

Indiana State Board of Health

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

ABSTRACT OF MORTALITY STATISTICS FOR DECEMBER, 1905.

Total number of deaths reported, 2,657; annual rate, 11.8. In the preceding month, 2,687 deaths; rate, 12.3. In the corresponding month last year, 2,858 deaths; rate, 12.6. Deaths by important ages were: Under 1 year, 380, or 15.3 per cent. of the total number; 1 to 5 years, 148; 5 to 10 years, 68; 10 to 15 years, 52; 15 to 20 years, 82; 65 and over, 742, or 29.9 per cent. of the total. Some important causes of death were: Pulmonary tuberculosis, 298; other forms of tuberculosis, 38; typhoid fever, 66; diphtheria and croup, 58; scarlet fever, 7; whooping cough, 9; pneumonia, 347; diarrhoeal diseases, 21; cerebro-spinal meningitis, 40; influenza, 19; puerperal fever, 15; cancer, 90; violence, 137; smallpox, 1.

SANITARY SECTIONS: THE NORTHERN SANITARY SECTION, population 887,832, reports 852 deaths; rate 11.3. In the preceding month, 850 deaths; rate, 11.6. In the corresponding month last year, 881 deaths; rate, 11.8.

THE CENTRAL SANITARY SECTION, population 1,087,620, reports 1,115 deaths; rate, 12.0. In the preceding month, 1,137 deaths; rate, 12.7. In the corresponding month last year, 1,257 deaths; rate, 13.5.

THE SOUTHERN SANITARY SECTION, population 673,097, reports 690 deaths; rate, 12.0. In the preceding month, 700 deaths; rate, 12.6. In the corresponding month last year, 720 deaths; rate, 12.7.

REVIEW OF SECTIONS: As usual, the Northern Sanitary Section shows the lowest death rate. It also shows the lowest death rate from consumption, typhoid fever, diphtheria, pneumonia, diarrhoeal diseases and cerebro-spinal meningitis. The Southern Sanitary Section shows the lowest death rate in influenza, puerperal fever and violence. The county

showing the lowest death rate was Ohio, in which area, having 4,724 population, there were no deaths. The next lowest rate occurred in Marshall County, which was 5.9. The highest death rates were found in Fayette, rate 20.4; Lagrange, 20.0. The counties showing a death rate above the average for the whole State, which average was 11.8, were: Allen, 12; Carroll, 13.1; Elkhart, 14.4; Fulton, 11.9; Grant, 11.8; Howard, 15.9; Lagrange, 20.0; Laporte, 15.3; Porter, 13.8; Starke, 13.1; St. Joseph, 16.5; Wabash, 12.3; Clinton, 17.7; Fayette, 20.4; Franklin, 13.6; Hancock, 16.7; Marion, 14.4; Morgan, 15.5; Putnam, 12.0; Shelby, 13.5; Tippecanoe, 15.3; Tipton, 12.7; Vigo, 16.9; Warren, 16.3; Wayne, 13.1; Daviess, 13.9; Dearborn, 14.3; Greene, 16.0; Jackson, 13.6; Jefferson, 15.9; Knox, 15.3; Martin, 14.9; Orange, 12.6; Pike, 14.4; Scott, 12.4; Sullivan, 15.1; Vanderburgh, 14.6; Washington, 13.7.

COUNTRY: Population 1,670,737, reports 1,404 deaths; rate, 9.9. In the preceding month, 1,482 deaths; rate, 10.8. In the corresponding month last year, 1,612 deaths; rate, 10.9.

CITIES: All the cities of the State, total population 977,812, report 1,253 deaths; rate, 15.1. This is 3.3 higher than the State rate. In the preceding month, 1,205 deaths; rate, 15. In the corresponding month last year, 1,246 deaths; rate, 15.9.

CITIES BY CLASSES: Class A, having 50,000 population or over, total population 260,046, reports 342 deaths; rate, 15.5. In the preceding month, 339 deaths; rate, 15.9. In the corresponding month last year, 336 deaths; rate, 15.7. This class includes Indianapolis, rate 15.6, and Evansville, rate 15.1.

Class B, having from 25,000 to 50,000 population, a total population of 159,349, reports 235 deaths; rate, 17.4. In the preceding month, 205 deaths; rate, 15.6. In the corresponding month last year, 296 deaths; rate, 18.2. This class includes Ft. Wayne, rate 14.8; South Bend, rate 19.6; Terre Haute, rate 22.4; Muncie, rate 10.7.

Class C, having from 10,000 to 25,000 population, 16 cities in all, total population 231,709, reports 290 deaths; rate, 14.7. In the preceding month, 285 deaths; rate, 15. In the corresponding month last year, 304 deaths; rate, 15.2.

Note.—The above figures seemingly show an error in comparative death rates, but as November has one less day than December, and therefore 285 deaths.

make a rate of 15, while in December, one day longer, 290 deaths give a rate of 14.7.

Class D, having under 10,000 population, 63 cities in all, total population 326,710, reports 386 deaths; rate, 13.8. In the preceding month, 376 deaths; rate, 14.2. In the corresponding month last year, 410 deaths; rate, 15.8.

SUMMARY OF MORBIDITY AND MORTALITY IN DECEMBER.

DISEASE PREVALENCE: Bronchitis and tonsillitis were reported the most prevalent diseases. This was also true for the preceding month, and again in the same month last year. While pneumonia was fifth in area of prevalence in December, 1904, it stood third in 1905. The following is the order of disease prevalence: Bronchitis, tonsillitis, pneumonia, rheumatism, influenza, typhoid fever, scarlet fever, pleuritis, diphtheria and membranous croup, intermittent and remittent fever, erysipelas, diarrhoea, whooping cough, inflammation of bowels, smallpox, typho-malaria fever, puerperal fever, cerebro-spinal meningitis, dysentery, cholera infantum, measles, cholera morbus.

SMALLPOX: One hundred and twelve cases, with one death, were reported from 13 counties, namely: Allen, 33, 1 death; Boone, 4 cases; Dubois, 6; Jackson, 1; Jasper, 5; Johnson, 1; Martin, 1; Orange, 1; Switzerland, 20; Tippecanoe, 2; Washington, 22; Wayne, 1; Whitley, 8. In the corresponding month last year, 472 cases, with 8 deaths, in 38 counties. It is to be noted that mild smallpox seems to be endemic in Washington County, for the disease is reported every month in the year from this locality.

TUBERCULOSIS: The total deaths from tuberculosis were 336—298 being of the pulmonary form. Of this number, 192 were males and 144 females. Of the males, 27 were fathers in the age period of 18 to 40, and left 58 orphans under 12 years of age. Of the females, 63 were mothers, in the same age period as above, and left 128 orphans under 12 years of age. We have, therefore, to credit to this disease in one month the death of 90 fathers and mothers in the useful age period of life, and the creation of 186 orphans. How many of these will find their way into orphan asylums can not be told. The homes invaded by the disease numbered 326. One hundred and ninety of the deaths were in the age period of 15 to 50, 47 in the age period of 50 to 70, and 19 were 70 years and over.

TYPHOID FEVER: This disease was reported from 47 counties, and it is not unlikely that cases existed in every county in the State. The cases reported numbered 306. Marked epidemics prevailed in Clark, Henry, Lake, Putnam, Vanderburgh and Washington counties. There were no reports in December of the "peculiar bowel disorder" which was

reported in November from Marion, Wayne, Tippecanoe and Putnam counties.

PNEUMONIA: Pneumonia caused 347 deaths; rate, 154.5 per 100,000. In the preceding month, 219 deaths; rate, 100.8. In the corresponding month last year, 351 deaths; rate, 155.9. Infancy and old age claimed the greater number of pneumonia deaths. One hundred and nineteen were under 5 years of age, and 112 over 50. There were 5 deaths of persons over 90 years of age.

VIOLENCE: Of the 137 violent deaths, 35 were females and 102 males. Five were murders, 20 suicides, and the remainder accidental. All five of the murders were by gunshots. Of the suicides, 7 took carbolic acid (3 males, 4 females); four males poisoned themselves with opium or other poisons; other methods used were shooting, 1 (a male); hanging, 2 (both males); cutting throat, 2 (both females). Of the accidental deaths, steam railway trains killed 25, one of them being a female; street cars and interurbans killed 2, both males; 20 were killed by crushing injuries, 24 by burns and scalds, 12 by gunshots, 3 by drowning, 8 by falls, 1 by horses, 6 by poison, 2 by explosions, 3 by suffocation and strangulation, and the remainder in various ways.

PROPHYLAXIS OF TUBERCULOSIS.

By DR. F. A. TUCKER, Member of the State Board of Health.

(Read before the Health Officers' School in Indianapolis, December 14, 1905.)

Prophylaxis in pulmonary tuberculosis — that is, its prevention — is of such general interest and of such vital importance that the presentation of this subject to such a body needs no apology. To use the words of the great Osler, "In regard to the general interest in this phase of the subject, the public is awake, but not yet up and dressed, as regards their duty and privileges in combating such a deadly foe," one that claims annually in Indiana more valuable lives than typhoid, scarlet fever, diphtheria, smallpox and measles combined. During the first ten months of this year pulmonary tuberculosis has claimed in Indiana 3,614 valuable lives. Of these, 1,051 were married, and between the age period of eighteen and forty years. These 1,051 married people left 2,102 orphans under twelve years of age. Another phase of this terrible disease is that between the age of fifteen and fifty years there were 2,172 deaths from tuberculosis, affecting all domestic conditions, which shows that just in the most active and productive period of life this disease gets in its awful work. During our Civil War there were 70,293 lives lost in battle. This is only a little over one-half the number dying each year from tuberculosis in this country. With such facts and figures before us there can be little need of discussing the advisability

of employing measures to suppress this universal pest. That we should adopt all such measures as lie in our power is a self-evident fact and a moral duty; that by the simplest measures we can guard against it, and cut down this awful mortality, and we are guilty of criminal negligence to neglect them.

Let us consider, first, the cause of tuberculosis. It is the tubercle bacilla, the one and only cause. This micro-organism is unable to increase and multiply outside of the human body or animals, except when cultivated in the laboratory. This, according to the best authorities, is because it requires the high body temperature and because of its slow growth. It exists among us only from being present in the secretions and excretions of tuberculous human beings, and in the meat and milk of tuberculous animals. The tubercle bacillus gains entrance to the human system most frequently from tuberculous matter given off by consumptives, and after it has become dry and pulverized, and the bacillus diffused in the air, they are then inhaled, or taken into the gastro-intestinal tract, as from the use of infected meat and milk. This latter condition is not likely to occur if we have dairy and meat inspection. But the greatest and everpresent danger lies in the inhalation of the tubercle bacillus as they float in the atmosphere of contaminated places, halls and dwelling houses, factories, stores and other poorly-ventilated buildings, which have become infected by the careless expectoration of tuberculous material. It is not the purpose of this paper so much to deal with the prophylaxis of the individual as it is to consider the interest of the State in tuberculosis. We have seen from the statistics given that this matter is of such vital interest and general importance that, without aid from the State and municipal charity organizations, the medical profession is powerless to stop the spread of this scourge. If smallpox, measles or typhoid fever were claiming one-third the number of valuable lives annually, and leaving such general and widespread destitution and pauperism in their paths as is tuberculosis alone, there would be a general alarm and uprising, with public meetings to condemn the State and municipal authorities for their false economy and criminal negligence of humanity. The most natural question to be asked is, How can the State help in this crusade? It can help in three very important ways: First, by requiring the registration with the proper health officer of every case of tuberculosis within its borders; second, by establishing sanatoria for the treatment and employment of these cases which are too poor or ignorant to care for themselves; third, by requiring the principles of general and personal hygiene to be taught in our schools, and the widespread education of the masses, through the greatest channel for reaching the masses — via the newspapers. The State performs wisely and gladly her duties in protecting us from the

spread of smallpox, scarlet fever and other contagious diseases, the ravages of which are not to be compared with tuberculosis. There should be in all States sanatoria with adequate capacity for the care and treatment of the tuberculous poor within its border. Some authorities argue this can best be done by establishing free sanatoria by the State. Others that it can best be done by State aid to private or corporate institutions. This question is debatable. It remains as true, therefore, that it is the afflicted poor, who live in our slums and in the poorer sections of our cities and small towns, who furnish the greatest source and continued foci of this disease. Tuberculosis is obviously a house disease. It is not contagious in the ordinary acceptance of that term, but in a vast majority of instances it is contracted from living in a room, or house, that has been previously contaminated, or is being contaminated, by a careless consumptive. It requires a prolonged exposure for the successful growth of the tubercle bacilla.

There is little, if any, danger from the transient association with consumptives. This disease is kept continually alive in the dirty, filthy areas of the slums of our large cities, and old, tumble-down, overcrowded, damp, poorly-ventilated houses in which the really poor live, which furnish the soil for this disease. Many of you know of such places in your home community and see them every day, and really wish something could be done to relieve such distress. It is not the wealthy to whom the State owes this duty of relief, for they will seek it in other places and in private sanatoria; but the worthy poor — the poor laboring man, who works all day to support his family, and coughs all night. It is to this class that the State owes a duty to help that afflicted one to recovery, thereby preventing in a very great measure the dependents upon our township trustees and the refilling of orphan homes. The most dangerous period of consumption is when the afflicted one is very ill, and far advanced in the disease. It is then he becomes careless, while expectorating a great deal. They fail to take any precaution or destroy the sputum. It is especially at this time they should be removed to city or county hospitals for better care and protection to the public. Sanatoria are, of necessity, limited to the incipient or moderately advanced cases, which will get better in from three to six months. In considering the measures necessary to enable the State to aid in combating this disease let us consider, first, the advantages to be gained by compulsory registration of all cases of tuberculosis. It is absolutely essential for the authorities to know the location and distribution of these cases, in order that they may carry out disinfectant measures, where such are necessary. It is not with the idea of making outcasts of these afflicted ones, but rather with a view of preventing it.

Registration would not mean municipal interference with private rights or personal liberties, but would enable urgent measures to be taken to clean and disinfect the houses in which the disease exists, and to educate the afflicted one and his friends as to the real source of danger. Let us again consider briefly the duty of the State in establishing free sanatoria or giving State aid to private sanatoria. As stated above, there are thousands dying annually in Indiana for the want of a suitable place to go and get well. We do not claim to cure all these cases, but, taken in the incipient stage, we can feel safe in promising a cure in from 55 to 68 per cent. of all such cases, and arresting the disease in 15 per cent. of the remainder. Is that not enough? Is it not more than we now give in pneumonia, or typhoid fever? At Sharou, Mass., a sanatorium for young women, which place I had the pleasure of visiting last October, they will return home as cured over 60 per cent. of their patients this year, while at Rutland, Mass., the State sanatoria, for such cases only, admitting all ages and sexes, they will for this year, in treating several hundred cases, cure or dismiss with the disease arrested about 76 per cent. of all their cases. I also had the pleasure in October of visiting the sanatoria at Seabreeze, on Coney Island, for the treatment of surgical tuberculosis in children, among which there is no greater field for work, especially among the poor and poorly-nourished children. They will cure and benefit over 61 per cent. of all their cases, and Dr. Wallace, the surgeon in charge, told me that they endeavored to select the worst cases they could find in New York City, where thousands of poor, crippled children die or become objects of charity because of their tubercular condition. They are making them to walk and run without their crutches and heavy braces. While there I asked Dr. Wallace what medicine and treatment they gave those poor children. His reply was: "Good personal hygiene and sanitation, plenty of good, nourishing diet, sea air all the time, all the sunshine they can get, together with an occasional dose of calomel and castor oil." Is that not simple? Is it not within the power of our great State to give as much and lend a helping hand to reclaim these poor unfortunates to society and useful lives? I say it is not only a privilege, but a duty of our State. The true policy and duty of the State in regard to the tuberculosis problem is as expressed by John H. Prior, in the Medical Record, who says: "Take care of the consumptive at the right time, at the right place, in the right way, until *well*, not at the wrong time, at the wrong place, in the wrong way, until *dead*." While in Washington, D. C., last May, I had the pleasure and great privilege of attending the first congress of the National Association for the Study and Prevention of Tuberculosis. The papers read were by the big men of our profession, those who are authority upon this subject, the men who are

every day doing this work in the cause of humanity. They speak from experience which is great in results, and in all of those valuable papers the one thought was for State aid and assistance in this great work. From Washington I went to Philadelphia, purposely to visit the Phipps Institute for the study and treatment of tuberculosis. There, with the aid of a private fortune, willingly given by the steel magnate, Henry Phipps, they are enabled to enlist the services of the best medical and scientific talent in Philadelphia. Their work speaks for itself. Their hospital is full, and they care for a great many patients in their homes. All this for humanity. Let us now take up for a brief period only the question of private or individual prophylaxis. The interest of the individual in prophylaxis concerns us as health officers and physicians very much. It is here that each and every one of us has an opportunity, and our duty is plain to help along this great crusade. The keynote in regard to individual prophylaxis lies in the fact that the tuberculous person is, in himself, the origin and source of danger, and, by the exercise of a little care and a few simple rules of hygiene, which will in no way interfere with his personal comfort, he can control absolutely the spread of this disease from himself — that is, by the absolute destruction of all tuberculous matter. This can best be accomplished by the use of paper spitboxes and paper handkerchiefs. In this way the consumptive can absolutely control the danger. Finally, just a word about the education of the masses and the importance of teaching personal and general hygiene in our schools. Instruction in public health and preventive medicine has a recognized place in medical education, but they are not yet available to the students in the general course. There is, however, a real necessity for the education of the layman in regard to public health matters, not for his own good alone, but for the good of the community as well. It will enable him to properly appreciate preventive measures, and to give co-operation to health officers in their attempt to control contagious diseases. It is the laymen's lack of knowledge of the measures necessary for their own protection where we meet our greatest opposition. We should aim to give a real understanding of the problems connected with preventive medicine, as the cause, spread and means of preventing the common communicable diseases. The most useful and desirable class of people to reach at this time are the educators, including school teachers, preachers and journalists. Preventive measures should be taught in all high schools and institutions of higher education. Our country is not troubled with too much education, but too much unregulated and unclassified education. The public can be made to co-operate now by hard work, but only in the face of an epidemic, and then they are only amenable to force and fear, not knowledge. I would offer only two suggestions to aid in

this work: First, see to it that the sanitary laws and regulations are perfectly reasonable: then carry them out fearlessly and exactly. In conclusion, let us all keep before the public the one fact as stated by Dr. Charles O. Probst, of Columbus, O.: That tuberculosis claims more victims than all other contagious diseases combined: that the medical profession has learned both to cure and prevent it, but that the State and public must give a generous assistance if they expect the necessary measures to be put into execution.

THE STATE LABORATORY OF HYGIENE.

The chemical department of the State Laboratory of Hygiene commenced work in October, 1905, and the analyses made up to December 1st have been published in the November issue of the Bulletin. These analytical tables have attracted much attention, for they showed adulteration in food products to the extent of 54.9 per cent., and adulteration in drugs to 43.6 per cent. A few lime water samples proved to be simply pump water, and of 21 samples of tincture of iodine examined 19 were not up to strength. The bacteriological and pathological department commenced regular work January 1st; 150 microscopical examinations had been made up to that date, as shown by the following table:

EXAMINATIONS MADE IN DIVISION OF BACTERIOLOGY AND PATHOLOGY UP TO AND INCLUDING DECEMBER 31, 1905.

	Positive.	Negative.	Total.
Tuberculosis	59	20	79
Typhoid	22	4	26
Diphtheria	30	15	45
			—
			150

THE SCHOOLHOUSE AT REDKEY: A citizen of Redkey writes us concerning the schoolhouse in that town. She says:

"My little daughter attends public school here, but has been out ten days because of illness, and I had a forty-eight-hour battle without rest to ward off pneumonia. It is with anxiety that I shall return her to school on December 4th. The room is 28x31 feet, including the cloakroom, and, until sickness cut the number down, has contained 65 pupils and one teacher. The building is heated and ventilated by the Smeed system, which the school board declares to be perfect. The teacher has lost thirty pounds since school began, and has been taking treatment from her physician. She lost the greater part of last week from school because of a severe cold. The superintendent told me when I visited the school, in company with our health officer, that he thought there were ten out of that room on account of sickness. Together with the health officer, I visited the whole school, including the basement. Everywhere there appeared to be drafts. While in the basement, I opened the door of the furnace to the stack-feeder, and held my hand over the feeble gas flame, but could not detect any motion of the air at a distance of twelve to fifteen inches above the

flame. The superintendent said two more rooms and two more teachers were badly needed. I appealed to the school board, but without effect. The teacher in room No. 2 believes she could handle the pupils to better advantage and teach them more if the board would allow her to divide the school into classes—one for each one-half of the day. The board makes the argument that 'the patrons pay taxes, and the whole number of children must be taught each day.' I presume the business men composing the school board think this is of more importance than the health and life of the pupils. The furnaces give a dry heat, no provision being made for moisture."

We are in constant receipt of letters of this character. Upon investigation, we have always found unsanitary schoolhouses, with children crowded in with insufficient air. This, of course, means ill health, with retardation in studies. In many instances we have been called cranks for trying to secure such surroundings for the children as nature demands, if their health is to be preserved. Ignorance is, indeed, the only sin, and if the ignorance of some school authorities could be removed, how much better it would be! We shall very soon inspect the schoolhouse at Redkey and do all we can to relieve the children from the conditions of ill health.

* * *

TYPHOID FEVER AT DEER CREEK: Dr. Kitchell, the energetic and efficient health officer at Deer Creek, Ind., writes as follows:

"We have had considerable typhoid this fall. I now have three cases, one just beginning. This is the third and last case in the same family. They came down, one after another, two to three weeks apart. The little daughter became sick first, then the mother, and then the father. The drinking water is from a drilled well, and I am convinced it is pure. The cases of the parents are certainly cases of secondary infection. They are very poor people, and are not accustomed to sanitary precautions. The mother did not remember to wash her hands after administering to the sick child. In about three weeks she had the disease, and, as said above, in another three weeks the father came down with it. I had one recovered case of typhoid to die of military tuberculosis six weeks after she got up. Since the snow of a week ago, which certainly purified the dust from the air, the health is better in this region."

* * *

NORTH JUDSON: Dr. W. A. Noland, the very intelligent and active health officer of North Judson, is trying to do good to his town. Dr. Noland understands that people are curiously particular as to the way they would have good done to them. He expects, therefore, if much real good is done by him, that he will "get it in the neck." The graveyard at North Judson adjoins the school grounds. These grounds are under the brow of a ridge, and the graveyard is fifteen or twenty feet higher. The well belonging to the school is about 100 feet from the nearest grave, and there is a feeling of dread and fear among many of the inhabitants whose children go to school in regard to the graveyard drinking

water. The Commercial Club of the town has taken up the question several times, and has tried to secure a new graveyard, but there are certain interests which have prevented this much-to-be-desired change. Dr. Noland quietly states that "the crooked-stick well hunters tell us of water veins running from the graveyard to the school property. How do we know this is not so?" It is stated that some of the school children have their appetites affected by thoughts of drinking the water. It is very probable that poor ventilation of the schoolhouse is a greater danger to the pupils of North Judson than the graveyard. Few schoolhouses in Indiana are properly ventilated, and bad air does more harm in the State every year than bad water.

* * *

SOME PEOPLE SEEM TO LOVE SICKNESS.

From a letter received from Dr. MacCammon, of Laurel, Ind., we quote the following:

"For two years past I have had a siege of typhoid fever in one of my best families, losing one case each year. I now have another case in the same family. I have exhausted my resources trying to induce this family to abandon an open well, which I am sure is polluted. It is indeed strange that case after case, and death after death will not prove to this family the necessity of doing something to prevent the return of the disease which is gradually extinguishing it. The general sanitary surroundings are very good. The house stands on a hill, and all outbuildings are below, on the general slope. The family is very clean, and the general allowance of carbolic acid and other disinfectants are used continually. First, I lost a very promising daughter of sixteen from intestinal hemorrhage. Next the father died from perforation of the bowels, and now the oldest son is stricken. All of this in two years' time. I think if the water were analyzed it would be found polluted, and if this condition is actually discovered and reported to the family, that possibly the old dug well will be abolished and a new driven one put in."

* * *

A CASE OF CONSUMPTION AT RUSHVILLE:

Mrs. Emma A——, of Rushville, writes us as follows:

"I have been sick since last June. Two doctors pronounced my case 'chronic bronchitis.' One doctor called it 'malarial fever,' and another said I was suffering from 'malnutrition.' All said that they could cure me. I now know I had beginning tuberculosis, for the disease is now upon me, and I probably must die. I shall make a brave fight, but I shall never cease to regret that the physicians did not discern my trouble in its early stages. Is there any place in Indianapolis or the State where I could go to be treated? I belong to the working class of people, and I can not pay the prices asked at private sanatoriums."

This story is repeatedly told to the State Board. Failure of the physician to early diagnose the case is too common. Dr. Trudeau, who is certainly authority, says: "The average medical man's idea of tuberculosis only relates to the disease after the rational and physical signs have become well

marked." The term "stomach cough" is a common one, and there is no such thing. A persistent cough without a recognized cause is a very suspicious thing indeed, and physicians should always take warning from such a cough. When associated with increased heart action, possibly slight subnormal temperature in the morning and slight fever in the afternoon, then look out for pulmonary tuberculosis.

* * *

AN INDIANA INVENTION: The Keen Folding Outing Cottage, invented by W. W. Keen, of Richmond, Ind., is illustrated below. The picture tells the story fully. It would be hard to devise a tent cottage which would be better adapted for outdoor life. A good-sized model of this cottage will be ex-



hibited in the Tuberculosis Exhibition, which will be held in Indianapolis the first week in March, under the auspices of the Commercial Club of the city. The cottage is manufactured by the Keen Folding Cottage Company, Richmond, Ind.

MEDICAL EXAMINATION OF SCHOOL CHILDREN.

BY J. N. HURTY.

[Read before the State Superintendents' Association.]

Some school children have defective eyes and do not see aright; some have defective ears and hear imperfectly, and when these portals are partially closed, the child is seriously handicapped, and is frequently wronged by being called stupid, and scolded.

Some children have their spines twisted by the too high or too low seats and desks they are forced to use, and such are nervous, irritable and hard to control. Some children come to school bearing infection in their clothing or afflicted with an infectious disease in mild form, and from such school epidemics usually start. In the winter time, it is the exception for school children to have a proper amount of fresh pure air, and so air starvation is forced upon them and in consequence they have headaches, malnutri-

tion, neurasthenia and affections of the respiratory tract, and as a result of this a goodly proportion afterward contract tuberculosis and die. At most country and town schoolhouses the outhouse facilities are not only inadequate but horrible, and the result is to cause the children to restrain the calls of nature and so do irreparable damage to their eliminative organs. In not a few schools the pupils are compelled to look straight into the blinding light, or to endure cross lights, to the detriment of their eyesight and nervous systems. In most schools the children near the stoves are roasted on one side, made exceedingly uncomfortable, and so prevented from studying and progressing as they should; and those away from the stove are chilled, have cold feet, and they, too, can not study and progress as they otherwise might.

At many schools the children drink saliva-laden water from dirty wooden buckets with dirty tin cups, and all but a very small percentage of school children sometime during the winter have colds. Deadly transmissible diseases also break out in the schools and kill many children, and schools are needlessly and uselessly closed on account of infectious diseases.

In 1903 the number of children who died between the ages of 6 and 15, the school age, was 1,459. Of these, diphtheria claimed 239 in the age period of 6 to 10, and 28 in the age period of 10 to 15. For the first-named age period, scarlet fever killed 55 and in the second 19. Then, there was smallpox, with its 7 deaths in the school age, measles with 16, whooping-cough with 12, influenza with 12, dysentery with 8, typhoid fever with 179, pneumonia with 130, diarrhoea with 138, and consumption with 328, all between 7 and 15. The above facts certainly demand our careful consideration and attention. Indeed, they seem of sufficient importance to warrant one to suggest that hygienic supervision of the schools, which, of course, includes the medical inspection of the school children, would be an economic and humanitarian move.

With the statistics of medical inspection, I presume you are all more or less familiar, but as long as we stupidly do nothing in this important line, it is most proper to keep presenting them. In ten months in Philadelphia 3,446 contagious and 2,430 noncontagious affections were observed, while in Boston in one year 4,203 cases of contagious diseases, and for the year 1903 out of 15,573 school children but 4,952 were found free from disease. In three months in New York 4,183 children were excluded from school on account of infectious diseases out of 63,812 examined. During a period of four months in Chicago 233 public schools were medically inspected, with the result of finding 1,417 cases of diphtheria and 306 of scarlet fever, while at a later period in the same city out of a school population of 200,000, 76,805 were

examined and 4,539 were found to be suffering from contagious diseases. In Minneapolis out of 25,696 pupils examined, 8,166, or 32 per cent., had defective eyesight. Pages and pages of such figures could be given, but surely we have enough to show clearly that we do not have to go far to find foci of contagion when an active field may be found in almost every school.

Desirable and skilled medical inspection is to benefit school children, for physical, moral and economic reasons; still, the most extreme optimist can not expect to see it accomplished in Indiana so long as people elect men to office for practicing that so-called economy which consists in not doing necessary things in order to show how much public money has not been spent. As the doing of the right thing is several decades in the future, we must now do the best we can. And so it seems that the teachers, not having much to do, should take up elementary medicine and turn medical inspectors. But, seriously, it is possible for the teachers to do a great deal, and with enjoyment in the line of detecting physical imperfections, incipient diseases and faulty nutrition. The working condition of the child is of first importance, and a little study and trial will fit teachers to discover abnormal conditions which are not deeply hidden. The conditions which unfit the child to undertake an average and reasonable amount of school work may be roughly grouped under four main heads—

First. Defects of hearing and eyesight.

Second. Illness of some description, as fever, headache, and the like, made plain by flushed face or drooping manner.

Third. Bad lighting, heating or ventilating of the room.

Fourth. Malnutrition.

The testing of eyes and ears to determine normality is not at all a difficult matter, and before deciding that a child is dull and stupid, its eyes and ears should be tested.

GENERAL ILLNESS.

To discover and determine illness is not difficult, for it is shown in the countenance, in the attitude and manner. The sick child, if it plays, does it listlessly; it has flushed cheeks, or heavy-lidded eyes, or contracted brows, or distressed lines about the mouth. It takes very slight perception to discover these signs, and the good teacher who perceives the illness should not delay in sending the child home with a pleasant and kind note to its mother. A clinical thermometer might profitably be among the possessions of teachers. The instrument simply needs to be placed underneath the tongue for five minutes, then removed, and the temperature read. The normal temperature of the human body is 96.7, but a degree's variation either way does not usually count.

If, however, the reading is 100 per cent., the child is sick, and should be out of school, and therefore should be sent home. Coughs are transmissible, and for this reason, also because of the disturbance in the school, coughing children should be sent home. Rhinitis or coryza, better known as cold-in-the-head, is infectious. Every case is taken from a previous one, and the patient is unfit to be in the schoolroom, sneezing, snuffing and distributing infectious nasal secretions; and such cases should be sent home. You might say if this were done, there would be times when the attendance would not be 10 per cent. Very well, let it be so. It would not be your fault, and the right thing would be done. An advantage of sending cases of such infections home would be the education of parents in a matter of no small moment. The warrant for teachers excluding sick children is found in section 5 of the quarantine law, which says—

"Parents, guardians or persons having custody of any child or children, shall not permit such child or children, if infected with any communicable disease, and it or they have been exposed to any communicable disease, to attend any public or private school, or appear in public in any way, and all school teachers, public, private or parochial, shall exclude from their schools all such children unless a written permit to attend is given by the health officer having jurisdiction."

ERUPTIVE DISEASES.

A considerable number of the infectious diseases are attended by a rash or eruption upon some part of the body. The locality, of course, varies, but the main seats of appearance are the upper part of the chest and the base of the neck, the wrists and the face. If these three localities be carefully inspected, the eruption of most of the so-called exanthamata, or eruptive fevers, like smallpox, chickenpox, measles, rotheln, etc., will be discovered in a majority of cases. It is obviously unnecessary for the teacher to know the name of the eruptive disease. To find it is sufficient, and as quite all of them are communicable, it is clearly the duty of the teacher to send all such cases home.

HEADACHE.

It is not difficult to discover headache, backache, or pain of any description. Any fever condition in children is usually accompanied by more or less headache. Most headaches in school children are caused by eye strain, and next as a cause comes inadequate ventilation, and next improper food.

Most of our serious illnesses are brought about by neglect at the beginning, and therefore, if even, on examination the child with a flushed face, the unusually dull or bright eye, showing a general apathy or discomfort, turns out to have no temperature or sore throat, but only a touch of headache with, perhaps, a coated tongue, and a history of too much nuts and

sweets at some juvenile party the night before and loss of the proper amount of sleep, even then the child should be sent home.

SORE THROAT.

When a child appears to be sick, determine if possible, whether or not the throat is sore. Asking the child frequently avails nothing, for I have had little ones say their throats were not sore, when violently red and inflamed. Therefore, let the teacher become familiar with the appearance of well throats, and any departure from the normal must be looked upon seriously. Slight pressure upon the glands immediately under the jaws will frequently discover soreness of throat. The slightest sore throat is abundant reason for sending a child home.

CONSUMPTION.

Consumption appears markedly at the age of 10, increases rapidly until the age climax is reached at 25. Any child whose health is continuously poor, who has a slight cough, who generally droops in the afternoon with slight rise of temperature, is almost certainly afflicted with beginning consumption. For a child with consumption to remain in school is certain death. But, if turned out into the air, made to sleep in a well-ventilated bedroom and supplied with nourishing, well-cooked food, it will usually get well. Any teacher with consumption should not think of teaching if she wants to live. The disease, once started, will invariably cause death in one who tries to carry the burdens of the schoolroom.

There is much more to treat of in this connection, but time will not permit and I will only catalogue the points. There is the deadly cold school lunch; continuing too long at any one thing; the range of school hours; proper seating; blackboards, dress, exercise, and defects of breathing.

GOT JUDGMENT: In the fall of 1904 smallpox broke out near Medora, Jackson County, Indiana. Dr. D. J. Cummings, county health officer, made a visit and inspection, and under the quarantine law of 1903, appointed Dr. Neal Matlock his deputy and employed him to look after the cases. This was necessary because Dr. Cummings had epidemics elsewhere in the county which he had to look after personally, and he could not be in two places at the same time. Besides, the law does not require county health officers to give medical treatment in any case. Their duty is to do all that is possible to prevent the spread of contagion. Dr. Matlock served for several weeks and treated faithfully many cases of smallpox and in time presented his bill. The Jackson County commissioners, under advice of their attorney, refused to pay the same, and suit was brought (see quarantine law of 1903). In the November term of the court, 1905, Judge Lewis awarded Dr. Matlock a judgment for \$335.

CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM CERTAIN COMMUNICABLE DISEASES FOR DECEMBER, 1905.

NORTHERN SANITARY SECTION.

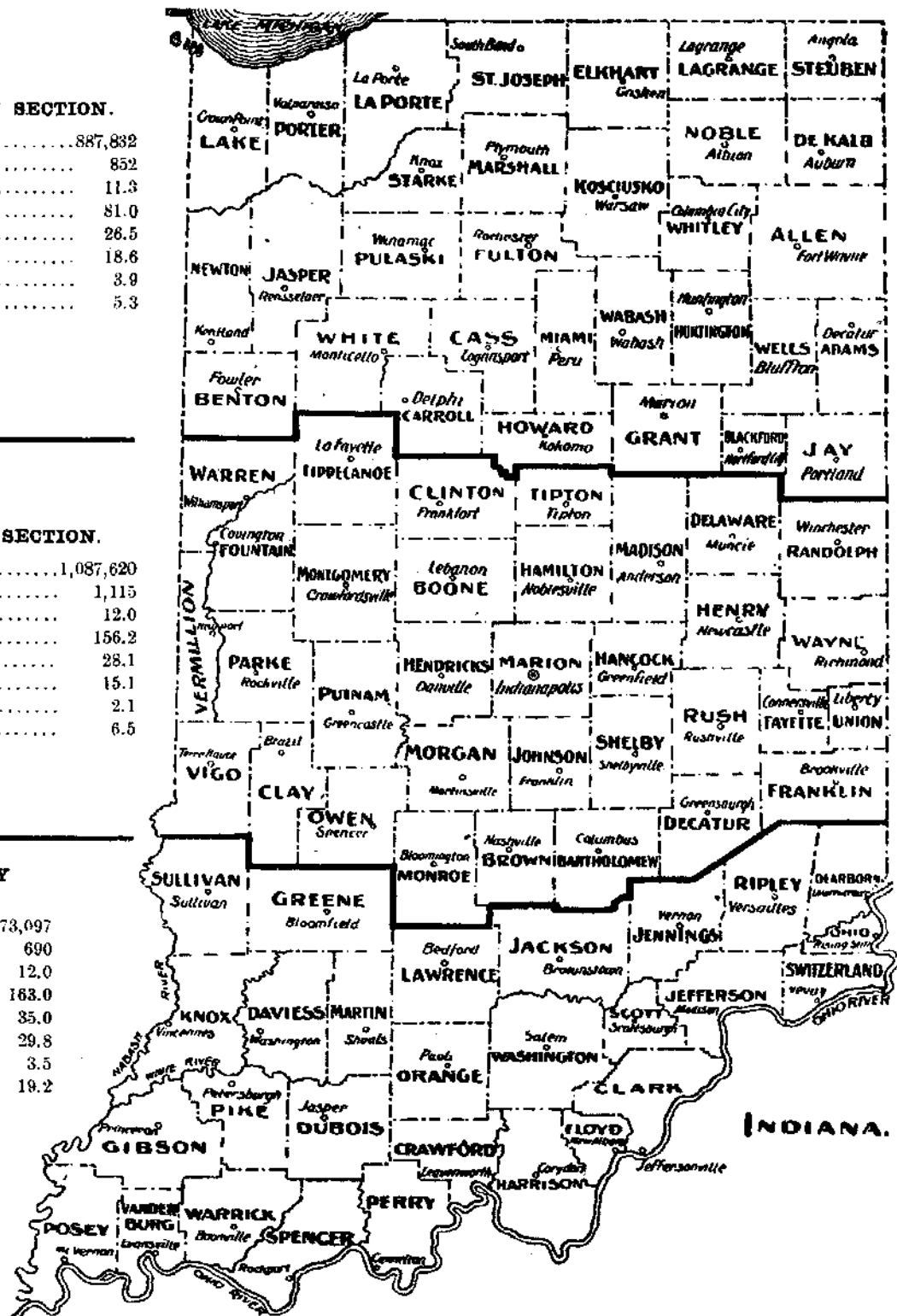
Total population	887,832
Total deaths	852
Death rate per 1,000	11.3
Consumption, rate per 100,000	81.0
Typhoid, rate per 100,000	26.5
Diphtheria, rate per 100,000	18.6
Scarlet fever, rate per 100,000	3.9
Diarrheal diseases, rate per 100,000	5.3

CENTRAL SANITARY SECTION.

Total population	1,087,620
Total deaths	1,115
Death rate per 1,000	12.0
Consumption, rate per 100,000	156.2
Typhoid, rate per 100,000	28.1
Diphtheria, rate per 100,000	15.1
Scarlet fever, rate per 100,000	2.1
Diarrheal diseases, rate per 100,000	6.5

SOUTHERN SANITARY SECTION.

Total population	673,097
Total deaths	690
Death rate per 1,000	12.0
Consumption, rate per 100,000	163.0
Typhoid, rate per 100,000	35.0
Diphtheria, rate per 100,000	29.8
Scarlet fever, rate per 100,000	3.5
Diarrheal diseases, rate per 100,000	19.2



Mortality of Indiana for December, 1905.

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Population, Estimated by U. S. Method.	Total Deaths Reported for December, 1905.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.										Deaths and Annual Death Rates per 100,000 Population from Important Causes.									
					Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		65 and Over.		Consumption.		Other Forms Tuberculosis.		Typhoid Fever.		Diphtheria.	
					Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
State	2,648,549	2,657	11.8	176	380	15.3	148	6.0	68	2.7	52	2.0	82	3.3	742	29.9	298	132.7	38	16.9	66	29.4	45	20.0
Northern Co's	887,832	852	11.3	62	130	16.4	41	5.2	16	2.0	18	2.2	21	2.6	352	31.9	61	81.0	7	9.8	29	26.5	14	18.1
Central Co's	1,087,620	1,115	12.0	62	154	14.6	56	5.2	29	2.7	16	1.5	33	3.6	331	31.4	144	156.2	13	19.5	26	28.1	11	15.1
Southern Co's	673,097	690	12.0	52	96	15.0	52	8.1	23	3.6	18	2.8	23	3.6	169	24.2	93	163.0	13	22.7	20	35.0	17	29.8
All cities	977,812	1,253	15.1	76	182	15.4	68	5.7	26	2.2	21	1.7	32	2.7	335	28.4	143	172.5	23	27.7	29	34.9	17	20.5
Over 50,000	260,046	342	15.5	20	44	13.6	10	3.1	4	1.5	5	1.5	10	3.1	84	26.0	44	199.6	8	36.3	5	22.6	4	18.1
25,000 to 50,000	159,349	235	14.8	19	44	20.3	19	8.6	15	9.5	9	5.7	9	5.7	54	25.0	17	125.8	4	29.6	4	29.6	2	51.8
10,000 to 25,000	231,707	290	12.5	14	47	17.0	20	7.2	13	5.5	7	2.5	3	1.5	79	28.6	32	162.9	6	30.5	10	50.9	7	10.1
5,000 to 10,000	196,779	236	12.0	16	38	17.4	11	5.0	6	2.7	6	2.7	7	3.2	65	30.0	25	149.9	2	11.9	4	41.9	4	29.9
Under 5,000	129,931	150	11.6	5	9	6.9	8	5.5	1	0.8	1	0.8	4	3.2	63	36.5	25	227.0	5	37.2	9	27.2	9	29.9
Country	1,670,737	1,404	9.9	100	198	15.1	80	6.1	42	2.2	31	2.3	50	3.6	407	31.2	155	109.4	15	10.5	37	26.1	28	19.7

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Deaths and Annual Death Rates per 100,000 Population from Important Causes.																							
	Croup.		Scarlet Fever.		Measles.		Whooping-Cough.		Pneumonia.		Diarrheal Diseases, Under 5 Yrs.		Cerebro-Spinal Meningitis.		Influenza.		Puerperal Septicemia.		Cancer.		Violence.		Small-pox.	
	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
State	13	5.7	7	3.1	9	4.0	347	154.5	21	9.3	40	17.8	19	8.4	15	6.6	90	40.0	137	61.0	1	1.4		
Northern Co's	5	6.6	3	3.9	1	1.3	101	134.2	4	5.3	9	11.9	7	9.3	4	5.3	32	42.5	50	66.4	1	1.3		
Central Co's	6	2.1	2	2.1	1	1.7	148	160.5	5	6.5	13	19.6	10	10.8	3	5.3	31	33.3	57	61.8	1	1.3		
Southern Co's	2	10.3	2	5.9	1	1.7	98	171.8	11	19.2	18	22.7	2	3.5	3	5.3	27	47.3	30	52.5	1	1.3		
All cities	3	3.6	5	6.0	5	6.0	156	189.2	4	4.8	19	22.9	6	7.2	6	7.2	52	62.7	69	83.2	1	1.2		
Over 50,000	2	9.0	1	4.5	4	29.6	41	186.0	1	4.5	10	45.3	3	13.6	2	14.8	13	58.9	21	95.2	1	7.4		
25,000 to 50,000	1	5.0	1	5.0	3	24.3	33	244.3	2	14.8	3	22.2	1	7.4	2	14.8	5	37.0	13	96.2	1	7.4		
10,000 to 25,000	1	5.0	2	11.9	3	19.8	35	198.6	1	5.0	2	10.1	1	5.0	1	10.1	13	66.2	16	81.4	1	7.4		
5,000 to 10,000	2	11.9	1	11.9	2	161.9	27	161.9	1	11.9	1	5.9	1	5.9	1	5.9	10	69.9	14	83.9	1	7.4		
Under 5,000	10	7.0	2	1.4	4	2.8	16	145.3	17	12.0	3	27.2	13	9.1	9	6.3	38	26.8	66	48.0	1	1.3		

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

W. T. BLYTHE, SECTION DIRECTOR.

SECTIONS.	TEMPERATURE.										PRECIPITATION.				CONDITION OF SKY.			Wind.		
	Mean.	Departure from Normal.	Highest.					Lowest.					In Inches.				Number of Days.			
			Degree.	Date.	Place.	Degree.	Date.	Place.	Average.	Departure from Normal.	Snowfall Un-melted.	Days with 31 inch or more.	Clear.	Partly Cloudy.	Cloudy.	Prevailing Direction.				
																	Degree.		Date.	Place.
Northern Section	30.3	+1.3	55	11	Bluffton	-1	24	Logansport	1.75	-0.74	4.7	6	14	6	11	SW.				
Central Section	32.9	+1.0	63	26	Bloomington	5	24	Northfield	2.19	-0.66	0.8	6	14	5	12	SW.				
Southern Section	35.3	+0.8	58	9	Rome	11	24	Bedford	3.32	+0.12	0.9	6	12	5	14	SW.				
State	32.8	+0.9	63	26	Bloomington	-1	24	Washington	2.42	-0.43	2.1	6	13	5	13	SW.				