	10	40	127	173	7.9	31	7			7																			37	30.7			
Lake	146,245	117	623	1,575	2,450	9.6	62	29			18								18										20	374	30.7			
Laporte	51,856	44	77	521	572	10.1	17	19			18								4											8	36	19.0		
Marshall	24,175	19	67	234	294	9.4	43	2			1																			4	46	22.8		
Miami	30,186	28	52	272	340	11.1	120	8			11																			3	63	25.0		
Newton	10,549	5	59	90	122	5.7	67	1			3																				1	16	18.2	
Noble	24,403	15	49	238	294	7.4	24	1			1																			2	33	16.2		
Porter	21,673	7	38	192	218	3.8	21	6			3																				2	26	14.4	
Pulaski	13,312	11	10	110	117	9.8	17	4			3																				2	26	14.4	
Starke	10,680	14	17	98	106	15.7	19	3			1																				1	16	17.0	
Stevens	14,274	13	34	165	192	10.9	28	5			1																				25	26	21.9	
St. Joseph	105,460	82	283	960	1,182	9.3	32	24			3								12												189	20.7		
Wabash	26,928	25	27	275	292	11.1	12	2			10																				4	40	17.8	
Wells	22,418	19	26	210	188	10.1	13	1			1																				3	41	21.9	
White	17,602	10	47	191	193	8.8	32	2			5																					23	75.7	
Whitley	16,862	17	25	179	163	12.1	17	1			11																					27	19.2	
Central Counties	1,219,131	1,130	2,544	13,547	15,277	11.1	25	170	78	46	408	82	18	10	10	3		1	52	74	1	4	11	8	85	79	192	2,037	20.0					
Bartholomew	24,993	26	41	267	316	12.5	19	5			2																			2	34	15.3		
Boone	24,673	16	62	239	290	7.8	25	1			1																				1	30	14.6	
Brown	7,975	6	5	83	70	9.0	7	5			1																					9	113.3	
Clay	32,535	19	30	305	295	7.0	11	2			10																				4	49	22.0	
Clinton	28,674	25	61	345	353	11.2	27	4			14																					3	36	22.9
Decatur	18,793	21	21	228	198	13.4	13	4			18																					103	23.4	
Delaware	62,901	56	53	591	608	12.7	12	12			3																					29	22.0	
Fayette	15,178	13	64	169	194	10.3	42	7			3		2																			32	18.8	
Fountain	20,439	26	35	201	225	15.3	20	4			12																					25	10.6	
Franklin	15,335	9	17	136	130	7.0	13	3			1																					2	32	14.2
Hamilton	27,026	23	65	259	314	9.9	24	4			7																					22	13.9	
Hancock	19,030	20	14	228	186	12.6	8	3			11																					2	27	15.5
Hendricks	20,840	12	55	210	241	6.8	31	1			7																					3	50	21.0
Henry	33,840	28	52	363	349	9.9	18	6			13																					2	34	19.9
Johnson	20,535	28	48	244	253	13.4	28	3			1																					8	123	22.6
Madison	65,234	62	82	725	776	11.4	15	1			22																					106	604	22.0
Marion	339,361	321	1,018	3,984	4,913	11.1	38	46			17								10													39	18.3	
Monroe	25,547	26	42	261																														

(Stillbirths Excluded.)

STATE AND COUNTIES	Estimated Population, 1919.	DEATHS FROM IMPORTANT CAUSES																		BIRTHS.												
		Total Deaths Reported for October, 1919.	Total Deaths Reported for October, 1918.	Total Deaths Reported for the Year, 1919 to Date.	Total Deaths Reported for the Year 1918 to Same Date.	ANNUAL DEATH RATE PER 1000.		IMPORTANT AGES.															Total Deaths.	Total Births.	Rate per 1,000 Population.							
						October, This Year.	October, Last Year.	Under 1 Year.	Age 1 to 10.	Age 10 to 20.	65 Years and Over.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Lobar and Broncho- Pneumonia.		Diarrhoea and Enteri- tis (under 2 years).	Cerebro-Spinal Fever.				Acute Anterior Poliomyelitis.	Influenza.	Puerperal Septicemia.	Cancer.	External Causes.	Smallpox.	Insanitation Deaths.
State of Indiana	2,948,089	2,503	5,083	31,222	35,367	10.2	24.3	335	178	104	822	174	37	40	28	4	1	3	116	158	1	7	27	11	195	182	396	5,091	20.7			
Rural	1,701,179	1,340	2,889	17,088	18,661	9.5	20.4	177	86	53	576	96	23	20	11	2	1	53	68	1	6	17	3	109	80	127	2,700	18.1				
Urban	1,246,909	1,163	3,000	14,134	16,726	11.2	29.7	218	92	51	345	78	14	20	17	2	1	63	87	1	2	10	8	86	102	268	2,385	22.9				
Cities of First Class Population 100,000	300,000	280	748	3,510	4,185	11.2	30.9	42	16	13	70	28	2	2	12			10	18	1	1	2	3	25	23	90	561	22.4				
Indianapolis	300,000	280	748	3,510	4,185	11.2	30.9	42	16	13	70	28	2	2	12			10	18	1	1	2	3	25	23	90	561	22.4				
Cities of the Second Class Population 45,000 to 100,000	355,257	274	789	3,621	4,505	9.3	31.6	56	21	11	68	16	1	5	5		1	18	28		1	2	17	27	85	629	21.2					
Fort Wayne	79,816	50	106	542	934	8.9	15.9	10	4	10	5	1		2	2			10	18				3	9	28	125	18.8					
Evansville	77,884	62	203	855	1,106	9.5	31.2	7	4	3	20	5	1	1	4			3	12			1	5	5	19	122	18.8					
South Bend	72,888	48	212	812	819	7.9	34.9	18	3	1	10	1		3				4	10			1	3	2	8	143	23.5					
Terre Haute	68,639	66	115	760	853	1.5	20.1	14	7	1	20	3		1				7	4			1	3	6	16	107	18.7					
Gary	56,000	39	153	552	793	8.8	61.2	7	6	2	2	2			1		1	3	6				3	5	15	131	28.1					
Cities of the Third Class Population 20,000 to 45,000	290,018	314	875	3,658	4,330	12.9	32.9	64	38	18	100	18	5	5	6	1	1	22	28		1	4	2	21	29	55	626	25.5				
East Chicago	31,829	26	204	318	821	9.8	76.7	14	4	1	2	4						3	8				1	2	1	2	115	43.4				
Muncie	25,882	39	28	367	338	18.1	12.1	10	6	3	8	1			2			5	5		1	2	1	2	5	69	31.0					
Hammond	27,861	27	163	412	590	11.6	74.5	2	7	5	4	2			3			2	4				2	6	7	70	30.1					
Richmond	25,463	37	48	277	311	17.4	22.6	8	3	3	16	2	1					4	4		1	1	1	3	1	44	20.7					
Anderson	24,464	31	38	319	295	15.2	18.6	6	1	1	10	3	2			1		4	4				3	5	6	45	22.1					
New Albany	23,639	18	99	291	355	9.1	48.7	2	1		6	2		1				2	1				1	3	5	32	16.3					
Elkhart	22,688	21	52	247	304	11.1	27.4	4	1	1	10	1						1	1				1	1	1	43	22.7					
Kokomo	22,569	28	43	322	291	14.9	22.5	5	5	1	6	1		2				3	1				2	2	6	60	31.8					
Michigan City	22,314	15	26	195	221	8.0	13.7	3	3	1	3	1						2	4					1	1	3	33	17.7				
Lafayette	21,676	22	80	375	424	12.2	24.3	4	3	1	9	1						3	1					1	2	10	51	28.2				
Logansport	21,630	14	66	244	319	7.8	36.6	2	2	1	11	1		1				1	2					2	1	5	29	16.1				
Marion	20,013	36	21	291	261	21.6	12.6	4	2	1	15	1		1				1	1					4	4	35	30.9					
Cities of the Fourth Class Population 10,000 to 20,000	165,854	162	286	1,750	1,910	11.7	20.7	30	12	6	60	11		5	2		1	9	11		1			14	13	21	310	22.4				
Mishawaka	17,781	5	17	14	148	12.1	11.5	5	1		4	1						1	1					1	6	8	21	14.3				
Vincennes	17,679	13	23	191	238	8.8	15.6	1	1		4	1		1				2	1					2	1	3	41	27.8				
New Castle	14,801	14	26	135	126	11.3	32.1	4	1	1	3	2						1	2					1	1	1	33	26.7				
Laporte	13,942	13	24	179	174	11.2	26.6	3	1	2	4	1		2				1	2							3	31	26.7				
Peru	12,572	13	15	128	154	12.4	14.3	4	1		7	1						1	1							3	30	28.6				
Bloomington	11,939	17	22	123	147	17.1	22.1	4	1		3	1						1	1							1	20	20.1				
Crawfordsville	11,722	12	29	138	131	12.3	29.7	1	3	1	4	4	1					1	1							1	18	14.8				
Shelbyville	11,437	12	26	87	132	12.5	27.3	2	1		6	1						1	3							1	10	10.5				
Huntington	11,034	14	8	173	135	15.2	6.7	1	1		9			2												5	28	30.4				
Elwood	11,028	10	16	113	138	10.9	17.4	1	1	1	7																29	31.6				
Bedford	10,877	11	37	93	123	12.1	140.8	2	1	1	3							1	1								20	22.1				
Brazil	10,830	4	17	115	107	4.5	19.1	1			1	1															2	18	20.3			
Jeffersonville	10,412	11	26	133	160	12.6	10.9	1			5	1															1	11	12.6			
Cities of the Fifth Class Population 5,000 to 10,000	135,780	133	302	1,556	1,798	11.8	26.7	26	5	3	48	7	3	3		1		3	4		2			9	10	16	260	22.8				
Frankfort	10,000	12	31	182	170	14.4	37.2	2			6								1	1						3	19	22.8				
Columbus	9,379	10	15	113	127	12.8	20.5	3			1	2															1	13	16.6			
Goshen	9,098	8	23	106	140	10.5	30.7		1		3																2	20	28.4			
Wabash	8,744	9	16	92	116	12.3	21.9				5			1													3	10	13.7			
Connersville	8,278	9	35	119	119	11.8	50.7		1	1	3	1	2														1	11	15.9			
Clinton	8,215	9	13	84	109	13.1	18.9	4	1		1								1								1	27	39.4			
Whiting	8,147	5	36	94	123	7.4	83.0	3			7	4	3					1	1								1	20	29.4			
Washington	7,854	3	13	73	105	4.6	19.8	1		1																		1	20	30.5		
Linton	7,604	10	8	63	71	15.8	12.5	4		1	2							1									2	11	17.3			
Valparaiso	7,407	3	17	74	87	4.9	37.5	1						1														7	11.8			
Lebanon	7,074	7	15	80	85	11.9	25.4	1	1		2																	4	8	13.6		
Madison	6,934	8	11	101	96	13.8	19.0	1			2																	1	11	19.0		
Princeton	6,688	5	29	178	95	8.9	52.0	1			2																	1	17	30.5		
Hartford City	6,637	6	6	51	70	10.8	10.8	2			2																		9	16.8		
Seymour	6,369	3	17	76	87	5.7	32.3	1	1	1	1																		15	28.5		
Kendallville	5,943	6	7	62	64	12.1	14.1	1	1	1																			12	24.5		
Mt. Vernon	5,821	9	2	72	59	18.5	4.1	2			5			1															8	16.2		
Greensburg	5,645	11	7	95	72	23.4	14.9				9																		1	12	25.5	

**Mortality of Indiana, October, 1919. (Stillbirths Excluded.)**

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.		DEATHS AND ANNUAL DEATH RATES PER 100,000 POPULATION FROM IMPORTANT CAUSES.																																	
		Estimated Population 1919.		Pulmonary Tuber- culosis.		Other Forms Tuber- culosis.		Typhoid Fever.		Diph- theria and Croup.		Scarlet Fever.		Measles.		Whoop- ing Cough.		Lobar and Broncho Pneumonia.		Diarrhoea and Enteritis (Under 2 Years.)		Cerebro- Spinal Fever.		Acute Anterior Poli- omyelitis.		Influenza.		Puer- peral Septi- cemia.		Cancer.		External Causes.		Small- pox.	
		Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
State of Indiana	2,948,089	174	78.1	37	15.1	40	16.3	28	11.4	4	1.6	1	.4	3	1.2	116	47.2	106	63.5	1	.4	1	.4	1	2.6	27	10.1	11	4.3	195	79.4	182	74.1		
Northern Counties	1,042,514	42	48.3	7	8.0	22	25.5	10	11.5			1	1.1	2	2.3	43	49.3	65	74.8					2	2.3	14	16.3	1	1.1	67	77.1	69	79.4		
Central Counties	1,219,131	82	80.7	18	17.7	10	9.8	10	9.3	3	2.9					32	41.3	74	72.9	1	.9			4	3.2	11	10.8	8	7.9	85	83.7	79	77.8		
Southern Counties	686,443	50	87.4	12	20.4	8	13.9	8	13.9	1	1.7					21	36.7	17	29.7					1	1.7	2	3.5	2	3.5	43	75.2	34	59.4		
All Cities	1,246,909	78	75.1	14	13.5	20	19.2	17	16.4	2	1.9	1	.9	2	1.9	83	60.6	67	83.7	1	.9	2	1.9	10	9.6	9	7.7	86	82.6	102	98.2				
Over 100,000	300,000	28	101.0	2	8.0	2	8.0	2	8.0							10	40.0	18	72.0	1	4.0			2	8.0	3	12.0	25	100.0	23	92.0				
45,000 to 100,000	355,257	16	54.0	1	3.4	5	18.5	5	18.5			1	3.4			19	61.2	26	87.8					1	3.4	2	6.7	17	57.4	27	91.2				
20,000 to 45,000	290,019	18	74.5	5	20.7	5	20.7	8	33.3	1	4.1			1	4.1	22	91.0	28	115.8			1	4.1			3	12.4	21	86.9	29	119.9				
10,000 to 20,000	165,851	11	79.5	3	21.7	5	36.2	2	14.5					1	7.2	9	65.1	11	79.5					1	7.2			14	101.3	13	94.0				
Under 10,000	135,780	7	61.9	3	26.5	3	26.5			1	8.8					3	26.5	4	35.3							2	17.7			9	79.5	10	88.4		
Country	1,701,179	96	67.7	23	16.2	20	14.0	11	7.6	2	1.4			1	.7	63	37.4	69	48.7			5	3.5	17	11.4	3	2.1	109	78.0	80	58.6				

## TEMPERATURE—IN DEGREES FAHRENHEIT.

PRECIPITATION—IN INCHES AND HUNDREDTHS.

(Signature) E. W. HOLCOMBE,  
Observer, Temporarily in charge

### Weekly Disease Reports From Health Officers. Table of Diseases.

	Tuberculosis.	Diphtheria.*	Influenza.	Measles.	Measlingitis.	Polioomyelitis.	Pneumonia.	Scarlet Fever.	Smallpox.	Typhoid.	Syphilis.	Gonorrhea.
Adams.....								1			13	
Allen.....	9	16	1	2				8	1	6	4	6
Bartholomew.....	1							3				1
Benton.....								12				
Blackford.....		1										
Boone.....										2		1
Brown.....		1						10		2		
Carroll.....		1	4				1	26	1	1	2	
Cass.....												1
Clark.....								4		2		
Clinton.....	1		3	1				9	1		5	4
Crawford.....			1					2				
Davies.....								2	4			
Dearborn.....	1							34		5		1
Decatur.....	1		5	15			1	2		2		33
Dekalb.....								5			5	1
Delaware.....			3							1		1
Dubois.....			3	1			1	5	7	4	6	1
Elkhart.....	1	4	3								1	1
Fayette.....				1				3				2
Floyd.....								3		19		
Fountain.....		1	8					3		3		1
Franklin.....	1		1					3				
Fulton.....	1	1			1			3	1		1	
Gibson.....		4						3				
Grant.....	1	3		1				5	8	1	2	6
Greene.....			9					1				1
Hamilton.....		1						2	3			2
Hancock.....		2	3							1		2
Harrison.....								2				
Hendricks.....		4										1
Henry.....		1	8	2				3			2	8
Howard.....		2						3	30	3	18	27
Huntington.....		2						8	2	11		2
Jackson.....	1	7							5	1		4
Jasper.....		1	5					4	1			
Jay.....	1	3								9		1
Jefferson.....	5								1			4
Jennings.....	1							1		3		
Johnson.....								1		2	1	1
Knox.....		5						13	1	3		
Kosciusko.....		5	2				1	1	1		1	1
Lagrange.....												
Lake.....		11	1	16	2			6	6	1	11	1
Laporte.....		1					2	1	19	5	8	
Lawrence.....												
Madison.....												
Marion.....												
Marshall.....												
Martin.....												
Miami.....												
Monroe.....												
Montgomery.....												
Morgan.....												
Newton.....												
Noble.....												
Ohio.....												
Orange.....												
Owen.....												
Park.....	17											
Perry.....	1											
Pike.....												
Porter.....												
Posey.....												
Pulaski.....												
Putnam.....												
Randolph.....												
Ripley.....												
Rush.....												
Scott.....												
Shelby.....												
Shelby.....	1	3										
Spencer.....												
Stark.....												
Stephens.....												
St. Joseph.....												
Sullivan.....												
Switzerland.....												
Tipperance.....												
Tipton.....												
Union.....												
Vanderburgh.....	15	5										
Vermillion.....												
Vigo.....	1	20		4		2		19	1	4	88	92
Wabash.....		2	4	11	1	2		10	1	2		
Warren.....						1						
Warrick.....		5										
Washington.....												
Wayne.....	1	31			1			13	1	3	1	1
Wells.....								8		2		2
White.....	1	2	11	3				9		1		
Whitley.....			1	1							1	1
Totals.....	102	182	82	23	3	9	4	230	51	74	350	306
Total cases.....	127	285	146	47	6	13	11	420	159	145	422	425